1989/1990

OECD ECONOMIC SURVEYS

AUSTRALIA

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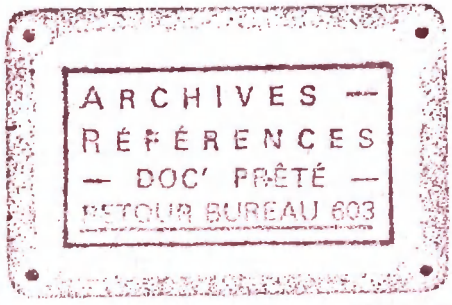

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Pursuant to article 1 of the Convention signed in Paris on 14th December 1960, and which came into force on 30th September 1961, the Organisation for Economic Co-operation and Development (OECD) shall promote policies designed:

- to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;
- to contribute to sound economic expansion in Member as well as non-member countries in the process of economic development; and
- to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

The original Member countries of the OECD are Austria, Belgium, Canada, Denmark, France, the Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The following countries became Members subsequently through accession at the dates indicated hereafter: Japan (28th April 1964), Finland (28th January 1969), Australia (7th June 1971) and New Zealand (29th May 1973).

The Socialist Federal Republic of Yugoslavia takes part in some of the work of the OECD (agreement of 28th October 1961).

Publié également en français.

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This Survey is based on the Secretariat's study prepared for the annual review of Australia by the Economic and Development Review Committee on 18th December 1989.

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After revisions in the light of discussions during the review, final approval of the Survey for publication was given by the Committee on 9th January 1990.

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The previous Survey of Australia was issued in July 1988.

BASIC STATISTICS OF AUSTRALIA

THE LAND

Area (1 000 sq. km)	7 682.3	Urban population, 1987, % of total	
Agricultural area, 1986-87, % of total	61	(cities over 100 000)	71
		Population of major cities, 1986 (1 000):	
		Sydney	3 473
		Melbourne	2 932
		Brisbane	1 196
		Adelaide	1 004
		Perth	1 050

THE PEOPLE

Population, June 1987 (1 000)	16 263	Civilian employment, 1988 (1 000)	7 330
No. of inhabitants per sq. km	2.1	*of which:* Agriculture	431
Natural increase, 1986 (1 000)	126	Industry[1]	1 936
Net migration, 1987 (1 000)	108	Other activities	4 963

PARLIAMENT AND GOVERNMENT

Composition of Parliament following latest elections:

Party	Senate	House of Representatives
Australian Democrats	7	—
Australian Labor Party	32	86
Independent	2	—
Liberal Party of Australia	27	43
National Party of Australia	7	19
Nuclear Disarmament Party	1	—
Total	76	148

Present Government: Australian Labor Party
Next general elections for House of Representatives: at the latest November 1990

PRODUCTION

Grosse Domestic Product, 1988		Gross fixed capital formation, 1988:	
($ A million)	315 045	Percentage of GDP	24.9

THE GENERAL GOVERNMENT SECTOR, % OF GDP IN 1988

Current disbursement	32.5	Current revenue	34.0
Current transfers	10.5	*of which:* Direct taxes	17.7

FOREIGN TRADE

Main exports in 1987, % of total:		Main imports in 1987, % of total:	
Agricultural products	40.4	Food, beverages and tobacco	5.0
of which: Wool	13.8	Basic materials and fuels	7.7
Fuels	20.6	Chemicals (incl. plastic)	9.7
Metals and metal manufactures	23.8	Metals, metal manufactures	5.2
Machinery and transport equipment	5.0	Machinery and transport equipment	39.1
Other	10.2	Other manufactured products	25.1
		Other	8.2

THE CURRENCY

Monetary unit: Australian dollar		Currency unit per US dollar, average of daily figures:	
		Year 1989	1.265
		December 1989	1.277

1. Including mining, electricity, gas and water and construction.
Note: An international comparison of certain basic statistics is given in an annex table.

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Introduction

When Australia was examined by the Committee some eighteen months ago the economic situation was characterised by all the good conditions typical of the early stages of an export- and terms-of-trade-led recovery. Output growth was accelerating, unemployment and inflation were coming down, and the current external deficit was narrowing. Underlying this significant improvement in economic performance was the Government's strategy of combining tight financial management, incomes policy and structural reform. The Government has since persevered in this direction. However, the expansion of private domestic demand in FY 1988-89 was much faster than expected and has largely outpaced output. As a consequence, the current account deteriorated anew and inflationary pressures increased. Monetary policy, which had been eased since the second half of 1986, turned toward restriction in April 1988 as it became clear that the impact of the October 1987 stock market crash was not so big as had been feared, and the subsequent tightening has pushed the short-term interest rates to around 18 per cent in November 1989. Nonetheless, inflation as measured by the private consumption deflator, is now running at a rate of 6½ to 7 per cent, and the current external deficit widened to some 6 per cent of GDP, the level seen four years ago.

There is now evidence that domestic demand growth has slowed in response to the tightening in policy. In the third quarter domestic demand growth has slowed significantly, particularly in interest-sensitive components. Export growth has recovered and imports have fallen. It is, nonetheless, difficult to be certain about the extent and duration of the slowdown. A severe recession is unlikely because plant and equipment investment seems likely to remain buoyed by high levels of profits, both current and prospective, and private consumption to be sustained by continued employment growth. The challenge now is to ensure that the necessary weakening of domestic demand growth continues, while pursuing policies conducive to higher, sustainable output growth and lower inflation over the longer term.

The present Survey first reviews salient aspects of the present economic situation, macroeconomic policies and the outlook to 1991. Part II takes up three major

medium-term issues; the desirability and sustainability of the current external deficit in terms of the savings-investment balance; the economy's inflation proneness; and the economy's productivity performance. Policies aimed at enhancing competition in product markets are also briefly reviewed as these appear crucial to improved economic performance over the medium term. Reform of the industrial relations system, the special topic of this Survey and a key to improving efficiency, is featured in Part III. Policy conclusions are then presented.

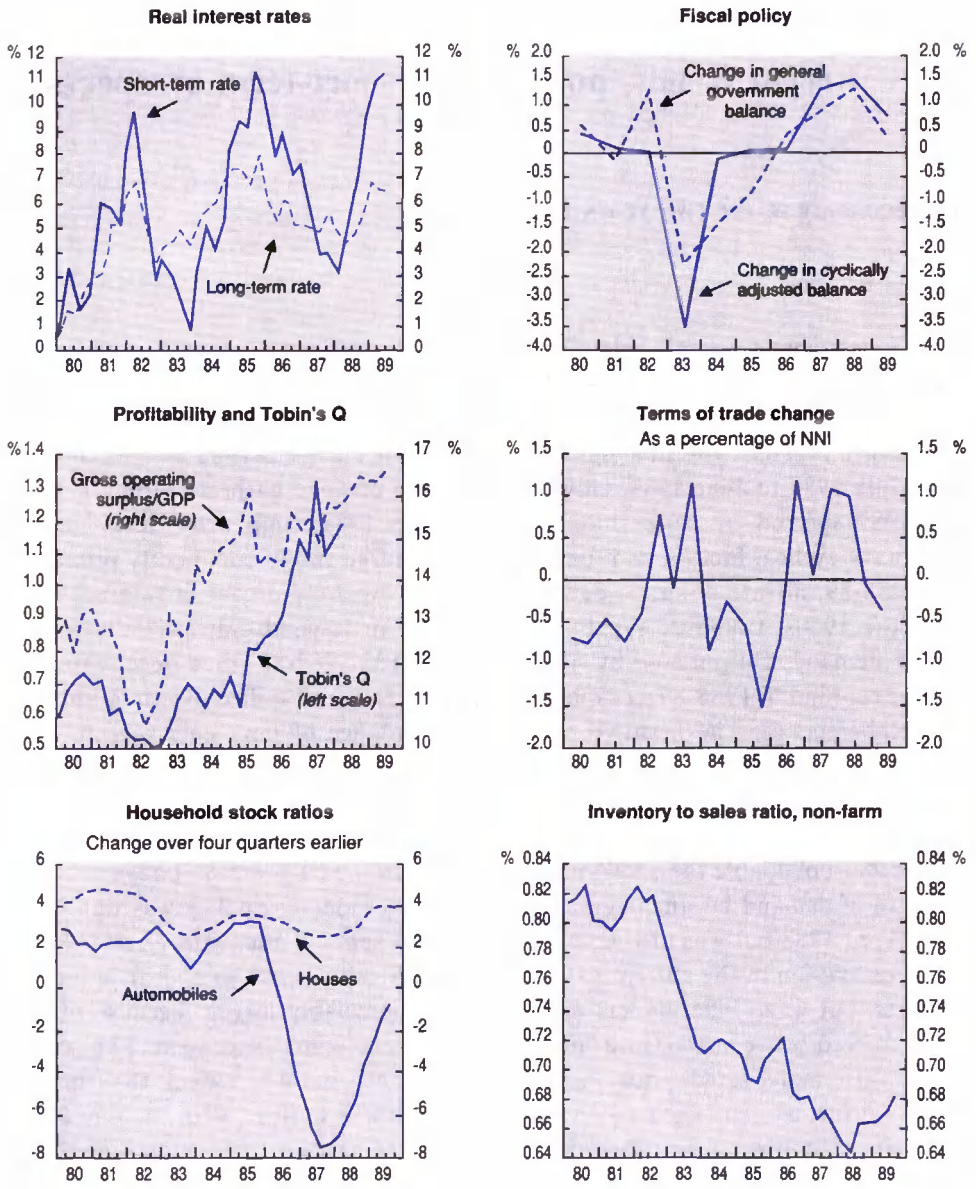
I. Recent trends, policies and short-term prospects

The economy in the two years to mid-1989

Overview

Government economic policy has continued to aim at a sustained reduction in the current external deficit and inflation. Fiscal policy has remained restrictive (Diagram 1). General government net borrowing has moved from a substantial deficit in FY 1983-1984 to a significant surplus in FY 1988-1989 – which runs from July 1988 to June 1989. However, domestic demand gathered strength from mid-1987 spurred by easier monetary policy in 1987, high profit levels, some temporary cyclical factors, and, particularly, the large rise in commodity prices. In FY 1988-89, private domestic demand increased by 7½ per cent, a rate not seen since the 1960s. Domestic supply has been able to respond only partially to the higher demand. Output rose by 4¼ per cent in FY 1987-88, then decelerated to 3½ per cent in FY 1988-89 as capacity tightened. Demand spilled over into imports and higher prices. The negative effect on the balance of payments was initially masked by a marked rise in commodity prices after mid-1987 which improved the terms of trade. But the deteriorating real foreign balance progressively dominated, and the current-account deficit rose to $A18¼ billion for the 1988-89 fiscal year, not far short of double the $A9½ billion expected in the FY 1988-89 budget. As the strength of demand became increasingly apparent, monetary policy was tightened from April 1988 but was unable, by itself, to curb demand adequately and prevent the deterioration in the current external deficits. Strains began to appear in labour markets, but wage inflation has not increased appreciably largely because of the wage Accord between the Government and the trade union movement. This, combined with more rapid price increases and higher output, meant that profits increased further. The exchange rate has been allowed to float, with the monetary authorities limiting their intervention to market testing and smoothing. The improvement in the terms of trade and tighter monetary policy was reflected in an appreciation in the exchange rate from late 1987. After rising steadily during 1988

Diagram 1. **FACTORS AFFECTING AGGREGATE DEMAND**



Sources : Australian Bureau of Statistics, NIF-10s model and OECD Secretariat estimates.

and into 1989, the exchange rate depreciated by about 10 per cent in February and has since remained steady. This, together with continuing high inflation has eroded some of the improvement in competitiveness that had resulted from the large exchange-rate depreciation in 1985 and 1986. Attention has been increasingly focused on microeconomic impediments to better macroeconomic performance. To this end, the Government has reduced protection, introduced some deregulation and addressed the need for reform in a number of other key sectors.

The economic environment

The strength of aggregate demand in the two years to mid-1989 reflected the conjunction of a number of factors. The external environment remained particularly favourable as the upswing in world demand continued. As higher world demand led to a gradual rundown of stocks of a number of primary commodities, raw material and food prices recovered from their trough in the first half of 1986, with a particularly strong rise from mid-1987 (Diagram 1). This was paralleled by an appreciation of the effective exchange rate, which amounted to around 25 per cent between the third quarter of 1986 and the first quarter of 1989, before easing back to around 15 per cent. The resulting terms-of-trade improvement was substantial, adding 2 percentage points to national income on average in each of the two years to mid-1989. This was reflected in higher profits and in a sharp increase in farm incomes.

Monetary policy contributed initially. Interest rates followed a trend decline from the third quarter of 1986 and by the first quarter of 1988 had fallen by nearly 6 percentage points at the short end, and the yield curve had become positive (Diagram 1). As in many countries, monetary policy was kept easy after the stock market crash in October 1987; the decline in Australian equity prices was particularly marked and, with some flight to security, there was a considerable flow of funds into the banking system and lending increased. Deregulation of financial markets may also have played a role as competition between financial intermediaries increased and financial institutions adopted more innovative and flexible policies in lending to individuals for housing and business.

Company profits continued to recover over the five years to mid-1989. Real wage restraint and higher rates of capacity utilisation have brought profit rates back to levels not experienced since the early 1970s. Business confidence has improved as continuing wage restraint has eased concern over a possible repeat of the wages explosions in 1973-74 and 1981-82 and the subsequent deep recessions.

Domestic demand components

Growth of *real private consumption* edged up in 1988 to 3.4 per cent and accelerated further in the first half of 1989 to an annual rate of 7.4 per cent (Table 1). This profile reflected the pick up in real disposable income growth in 1988[1]. Automobile purchases recovered during 1988, reflecting the earlier easing in credit conditions and lower prices for foreign cars as the Australian dollar appreciated. But the rebuilding of automobile stocks by consumers after a relatively low level of purchases over the previous one to two years was probably the most important factor. *General government consumption* grew by 4.1 per cent in 1988 and by an annual rate of 5.2 per cent in the first half of 1989, largely reflecting developments at the State and local levels. *Public investment* fell significantly in FY 1987-1988, although this appeared to be partly the result of sales of real assets[2]. It recovered somewhat in the following fiscal year, largely because of a 30 per cent increase in investment spending by Commonwealth public enterprises (notably Qantas and Telecom).

Private-sector investment picked up strongly through 1988, rising by around 20 per cent, and continuing to increase at the same rate in the first half of 1989. The share of private business investment in GDP is now about one-fifth above its previous peak at 14 per cent of GDP, levels above those of the 1960s. *Dwelling construction* picked up – from levels well below trend – from the second half of 1987 as interest rates eased and real incomes rose. A number of other factors contributed to the strength of the rise, including: a "flight to safety" after the stock market crash in late 1987, more innovative lending practices, tax changes (including the re-introduction of "negative gearing"[3]), a tighter rental market, and increased immigration and foreign buying. *Non-residential construction* which has grown at high and sustained rates since 1985, continued growing strongly in 1988 and 1989, reflecting higher corporate profits, and a reduction in available office space, particularly in central business districts, as service-sector employment expanded. Hotel construction has also increased with the boom in tourism activity. With profits high and increasing evidence of capacity constraints, *investment in plant and equipment* strengthened further.

Stockbuilding contributed significantly to domestic demand growth in FY 1988-89, even though sales grew rapidly, and the downward trend in non-farm stocks-to-sales ratio reversed itself from the mid-1988. Nonetheless, the non-farm stock-to-sales ratio has fallen sharply in recent years, reflecting the increased cost of holding stocks, the move to better inventory management methods and changes in the composition of sales. As a consequence, stocks no longer play as much of a

Table 1. **Demand and output**

Percentage changes, at 1984/85 prices

	From previous year				From previous period, seasonally adjusted annual rate			
	1987	1988	1987/88	1988/89	1987	1988		1989
	Calendar years		Fiscal years		II	I	II	I
Consumption								
Private	1.7	3.4	3.4	3.9	5.3	2.7	2.8	7.4
Public	1.6	4.2	3.1	3.5	1.5	7.4	0.6	5.7
Gross fixed investment	3.3	9.7	6.4	12.8	7.3	9.8	12.1	17.1
of which:								
Government	−4.4	−12.2	−9.6	−3.5	6.5	−29.3	11.5	0.0
Private:								
Total	4.4	12.8	8.8	14.8	7.4	15.8	12.1	19.0
Dwellings[1]	1.3	24.0	14.3	21.7	14.1	26.8	28.1	6.3
Other construction	13.4	21.1	24.1	8.7	21.9	36.7	−5.2	14.7
Equipment	6.5	15.9	11.6	18.7	12.3	21.9	8.4	37.6
Public enterprises	−2.5	−16.6	−16.3	0.9	−19.7	−28.7	18.8	4.3
Final domestic demand	2.0	5.0	4.0	6.0	5.0	5.2	4.6	9.5
Change in stockbuilding[2]	0.1	0.7	0.4	1.4	−0.7	0.6	2.3	0.3
of which:								
Private non-farm[2]	0.3	0.2	0.5	1.0	0.5	−0.9	2.1	0.7
Farm and miscellaneous[2]	−0.1	0.5	−0.1	0.4	−1.2	1.6	0.2	−0.4
Total domestic demand	2.2	5.8	4.4	7.4	4.3	5.9	7.0	9.7
Exports of goods and services	10.1	2.9	6.7	1.0	6.8	3.0	−1.2	3.4
Imports of goods and services	3.3	16.1	10.1	24.3	13.1	12.5	26.3	32.2
Change in foreign balance[2]	1.1	−2.3	−0.5	−4.2	−1.0	−1.6	−4.7	−5.5
GDP (expenditure-based estimate)	3.3	3.4	3.8	3.1	3.3	4.2	2.1	4.3
Statistical discrepancy[2]	0.8	0.1	0.4	0.4	0.7	0.1	−0.6	2.6
GDP (income-based)	4.1	3.5	4.2	3.5	4.0	4.3	1.5	6.9
of which:								
Farm	0.1	−3.4	−6.4	3.6	−13.4	−2.9	6.7	3.9
Non-farm	4.3	3.8	4.7	3.5	4.7	4.6	1.3	7.0
GDP (adjusted for terms of trade)[3]	4.3	5.9	5.7	6.1	5.7	6.7	4.5	8.8

1. Including real estate transfer expenses.
2. Contribution to GDP growth (percentage points on income measure).
3. Exports of goods and services revalued by the deflator of imports of goods and services.

Sources: Australian Bureau of Statistics and OECD Secretariat estimates.

buffer role as in the past and increases in aggregate demand are more likely to be reflected in higher output or, as in the most recent period, to spill over into imports. The contribution of changes in the *real foreign balance* subtracted marginally from GDP in FY 1987-88 and by as much as 4½ per cent in FY 1988-89.

Output, productivity and labour-market developments

Non-farm value added rose by over 4¾ per cent in real terms in FY 1987-88, decelerating to around 3½ per cent in FY 1988-89. Slower growth in FY 1988-89 appears to have been concentrated in mining and extraction, partly reflecting industrial action and lower oil output. Manufacturing production rose by 5½ per cent in both years, and employment in that sector has been rising since 1987 after little change since the trough in 1983. There has been an even sharper expansion in the construction industry given the sustained increase in investment in buildings and structures and the rise in building employment. Output in market services has grown strongly in 1987/88 by more than 6 per cent. A steady increase in the number of service workers suggests that measured output has risen at a sustained pace in 1988/89 as well. Farm output fell in FY 1987-88 after two years of excellent harvests but recovered again in the following year.

Aggregate employment has continued to rise in line with GDP growth (Table 2). The level of productivity, after recovering from the trough in 1982-83, has thus remained virtually unchanged from its 1985 level. Employment has grown by over one million persons in the period from mid-1985 to mid-1989, a rise of almost 20 per cent. With domestic demand driving economic growth during the greater part of this period, 70 per cent of total employment growth occurred in sheltered sectors. In the four years up to mid-1989, 20 per cent of the total growth in employment was located in the financial sector, 25 per cent in wholesale and retail trade, 25 per cent in community services and 10 per cent in manufacturing (Diagram 2). Although compositional effects are likely to have had some impact on productivity growth (sheltered sectors have low measured productivity levels compared to tradeable goods producing sectors), the combination of real wage restraint and an edging up of real interest rates has probably been the major contributing factor behind recent productivity trends (see Part II). Productivity growth does not appear to have been biased significantly downwards by the increasing share of part-time employment. The impact of this on average hours worked has been almost entirely offset by the considerable increase in full-time hours worked per person through overtime.

Table 2. **Labour-force indicators**

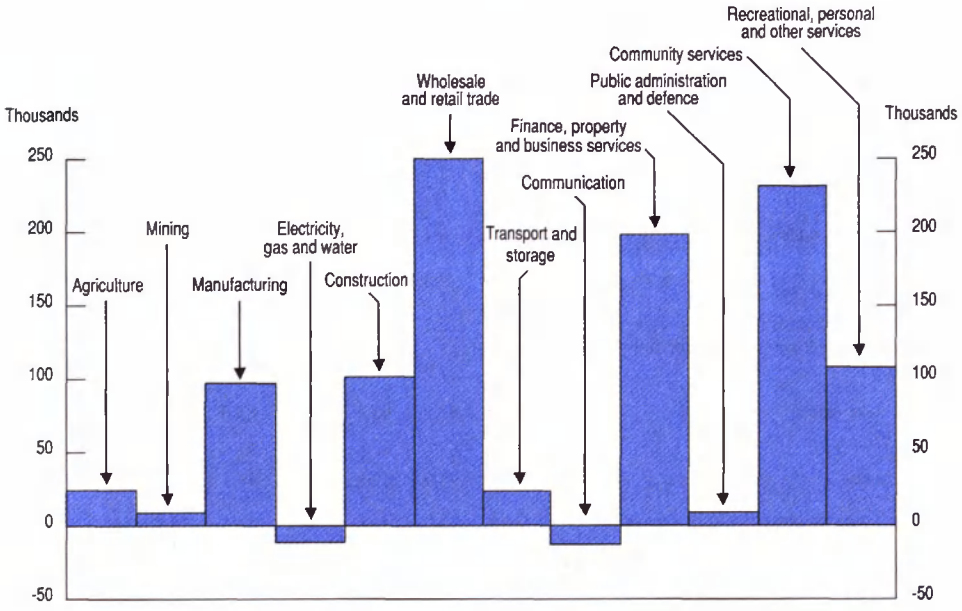
	1986	1987	1988	1987		1988		1989
				I	II	I	II	I
Civilian labour force[1]	3.9	2.2	2.8	2.0	2.1	3.6	1.8	3.9
of which:								
Males	2.3	1.4	2.0	1.4	1.3	2.8	1.0	2.9
Females	6.5	3.5	4.0	2.9	3.1	4.9	3.0	5.5
Employed persons[1]	4.1	2.2	3.8	2.2	2.6	4.6	3.3	5.1
of which:								
Full-time	3.1	1.2	3.5	1.1	2.0	4.3	3.3	3.8
Part-time	8.9	6.7	5.0	7.2	5.0	6.0	3.2	10.3
Unemployment rates[2]	8.1	8.1	7.2	8.2	8.0	7.5	6.9	6.4
of which:								
Males	7.7	7.8	6.8	7.9	7.6	7.1	6.4	5.9
Females	8.7	8.6	7.9	8.7	8.5	8.2	7.5	7.0
Juniors looking for full-time work	21.9	22.2	18.5	22.7	21.6	19.5	17.5	15.4
Aged 20 and over looking for full-time work	6.8	7.0	6.2	7.1	6.9	6.4	5.9	5.4
Participation rate[2]	61.9	62.0	62.4	62.0	62.0	62.4	62.3	62.9
of which:								
Males	75.9	75.3	75.2	75.5	75.2	75.4	75.0	75.3
Females	48.3	48.9	49.8	48.8	49.1	49.7	50.0	50.8
Average hours employed[3]	34.6	35.0	34.8	34.3	35.6	34.0	35.5	33.9
Overtime hours per week, non-farm[3]	1.2	1.3	1.4	1.2	1.3	1.4	1.4	1.4
Non-farm vacancies (thousands)[3]	53.5	56.2	63.2	58.3	54.2	60.2	66.3	72.8

1. Percentage change over previous period at seasonally-adjusted annual rates.
2. Seasonally adjusted.
3. Seasonally unadjusted levels.

Sources: Australian Bureau of Statistics and Reserve Bank of Australia.

Indicators point to a marked tightening of labour-market conditions in FY 1988-89 (Table 2) (Diagram 3). The unemployment rate has recently fluctuated around 6 per cent, which is the lowest figure recorded since the 1982-83 trough and near levels where, on the basis of OECD estimates and past experience, wage pressures could become more marked[4]. This impression is confirmed by the number of vacancies and, particularly, by the level of overtime which is now considerably above trend and at levels not seen since the time of the first wage explosion in the early 1970s. Further progress in reducing unemployment may depend on removing current skill mismatches and on enhancement of skills. Labour shortage appears to be most marked in skilled trades, partly reflecting the loss of

Diagram 2. **SECTORAL DISPERSION OF EMPLOYMENT GROWTH MAY 1985 TO MAY 1989**



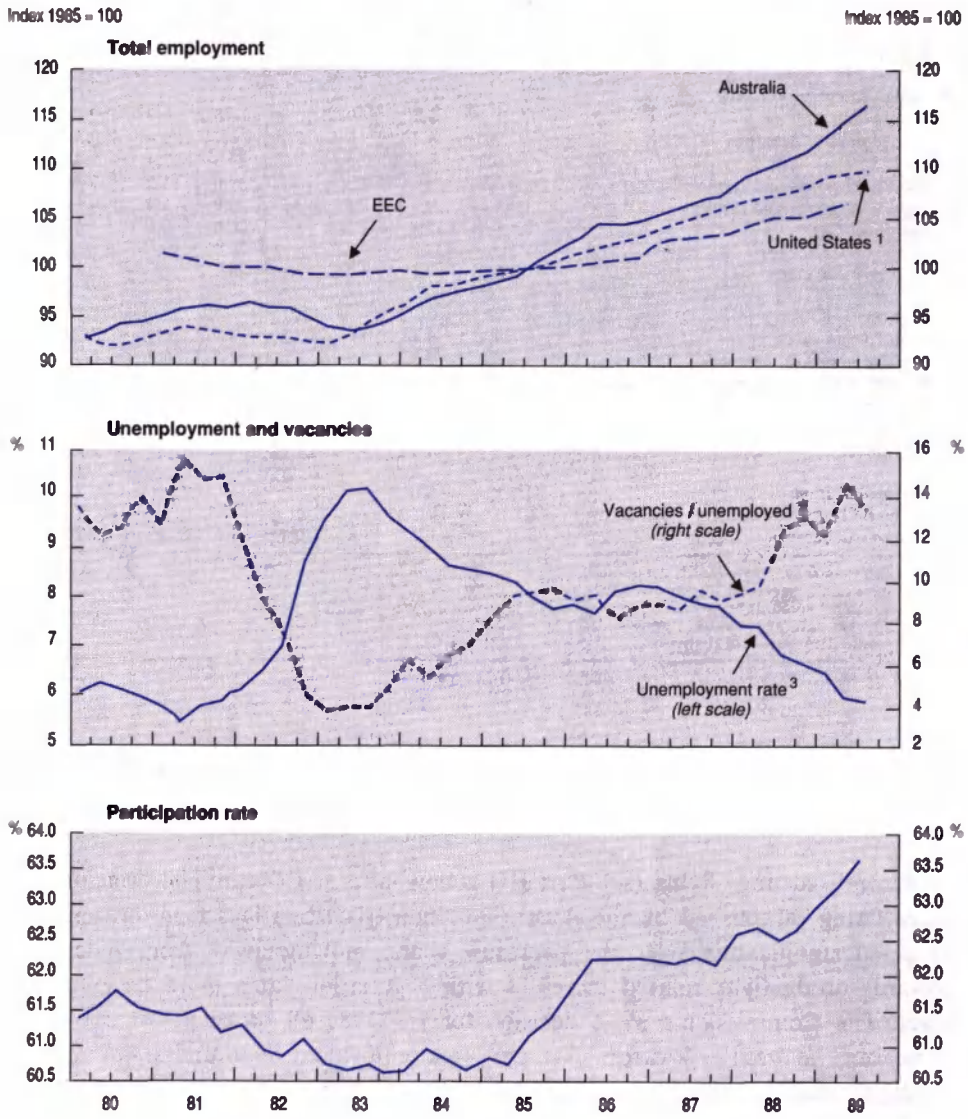
Source : The Labour Force Australia, Australian Bureau of Statistics, Cat. No. 6203.0.

tradesmen as the manufacturing sector contracted in 1982-83, the reduced intake of apprentices earlier in the decade and low immigration levels in the decade to 1985.

Wages, prices and profitability

Nominal earnings growth has remained locked in a range of 6 to 7 per cent over the four years to mid-1989 (Table 3). Some marginal acceleration may have occurred so far in 1989 but, on balance, incomes policy appears to have contained wage pressures despite the tightening labour market. The Accord – between the Australian Council of Trade Unions (ACTU) and successive Labor Governments –

Diagram 3. **EMPLOYMENT, UNEMPLOYMENT AND PARTICIPATION RATE**



1. Civilian employment.
2. Values taken at mid-period.
3. Per cent of civilian labour force.

Sources : Australian Bureau of Statistics and OECD, *Main Economic Indicators.*

Table 3. **Prices and costs**

Percentage change from previous period: annual rates

	1985	1986	1987	1988	1987	1988		1989
					II	I	II	I
National accounts deflators[1]								
Private consumption	7.1	8.7	7.9	6.9	6.8	6.9	7.2	6.4
Total domestic demand	7.2	8.5	7.5	6.2	6.7	5.4	7.3	5.0
GDP	6.2	7.2	7.5	9.0	7.6	9.4	9.4	8.7
Exports of goods and services	10.9	0.8	4.3	10.1	9.6	15.5	0.8	9.0
Imports of goods and services	17.4	9.5	2.4	−3.5	−0.9	1.4	−14.2	−1.3
Non-farm GDP	6.4	7.3	7.2	8.3	6.6	8.6	9.4	9.8
Consumer price index	6.7	9.1	8.5	7.2	6.7	7.2	7.8	6.6
Wage costs[1]								
Award wage rates[2]	4.1	4.8	4.0	5.3	3.9	6.7	3.7	6.0
Average non-farm earnings[3]	6.0	7.2	5.9	6.8	7.6	6.7	6.3	9.6
Average weekly earnings, all employees[4]	4.8	7.0	5.3	6.6	6.8	6.8	6.2	7.9
Non-farm unit labour costs								
Real	−2.3	1.0	−2.9	−1.6	−0.9	−2.7	−0.3	−0.2
Nominal	4.0	8.4	4.0	6.6	5.9	5.7	9.1	9.6
Memorandum item:								
Productivity (per person employed in the non-farm sector)[1]	2.1	−1.7	1.6	0.1	1.6	0.3	−1.8	1.2

1. Derived from seasonally-adjusted data.
2. Full-time adult, weekly wage earners series.
3. On a national accounts basis.
4. On a survey basis, not seasonally adjusted.

Source: Australian Bureau of Statistics.

on centralised wage fixing (see Part III) is now in its sixth year. The principles for wage fixing established by the Australian Industrial Relations Commission have changed significantly over the past few years, moving away from indexation towards productivity-related increases with negotiations at a more decentralised level. The Commission's wage decision for FY 1987-88 provided for a two-tier increase. The first tier was for A$16 per week (equivalent to around 3.8 per cent of average weekly ordinary time earnings) but with a second tier of 4 per cent if productivity improvements and cost offsets of a similar magnitude had been negotiated. These second-tier increases have gradually spread to approximately 85 per cent of the workforce covered by "awards", i.e. employment "contracts" overseen by the arbitration and conciliation courts (see Part III). For FY 1988-89, the Commission directed its attention to award restructuring (see Part III), allowing

increases of 3 per cent or A$10 per week at least six months apart after management and unions had reviewed their awards and agreed to proceed with award restructuring. The form of the wage increases has tended to give lower-paid workers a slightly higher increase. Wage costs in FY 1988-89 have also been affected by the flow-through of previous wage decisions which expanded the superannuation system. The wage decision for FY 1989-90, made in August 1989, allows for a wage increase averaging around 6 per cent in two instalments, with slightly more for lower-paid workers[5]. The first half of the increase will be paid following examination and acceptance of the restructuring proposals by the Commission with the second at least six months later. The Commission also allowed additional increases for certain categories of wage earners to remove certain anomalies between awards. These "minimum rate" adjustments (see Part III) are to be introduced from the beginning of 1990 in four equal instalments at six-monthly intervals. However, workers already receiving a wage which is above the *new* minimum are not to receive any additional increase[6].

Real wages have, for the most part, continued to decline in recent years, however. An assessment of the impact of wages policy is always difficult because of the impossibility of knowing what would have occurred in its absence. Up to 1987, there was little clear evidence that wage outcomes in the absence of the Accord would have been much different. With prevailing levels of unemployment, wage equations gave conflicting results[7]. In the light of the recent tightening of labour markets, there seems to be clearer evidence that the Accord, up to the present, has produced lower real wage outcomes as well as helping to lower strike activity. Compared internationally, the slowdown in real wages has been relatively more marked in Australia (Table 4). Real wages fell by over 4 per cent between the "pre-Accord" period of 1978-83 and 1984-88. In contrast, there was virtually no slowdown of real wages in the major seven OECD countries over the same period. The number of working days lost due to industrial disputes has been diminished, although it is not clear whether this fall has been greater than in the seven largest countries. A recent study appears to confirm this comparatively larger real wage fall[8]. It should be noted, however that wages restraint in FY 1989-90 depends partly on agreed tax reductions totalling A$4.9 billion.

Changes to the definition of the consumer price index have made the interpretation of price movements difficult. In March 1987, mortgage interest and consumer credit charges were introduced into the index, the former replacing a "house purchase" component based on new house prices. The volatility of the index was increased as two additional factors affecting the housing component (nominal

Table 4. **Indicators of comparative wage restraint and labour-market performance before and after the Accord**

Per cent growth rates

	Pre-Accord 1978-1983	Accord 1984-1988	Difference[1]	Difference big-seven OECD countries[1]
Wage rate	9.5	6.3	−3.1	−4.3
Real wage rate	−0.1	−1.1	−0.9	1.0
Real unit labour cost	0.5	−0.5	−1.0	0.2
Employment	0.7	3.2	2.6	0.8
Unemployment rate	6.9	8.1	1.2	1.7

1. Period 1984-88 minus 1978-83.
Source: OECD Secretariat estimates.

Table 5. **Rates of return, private corporate trading enterprises**

	1984/85	1985/86	1986/87	1987/88	1988/89
Gross rate of return[1]	23.7	23.1	23.4	24.8	n.a.
Less:					
Depreciation[1,2]	7.6	7.8	8.0	7.9	n.a.
Net rate of return[1]	16.1	15.4	15.4	16.9	n.a.
Less:					
Taxes[1]	3.9	3.6	4.2	4.3	n.a.
Net interest payments[1]	6.5	7.0	7.6	7.8	n.a.
Profit rate[1,2]	5.7	4.8	3.6	4.8	n.a.
Corporate gross operating surplus share[3]	14.6	14.6	14.8	15.6	16.6
Private non-farm corporate gross operating surplus share[4]	33.4	34.2	35.0	35.5	36.7

	1986	1987		1988		1989
	II	I	II	I	II	I
Corporate gross operating surplus share[3]	14.4	15.1	15.2	16.0	16.5	16.7

1. As a percentage of net capital stock.
2. The depreciation measure used is on a current replacement cost basis. Accordingly, allowance is made for the effects of inflation on physical assets but no corresponding adjustment is made for the effects of inflation on financial assets and liabilities. This treatment lowers the measured rates of return.
3. Gross operating surplus of trading enterprise companies and financial enterprises less imputed bank service charge, as a percentage of gross non-farm product at factor cost.
4. Ratio of the gross operating surplus of private non-farm trading enterprise companies and private financial enterprises (less imputed bank service charge) to gross product at factor cost of the private non-farm corporate sector. Gross product at factor cost of the private non-farm corporate sector is derived using Treasury estimates for wages of the unincorporated sector for 1987-88 and 1988-89.
Source: The Treasury, NIF model.

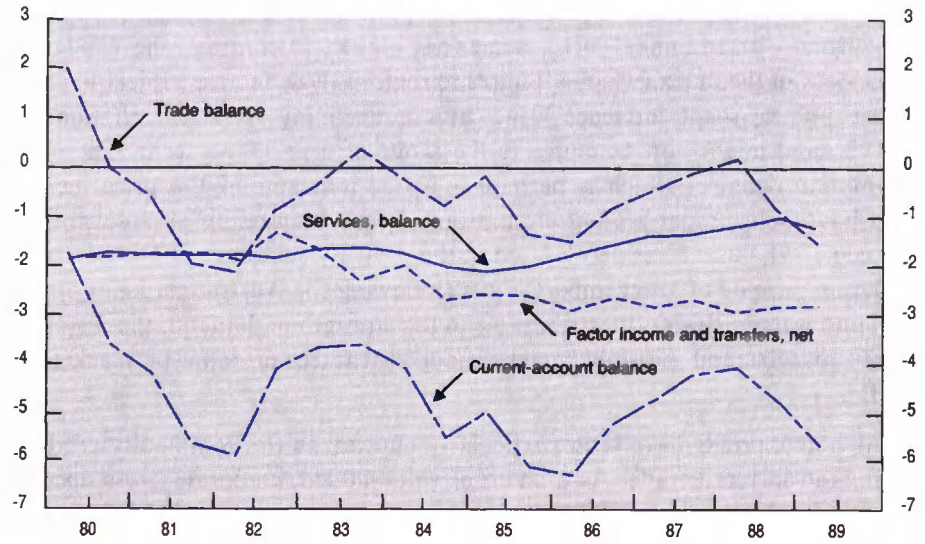
interest rates and established house prices) have shown large movements in Australia. Subsequent changes mitigated this effect, but the index continues to be pushed up by higher interest rates, demand pressures and certain irregular factors. The year-on-year increase is now in the range of 8 per cent with the increases in the last two quarters – at an annual rate – somewhat higher. In contrast, the "underlying component" of the index (which attempts to remove those factors subject to administrative and seasonal influences) indicates a declining trend in inflation from mid-1986 and might now be closer to the range of 5 to 5½ per cent. The private consumption deflator, which is perhaps a better indicator of the price increases facing households under present circumstances, has been rising at closer to 6½ to 7 per cent, although it has decelerated in the most recent quarter. The persistence of inflation, in spite of lower import prices (following the Australian dollar appreciation) and wage restraint, is attributable to the strength of demand, the restoration of profit margins and, possibly, some structural features of domestic markets (see Part II).

As noted, profits have been particularly buoyant in the commodity-producing sectors, and in retail trade. As a share of value added, corporate gross operating surpluses has increased by almost half relative to the previous trough in 1982-83 while company income after tax has more than doubled. However, the increase in the net profit share is possibly less, reflecting higher financing costs as interest rates have risen from early 1988 (Table 5). Profit rates now appear to be near to levels experienced in the early 1970s.

Foreign trade and the current external account

The current-account deficit has averaged 4¾ per cent of GDP during the 1980s (Diagram 4). With the upward trend in the foreign debt-to-GDP ratio and the large differential between yields on domestic and foreign assets, the deficit on net investment income has increased steadily since 1982-83, and now represents over 70 per cent of the current-account deficit. This has been partly offset in recent years by a growing surplus of private transfers as immigration has increased. After declining from its peak in 1986, the current-account deficit has widened from the first half of 1988, with the balance of merchandise trade representing three-quarters of the deterioration and net services most of the remainder. In the first half of 1989 the current-account deficit represented 6 per cent of GDP (6¼ per cent on average in the second and third quarters) compared with just under 4 per cent a year earlier.

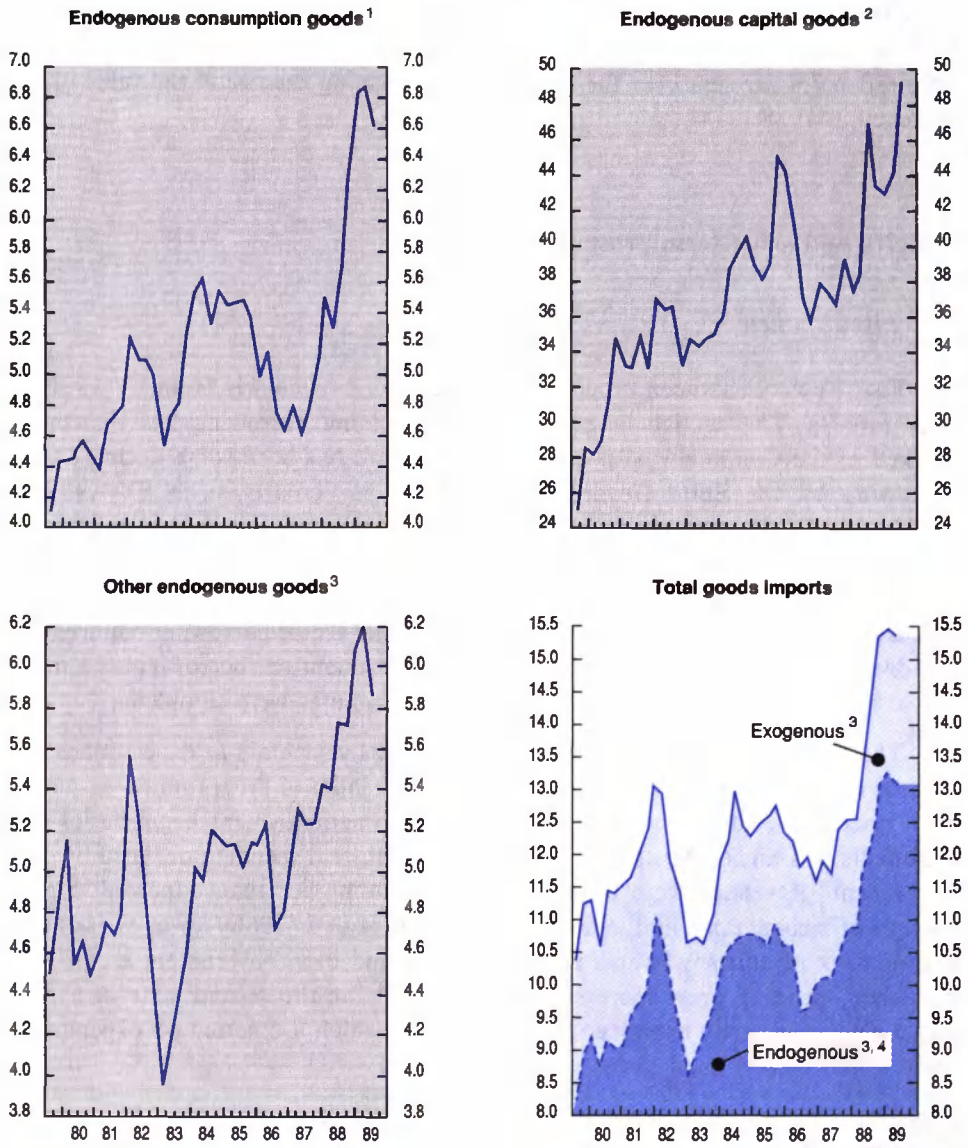
Diagram 4. **CURRENT-ACCOUNT BALANCE**
As a percentage of GDP



Source : OECD Secretariat estimates.

Export growth decelerated in 1988 and remained sluggish in the first half of 1989. The end to the rundown in agricultural stocks depressed shipments of food and wool, increases in livestock herds lowered meat exports temporarily, coal production was affected by industrial action, petroleum exports were held down by reduced oil production in the Bass Straits and output of manufactured goods was increasingly diverted to the domestic market. Service exports remained high for most of 1988 but have since declined. The import penetration ratio for goods increased by 3.8 percentage points to 15.5 per cent from the first half of 1987 to the first half of 1989 (Diagram 5), reflecting high levels of aggregate demand, some loss in competitiveness as the currency appreciated and, possibly, some anticipatory purchases before the exchange rate fell back. Investment goods imports (including exogenous imports) broadly represented 45 per cent of the increase and consumption goods another 25 per cent[9]. Part of this increase represents a refurbishing and

Diagram 5. **IMPORT PENETRATION**



1. As a percentage of private consumption.
2. As a percentage of investment in plant and equipment.
3. As a percentage of non-farm sales.
4. Endogenous imports equals total imports of goods excluding imports of petroleum, civil aircraft and government goods.

Source : Australian Bureau of Statistics.

expansion of air fleets and increased demand for computer equipment and more technologically advanced equipment which is not produced in Australia. As noted, trade prices have been particularly favourable. Export prices have risen by 18 per cent between the first half of 1987 and the first half of 1989 while import prices have fallen 7.8 per cent over the same period, reflecting the rise in the value of the currency in 1988.

Policies and short-term prospects

Fiscal policy

Fiscal policy has been progressively tightened, particularly from FY 1986-87 (Diagram 1). The decline in general government net borrowing has been most marked at the Commonwealth level, although there has been some decline in net borrowing by the State Governments as well, particularly since FY 1987-88 (Table 6). This improvement has been largely accomplished by a reduction in expenditure, total government outlays as a percentage of GDP having fallen by 4.8 points from the peak in FY 1984-85. Revenue has remained broadly unchanged as a share of GDP over the same period. The public sector borrowing requirement has dropped even more sharply than general government net borrowing as a number of large public-enterprise infrastructure programmes were completed.

The outcome for the 1988-89 Budget year was very close to expectations. As regards spending, the impact of higher inflation on indexed programmes was counterbalanced by a lower-than-expected number of unemployment beneficiaries and the effects of a higher Australian dollar. As a result, real spending declined by over 4 per cent. Revenues were around ½ a per cent higher than expected: higher receipts of income taxes and indirect taxes were broadly offset by lower excise taxes and non-tax revenues[10]. Estimates for the State and local government sector suggest that spending grew more slowly than GDP for the second year in a row, although this is partly explained by sales of land which are netted off expenditure on new and second-hand assets.

The FY 1989-90 Commonwealth budget combines continuing expenditure restraint with personal income tax reductions. Commonwealth outlays are expected to increase by 5.6 per cent in nominal terms (Table 6), a decrease in real terms of 0.6 per cent. The major sources of growth are in social security and welfare and in health and education. New programmes of A$1.6 billion (1.9 per cent of total

Table 6. **Public-sector transactions**[1]

	Level in billion dollars 1987-88	1985-86	1986-87	1987-88	1988-89	1989-90 Estimated
		Percentage change from previous fiscal year				
1. Commonwealth						
Receipts	80.8	12.5	12.4	10.9	8.9	8.9
Tax	74.9	11.2	12.5	12.9	11.2	9.7
Other	5.9	27.1	12.0	−8.9	−19.5	−4.7
Outlays[2]	78.8	9.5	7.2	4.3	4.3	5.6
Goods and services	14.1	12.5	8.3	3.5	6.2	7.2
Capital	44.7	1.0	−2.9	−10.6	−5.0	−0.9
Transfer payments	61.1	9.8	7.9	7.8	3.6	6.7
Borrowing requirement (% of GDP)						
Gross	. .	2.9	1.5	−0.4	−1.1	−2.1
Net[2]	. .	3.1	1.4	−0.8	−1.6	−1.9
2. State and local (total)						
Receipts	52.9	11.0	9.9	10.1	9.1	. .
From own sources	29.2	15.2	12.0	14.7	14.0	. .
Net Commonwealth payments	23.7	6.8	7.5	4.9	3.1	. .
Outlays	58.9	11.7	9.5	4.5	5.7	. .
Current outlays	45.9	11.8	10.3	9.1	8.4	. .
Capital outlays	12.6	12.4	7.2	−9.1	−4.0	. .
Borrowing requirement (% of GDP)						
Gross	. .	3.0	2.4	1.9	1.4	1.1
Net[2]	. .	2.0	2.1	1.3	0.7	0.7
3. Total public sector borrowing requirement (% of GDP)						
Gross	. .	5.8	4.0	1.5	0.3	−1.0
Net[2]	. .	5.1	3.5	0.4	−1.0	−1.2

1. Note that receipts and outlays refer to the budget sector only while borrowing requirements refer to budget as well as off budget.
2. Including change in financial assets.
3. Gross borrowing less any change in financial assets.

Sources: Budget Paper No. 1, *Budget Statements 1989-90* and unpublished ABS data.

expenditures) have been broadly offset by savings in others of A$1.4 billion. Real outlays are expected to be 8.2 per cent below the peak in FY 1985-86. Outlays will continue to decline as a share of GDP to 23¾ per cent in FY 1989-90 and on the basis of government forward estimates, should reach 22 per cent of GDP in 1994. Commonwealth revenues are expected to rise by 8.9 per cent, the same rate as in the previous year. The main measure is a A$4.9 billion (A$5.7 billion in FY 1990-91) personal income tax reduction. The associated falls in tax rates have

Table 7. **Public-sector capital account** [1]

Per cent of GDP

	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89
Finance of gross accumulation	1.7	0.4	1.2	1.8	3.1	4.7	5.9
of which:							
General government	0.4	−0.8	−0.3	0.1	1.4	2.5	3.8
Public enterprises [1]	1.2	1.3	1.6	1.7	1.6	2.2	2.0
Gross fixed capital expenditure	7.2	7.0	6.6	7.0	6.8	5.6	5.2
of which:							
Commonwealth general government	0.3	0.3	0.4	0.4	0.4	0.4	0.2
State and local general government	2.3	2.4	2.5	2.6	2.5	2.1	2.0
Commonwealth public enterprises	0.8	0.9	0.9	1.3	1.2	1.0	1.1
State and local public enterprices	3.8	3.4	2.9	2.7	2.6	2.1	1.8
Total net lending [2]	−5.6	−7.2	−5.5	−5.0	−3.5	−0.5	0.8
of which:							
Commonwealth general government	−1.8	−3.3	−2.8	−2.1	−0.8	0.5	1.7
State and local general government	−0.5	−0.2	−0.5	−0.7	−0.7	−0.3	0.0
Commonwealth public enterprises	−0.3	−0.9	−0.4	−0.4	−0.4	0.3	−0.2
State and local public enterprises	−3.1	−2.7	−2.1	−1.7	−1.6	−1.0	−0.6
Net public sector borrowing requirements [3]	5.9	6.7	5.1	5.1	3.5	0.4	−1.0
Gross fixed capital expenditure (as a per cent of total)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Commonwealth general government	4.8	4.7	5.8	5.8	6.2	6.4	4.6
State and local general government	32.1	34.2	37.3	36.8	37.3	38.3	38.7
Commonwealth public enterprises	10.5	12.3	13.3	18.4	18.2	17.2	22.1
State and local public enterprises	52.6	48.8	43.5	39.0	38.3	38.1	34.6

1. Public sector and public enterprises excluding public financial enterprises.
2. Total net lending = finance of gross accumulation – gross fixed capital expenditure – increase in stocks – purchases of land and intangible assets.
3. Differs from total net lending because of different treatment of accruals and recent revisions.

Sources: *Budget Statements 1989-90*, Budget Paper No. 1 and *National Income and Expenditure 1987-88, Australian National Accounts*, ABS Catalogue No. 5204.0.

largely favoured lower marginal tax rates. Tax reductions have been partly offset this fiscal year by a number of measures bringing forward the payment of both company tax and income tax (amounting to A$1.4 billion). The Commonwealth net lending surplus is expected to rise by around ¾ of a percentage point of GDP to around 2½ per cent of GDP (Table 7). State government spending is expected to slow somewhat reflecting continued income restraint. Commonwealth grants to the state and local government sector are projected by the authorities to rise by 2.6 per cent in FY 1989-90, half the rate of growth of total spending, and state and local borrowings under the Loan Council (which include the borrowing of the public enterprises) have been further reduced by about one quarter. On balance the net

surplus of the public sector is projected by the authorities to rise marginally. While there are considerable margins of error in cyclically adjusting the budget balance, the Secretariat estimates suggest that there may be some small increase in the surplus on this measure in the present fiscal year. On this basis, fiscal policy can be considered as having a moderately restrictive impact on aggregate demand.

Monetary policy

Changes to the regulatory framework of the financial system are affecting the structure of financial sector balance sheets. The Statutory Reserve Deposits (SRD) of trading banks with the Reserve Bank of Australia were replaced by a Non-Callable Deposit (NCD) requirement in September 1988, which now applies also to saving banks. All banks now have to hold NCDs with the Reserve Bank amounting to 1 per cent of their total liabilities (excluding equity, but including non-Australian-dollar liabilities). The previous statutory reserve deposit (SDR) system required trading banks to hold a deposit with the Reserve Bank equivalent to 7 per cent of their Australian dollar deposit liabilities. The previous system placed a penalty on financing assets by domestic deposits. A substantial part of lending was financed by overseas borrowing and by recourse to the bill market. The change in the system has distorted monetary aggregates as banks increased deposits relative to other balance sheet liabilities, artificially pushing up the growth rate of M3 and other monetary aggregates. The Reserve Bank has recently announced a major increase in the interest rate paid on the NCD to a level 5 percentage points below the Treasury bill rate, further reducing any potential distortion that the regulatory framework might have on the institutional structure of the financial system. This measure coincided with the banks' agreement to restrain further increases in mortgage interest rates despite the sustained increases in short-term rates. The only remaining distortion to interest rates concerns the one-third of mortgages remaining under the 13½ per cent interest rate of the old system. This share is declining progressively but those with mortgages under the ceiling are receiving a cross subsidy.

Monetary policy has been progressively tightened from April 1988, after it had become clearer that the stock-market crash in October 1987 was not having any appreciable effect on spending. Short-term interest rates rose by 7 percentage points from the first quarter of 1988 to the third quarter of 1989 and are now in the range of 18 per cent (Table 8). Long-term interest rates have risen by approximately 1¼ to 2 percentage points and there is a sharply inverted yield curve. Intermediaries' assets, which probably give a more accurate picture of the current

Table 8. **Interest rates and monetary and credit aggregates**

	1981-1985	1986		1987		1988		1989
		I	II	I	II	I	II	I
Interest rates[1]								
Bank bills (90 days)	14.5	16.5	16.4	15.2	11.9	11.7	14.1	17.3
Treasury notes (13 weeks)	13.1	14.7	16.0	14.6	11.0	10.6	13.7	16.3
Treasury bonds (10 years)	14.2	13.0	13.8	13.4	13.0	12.1	12.2	13.6
Monetary aggregates[2,3]								
M3	12.9	13.0	9.4	12.8	16.0	13.3	18.6	26.7
Broad money	12.9	13.4	9.6	9.8	11.5	12.0	15.9	18.8
Lending to private sector[2,3]	15.5	20.3	16.6	14.3	15.9	18.3	20.4	22.4
of which:								
By banks	16.1	22.5	19.7	19.9	20.5	17.6	25.0	34.6
By NBFIs	14.8	18.7	13.5	8.9	11.9	18.5	14.1	11.1
Credit to private sector[3,4]	17.2	21.9	19.7	18.5	20.1	24.4	23.8	20.8

1. Averages of monthly data.
2. Data distorted by the establishment of new banks.
3. Percentage change on one year earlier for the last month of each period.
4. Loans by financial intermediaries and bank bills outstanding.

Source: Reserve Bank of Australia.

stance of monetary policy than monetary aggregates, indicate a tapering off in credit advanced to the private sector. The tightness of monetary policy and the improvement in the terms of trade helped induce a strengthening in the currency. The effective exchange rate rose by around one quarter from the low point in the third quarter of 1986 to the first quarter of 1989. Growing evidence of a weakening in the current account has led to a subsequent easing in the effective exchange rate by about 5 per cent.

Projections to the end of 1991

The national accounts for the third quarter have confirmed earlier indications of a slowing in domestic demand growth from the high levels in late 1988 and early 1989, with imports falling and a possible easing in inflationary pressure. Partial indicators suggest further weakening in the fourth quarter. Mortgage borrowing has declined sharply, and approvals for both residential and non-residential construction have fallen away, leading indicators are flat and there has been some weakening in consumer confidence. Job vacancies, which give some indication of future labour market trends, have been falling since mid-1989 and the growth in employment has eased in recent months. Nonetheless the economy has taken some

time to reach this turning point despite the tightness of policy. This can be attributed to the high level of profitability and the high degree of utilisation of existing capacity which is helping maintain business investment at high levels. Strong employment growth has kept a floor under consumption.

The OECD projections are based on the assumption of high short-term interest rates through much of the projection period, with some easing as a result of a slowing in domestic demand growth. Following usual OECD practice, the exchange rate is held constant in nominal terms over the projection period from its level in November 1989. Fiscal policy is assumed to be moderately restrictive. Although tax reductions will boost household incomes in FY 1989-90, this occurs against a background of continuing expenditure restraint. Continued slow growth of general government expenditure on goods and services is assumed in the following fiscal year, while tax revenues are likely to continue to rise more rapidly than household incomes because of fiscal drag. Aggregate wages are projected to rise in the range of 7 to 7½ per cent in FY 1989-90, perhaps decelerating slightly thereafter if labour market pressures ease. The extent and duration of the fall in domestic demand growth are open to an unusual degree of uncertainty.

While domestic demand is expected to remain fairly strong in the second half of 1989, it could weaken in 1990, led by a fall in residential and non-residential construction, and lower stockbuilding. Despite the tax reductions, private consumption growth may slow from its high rates in 1989, reflecting the increase in interest rates. In 1991, there could be a modest recovery in domestic demand growth; private investment might stabilise at relatively high levels in terms of GDP and there could be a small positive contribution from stockbuilding. The impact of slower growth in domestic demand on output growth is expected to be offset by a significant contribution from the real foreign balance, particularly in 1990. Exports are expected to pick up as the pressure on demand eases and a number of temporary factors are unwound. Imports are projected to fall significantly, reflecting slower growth in plant and equipment purchases and, in 1990, lower rates of stockbuilding. GDP growth is accordingly projected to slow to around 2 per cent in 1990, perhaps picking up slightly in 1991 (Table 9).

Assuming steady growth of world demand, commodity prices are expected to remain strong, with the terms of trade broadly unchanged in 1990 and 1991. The current account deficit could therefore decline to the range of A$15½ to A$16 billion (3½ to 3¾ per cent of GDP) by the end of 1991. There may be some slowdown in the rate of growth of employment as output growth weakens. However, as participation rates are cyclically sensitive, the labour force may also rise

Table 9. **Short-term prospects**

	Per cent share of GNP	Seasonally adjusted, percentage changes					
		Calendar years			Fiscal years		
	1988	1989	1990	1991	1988/89	1989/90	1990/91
A. Demand and output, constant 1984/85 prices							
Private consumption	57.2	5	2½	2¼	4	3¾	2¼
Government consumption	18.6	3¾	2¼	1½	3½	3½	1½
Investment	24.6	11½	– 4	½	12¾	2½	– 2½
of which:							
Government investment	2.4	5½	– 3	2¾	– 3½	1¾	-½
Private dwellings[1]	6.3	7½	– 10	2¼	21¾	– 6¼	– 4¼
Private construction	4.4	5	– 4¼	– 1¾	8¾	1¾	– 3
Private plant and equipment	8.4	21¼	– 1	-¾	18¾	9½	– 2¼
Public enterprises	3.1	6¼	– 2	3¼	¾	1¾	-¼
Final domestic demand	100.4	6¼	¾	1¾	6	3½	1
Stockbuilding[2]	0.6	½	-¾	¼	1½	-½	-¼
Total domestic demand	101.0	6½	0	2	7½	2¾	½
Foreign balance[2]	– 1.5	– 4	2	¾	– 4¼	-½	2
Exports of goods and services	17.8	2¼	6¾	5¾	1	5½	6½
Imports of goods and services	19.4	23½	– 3½	2	24¼	7½	– 3
Statistical discrepancy[2]	0.6	1¾	0	0	½	1	0
GDP at market prices[3]	100.0	4	2	2½	3½	3	2½
B. Other items							
Consumer prices[4]		7	7½	6¼	7	7½	6¾
Employment		4¼	1¾	1¾	4	3½	1½
Unemployment rate		6¼	6½	6¾	6½	6¼	6¾
Current balance (A$ billion)		– 21¼	– 16¼	– 15¼	– 17½	– 20	– 15
Current balance[5]		– 6	– 4¼	– 3½	– 5¼	– 5½	– 3¾
Net lending by government[5]		1¼	2¾	3½	1	1¾	3

1. Including real estate transfer expenses.
2. Contribution to growth.
3. Includes statistical discrepancy.
4. Private consumption deflator.
5. Per cent of GDP.

Source: OECD Secretariat projections.

less quickly, attenuating any impact on the unemployment rate. Inflation, as measured by the private consumption deflator, is projected to slow, possibly to around 6 per cent. This largely reflects the reversal of temporary seasonal factors, an easing in demand pressures and the fixed exchange rate assumption and consequent lower growth in import prices, rather than any major slowdown in domestic labour costs.

II. Meeting medium-term macroeconomic challenges

Short-term projections presented above foresee some unwinding of imbalances thanks to tighter policies, but the ratio of foreign debt to GDP is likely to continue to rise and price performance to remain poor when compared with trading partners. The challenge is to achieve the reduction in the external deficit and lower inflation over the medium term while at the same time maintaining, to the extent possible, a sustained rate of output growth and high levels of resource use. Success in meeting this challenge requires a combination of tight macroeconomic policies and further strides in microeconomic reforms to foster necessary changes in attitudes, work patterns and market structure which are negatively affecting productivity and inflation. This part of the Survey first assesses the constraints in achieving better balance of payments and price performance with the help of an illustrative medium-term scenario where high capacity utilisation is sustained. It then reviews structural aspects of the poor inflation record, making reference to relevant policies. Finally, productivity performance and its importance for achieving better medium-term results are discussed.

Medium-term prospects

The prospects for better macroeconomic performance over a medium-term horizon have been assessed in the two previous Economic Surveys and by others as well[1] in terms of hypothetical scenarios. With each Survey, the transition period has been rolled forward further into the 1990s, in this case as a result of the effects of unexpectedly higher domestic demand. The outlook is reassessed in this Survey on the basis of short-term projections to the end of 1991 – which are conditional on unchanged policies --, and a scenario for the subsequent 1992-1994 period. It should be noted that such scenario analysis has a number of shortcomings. These include the sensitivity of results to changes in underlying assumptions about the real exchange rate, terms of trade and export supply. Government policy also may not be invariant to the course of external debt. The resulting profile of demand,

Table 10. **Stabilisation scenario, 1990-1994**

Percentage annual changes and shares of GDP

	1989	1990-91	1992-94	1990-94	1994
Demand and output[1]					
Total domestic demand	6½	1	2½	2	. .
Exports of goods and services	2¼	6½	8	7¼	. .
Exports of manufacturing and services	3	. .	. .	10	. .
Imports of goods and services	23¼	– 1	6	3¼	. .
Foreign balance[2]	– 4	1½	¼	¾	. .
GDP volume	4	2¼	3	2¾	. .
Saving-investment balance[3]					
Saving rate	20	19½	20	19¾	20¼
Investment rate	25¾	23½	22¾	23¼	22¾
Private non-residential[4]	15½	15	14¼	14½	14¼
Residential[5]	6¼	5¾	5¼	5½	5¼
Real estate transfer expenses	1½	1¼	1¼	1¼	1¼
Government	2¼	2	2½	2¼	2½
Current-account balance	– 6	– 3¾	– 2¾	– 3¼	– 2½
Net foreign assets	– 31¾	– 34	– 36	– 35½	– 36
Memorandum items:					
GDP deflator	8½	6½	4½	5¼	4
Wage rate	7½	7	5	5¾	4½
Labour productivity	– 0	½	1	¾	1
Employment	4¼	1¾	2	2	2
Unemployment rate	6¼	6½	5¾	6	5½

1. Per cent growth.
2. Contribution to GDP growth.
3. Per cent of GDP.
4. Excluding stockbuilding, including public authorities.
5. Excluding real estate transfer expenses.

Source: OECD Secretariat estimates.

output and prices is then used to explore the conditions necessary to achieve better macroeconomic performance and implications for policy. The main macroeconomic features of the revised OECD scenario (Table 10) are:

- A cyclical fall in the current-account deficit from its present level of 6 per cent of GDP to around 3½ to 3¾ per cent in 1991 followed by a steady decline towards 2½ per cent in 1994, leading to a stabilisation of the foreign debt ratio at some 36 per cent of GDP;
- GDP growth of around 2¾ per cent on average with total domestic demand rising by 2 per cent;

- Average annual employment growth of 2 per cent and some slight reduction in the unemployment rate;
- A decline in the inflation rate to around 4 per cent at the end of the period.

Such an outcome is based on a number of assumptions being realised. A strong external environment is assumed. World output grows at 3 per cent and Australian terms of trade remain unchanged. Nominal exchange rates are held constant up to the end of 1991 with the real rate unchanged thereafter. Key assumptions regarding the development of main aggregates include the following:

- A sustained medium-term trade response, with exports growing by about 4 percentage points a year faster than imports over a five-year period;
- Aggregate savings net of investment rising by 3½ percentage points of GDP;
- Private investment remaining high enough to ensure adequate growth in production capacity, particularly for traded goods;
- Aggregate productivity growth of around ¾ per cent, or around the average for the 1980s;
- Continuing nominal wage restraint.

Such a scenario is but illustrative, giving broad indications of how main aggregates might unfold under specific assumptions. Such an analysis should in no way be taken as suggesting concrete medium-term goals of any kind. For example, there is nothing sacred about the stabilisation of the foreign debt ratio at around 36 per cent by 1994. While such a figure is high by OECD standards, judgement as to whether it is excessive depends on how international financial markets view the long-term capacity of the economy to service debt. Investor confidence is likely to be enhanced if there is steady progress in improving the current-account position, although this may not be the only factor. Economic "fundamentals", including profitability, price performance and the flexibility of the economy in the face of outside shocks, are also relevant considerations. With these caveats, the scenario exercise can be useful in exploring conditions necessary for achieving better macroeconomic performance and associated risks and uncertainties.

The scenario raises several important issues. First, there is a fundamental question as to whether the size of the current-account deficit projected to prevail in 1991, some 3½ to 4 per cent of GDP, should be considered "unsustainable". Second, if the need to reduce the current external deficit is agreed, questions can be raised as to whether the required growth of net exports is consistent with international competitiveness and supply capacity. Capacity to service net exports can be raised by reducing domestic absorption and/or creating new production capacity,

and this is closely related to the third set of issues concerning the possibilities of bringing about a better balance between domestic saving and investment as well as the assessment of the levels of investment that are necessary for production capacity of the economy to increase at a sufficient pace. The fourth set of questions relate to how the economy's inflation proneness can be broken so that a significant deceleration in both price and wage inflation presented in the scenario can be realised while maintaining relatively high levels of resource utilisation. Changes in price and wage-fixing behaviour are called for as well as ensuring that monetary policy is consistent with a deceleration in inflation. The final set of questions concern enhancing productivity, thereby contributing to increased productive capacity as well as to lower inflation.

The issues addressed above pertain to achieving sustained improvements in macroeconomic performance. A significant part of the improvement to 1991 is cyclical and progress thereafter may become more difficult. For this reason, further microeconomic reforms appear to be necessary to encourage saving – through a better balance between indirect and direct taxes and the removal of any remaining savings disincentives – to promote competition in product markets and to make the labour market more efficient. These various issues are taken up in more detail below.

Reducing external imbalances

The need to reduce the current-account deficit

The desirability of a reduction in the present current-account deficit is predicated on the concern that a progressive rise in the external debt and debt servicing can become "unsustainable". Recent international experience suggests, however, that large current-account imbalances can continue for longer periods than in the past without running into financing problems. Various explanations have been put forward, including the evolution towards more global markets. The increased flows of capital between countries (reflecting the differences in savings and investment patterns across countries) parallels patterns already existing within countries. With the government sector in rough balance, it has been argued that the external deficit reflects private sector views that investment in Australia will generate returns adequate to cover the necessary foreign borrowing. With net domestic saving still positive, foreign borrowing corresponds to equivalent real asset formation, capable

of generating future profits from which debts could be serviced. Seen from this vantage point, the deficit on current account would not be considered as a constraint on growth and, indeed, could be seen as "optimal" as it reflects rational private-sector decisions at a microeconomic level[12].

There are several reasons why such arguments should not be taken at face value. First, it is not clear that existing tax, expenditure, tariff and regulatory policies are not distorting private-sector decisions. If they are, then the current-account deficit which resulted from private decisions might not be socially optimal. Second, the existing size of the current deficit includes interest payments on past borrowing. Part of this borrowing was made to finance private-sector resource investments in the early 1980s which were made under expectations of high and sustained natural resource prices. With falling commodity and energy prices, returns on capital from these projects have been less than expected. Government and public enterprise investment over the same period – part of which was associated with these resource projects – has also been criticised for excess costs, inefficient capital use and low returns. At the same time, the increase in debt in the early 1980s has in part reflected the rise in general government net borrowing. Part of the capital inflows may have been channelled into consumption, leaving no counterpart increase in the capital stock. Third, policies directed towards reducing the external deficit and a closer alignment of domestic saving with investment may help provide greater stability to the economic environment. The most recent widening in the large current deficit has occurred during a period of high commodity prices. Policy makers recognise that sustainability depends on market attitudes which can change abruptly, for example, in the face of a weakening in the terms of trade. A continued rise in foreign debt raises the risk that eventual pressure for correction will be all the sharper and more sudden, requiring a large rise in interest rates or, more likely, a steeper fall in the exchange rate. While the latter would generate a desirable rise in the relative price of tradeable goods, it would also introduce an inflationary shock, raise debt-servicing costs, and probably engender some terms-of-trade loss. Increased import costs and an additional round of wage and price hikes would put pressure on profits, and cloud investment prospects.

The development of net exports

There are some major uncertainties regarding the outlook for trade and trade prices. First, as noted, exports will need to grow substantially faster than imports. After allowing for some fall in import penetration in 1990 and 1991 from the current very high levels, imports could rise on average by just over 3 per cent per

year over the five-year period. On this basis, if the figures in the illustrative scenarios are to be attained, exports of goods and services would need to rise by a little over 7 per cent per year. If the rise in natural resource and farm exports can be assumed to be considerably less rapid than this[13], manufacturing and service exports would have to grow on average by around 10 per cent. Achievement of such rates of growth will depend on competitiveness and supply availability. As noted in Part I, there has been some erosion of the gains in competitiveness as the Australian dollar has appreciated and, if constant exchange rates were maintained over the projection period, international cost competitiveness would deteriorate further and make the current-account figure harder to achieve. Since improved competitiveness through a depreciation in the exchange rate cannot be guaranteed under a floating exchange rate regime, competitiveness can best be enhanced through increased productivity and by improving non-price performance in areas such as quality, reliability and timely delivery. Second, the terms of trade could weaken. Commodity prices have recovered sharply, particularly for farm products, and world stocks for many Australian commodities remain finely balanced. World economic growth is expected to be sustained at least over the short term and demand for primary commodities should remain firm. Nonetheless, wool prices now seem to be below their peak, wool stocks have risen significantly and there is some prospect of a fall in wheat prices. Over the medium term, an increase in world supply of raw materials in response to higher prices could provoke some easing of other commodity prices. If agricultural and raw material prices were to rise by 1½ per cent *per annum* less than projected, the debt-to-GDP ratio would be 1 to 1½ per cent higher in 1994 than in the illustrative scenario and the debt-to-GDP ratio would continue to rise.

Domestic absorption and the balance between savings and investment

Achievement of medium-term stability of external debt will require lower growth of domestic demand, allowing output to be increasingly directed to net exports where supply and competitiveness permit. The net release of resources *ex post* is indicated by the change in overall saving relative to investment. Over the present upswing, the recent increase in the external deficit reflects the growing imbalance between private sector saving and investment, whereas the public sector has moved towards overall balance (Table 11). The aggregate savings ratio, following a trend decline, reached its nadir around 1983 when increased spending and a cyclical fall in tax revenues led to a contraction in government savings (Diagram 6)[14]. The increase in aggregate savings as a share of GDP since then – over

Table 11. **Saving and investment**

Per cent of GDP

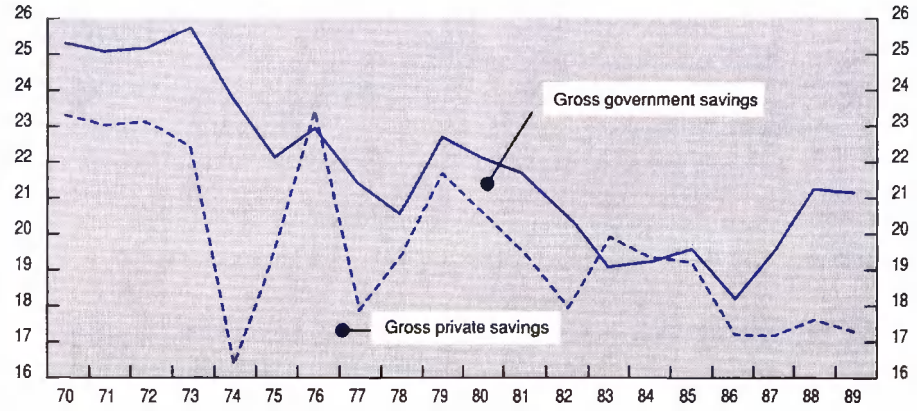
	1983	1984	1985	1986	1987	1988	1989[1]
Private sector							
Gross savings[2]	19.5	19.3	19.2	17.4	17.5	17.7	17.3
Gross investment[3]	19.6	21.2	22.3	21.0	21.3	23.1	24.9
of which:							
Business investment	15.2	14.4	15.8	15.8	15.8	15.6	15.9
Housing investment[4]	5.3	6.0	6.1	5.6	5.6	7.0	8.0
Stockbuilding	−0.9	0.9	0.4	−0.3	0.0	0.5	1.1
Net lending	0.9	−0.8	−2.1	−2.7	−3.0	−4.7	−7.0
Government							
Gross savings	−0.8	−0.1	0.3	0.9	2.2	3.5	3.0
Gross investment	2.7	2.7	2.9	3.1	2.8	2.4	2.2
Net lending	−4.5	−4.0	−3.5	−3.1	−1.4	0.4	1.1
Total							
Gross savings	18.6	19.1	19.5	18.3	19.7	21.3	21.2
Gross investment[3]	22.3	24.0	25.2	24.1	24.1	25.6	27.1
Current account	−3.7	−4.8	−5.6	−5.8	−4.4	−4.3	−6.0

1. Estimates.
2. Adjusted for statistical discrepancy.
3. Including stockbuilding.
4. Including real estate transfer expenses.

Sources: Australian Bureau of Statistics and OECD Secretariat estimates.

4 percentage points of GDP since 1983 with the sharpest improvement after FY 1985-86 – can be largely attributed to general government. Private saving and investment have moved procyclically, with the latter tending to have the greater amplitude[15]. An initial increase in savings from the trough was more than offset by a rise in investment. More restrictive policies in 1986 helped curtail private investment, but private sector saving fell by more, possibly reflecting the impact of the decline in commodity prices and the associated terms-of-trade loss in 1986. The narrowing in the external deficit in 1987 appeared, therefore, to reflect higher saving and lower investment by general government. As the economy gathered strength in 1988 and into 1989, the private-sector investment ratio rose sharply while the private savings share remained virtually unchanged. Private-sector savings remain 3 percentage points of GDP lower than at the beginning of the decade and 6 percentage points lower than in the period just prior to the first oil shock. While the split between household and business sectors is open to wide margins of

Diagram 6. **SAVING RATES**
As a percentage of GDP



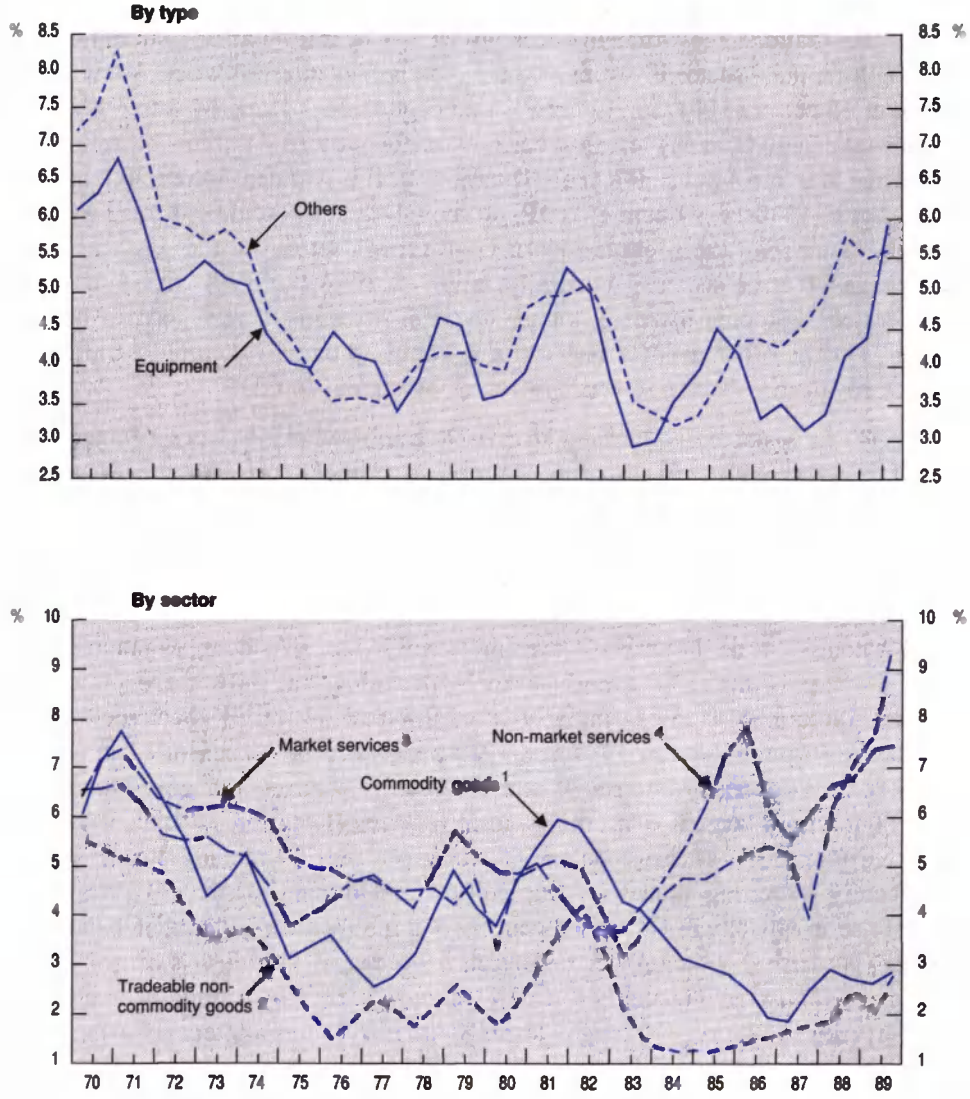
Sources : Australian Bureau of Statistics and OECD Secretariat estimates.

error, household saving ratios, on balance, appear to have declined in the period since 1983, with higher business-sector saving contributing to higher levels of capital formation.

Investment patterns in a medium-term context

As noted, the stabilisation of the foreign debt ratio will require a corresponding narrowing in the gap between private saving and investment, from around 6 per cent at present to around 2 per cent of GDP over the period 1990-94 if the debt were to stabilise at around 36 per cent of GDP. There are numerous configurations of aggregate demand, savings and investment which could produce this result. However, estimates, partly based on the OECD Interlink model, provide some broad indications of the *scope* for adjustment under the scenario laid out above. Housing investment has risen sharply from low levels in 1987 and is now around 6 per cent of GDP, significantly above the medium-term trend. Various estimates

Diagram 7. **GROWTH IN THE CAPITAL STOCK**
(Business sector)



1. Agriculture and mining.
2. Manufacturing.
3. Transport, storage and communication, finance, property and business services, wholesale and retail trade.
4. Community, recreation, personal and other services.

Sources : Capital stock 1987 - 88, Australian Bureau of Statistics, Catalogue No. 5221.0 and OECD Secretariat estimates.

and projections suggest that underlying demand for housing could be 15 per cent less than present levels or between 5 and 5½ per cent of GDP[16].

Business surveys, price pressures and the sluggish response of output to higher levels of demand suggest that the economy is now operating at or near full capacity. With business sector investment (including public enterprises) currently in the range of 15 per cent of GDP, and measured capital stock rising by 5 to 6 per cent, the model calculations suggest that business-sector supply might now be growing in the range of 3¾ to 4 per cent a year (Diagram 7). If investment were to fall back to the range of 13 to 14 per cent of GDP, estimated capacity would still keep growing slightly faster than the average rate of GDP growth set out in the scenario[17]. But the range of error seems particularly large[18,19]. If replacement investment and accelerated scrapping increase, higher levels of investment may need to be sustained. On the other hand, a faster rise in capital productivity could permit adequate growth in capacity at lower ratios of investment in GDP.

A fall in business and housing investment combined of 2 to 3 percentage points of GDP could nonetheless maintain broad consistency between the growth of capacity and output as presented in the scenario. Such conclusions need to be qualified in two important respects. First, government investment is now at historically low levels in terms of GDP and pressures may build up for an increase, particularly if the private sector continues to grow at a sustained pace[20]. Second, there is no assurance that private investment will in fact subside by as much as this if profits remain high. This might even be desirable, but only if the pattern of business investment is increasingly oriented towards the traded goods sector. The increase in capital stock in 1988 and 1989 appears to be concentrated in market services (services excluding social and community services and government services) but with a large rise in hotels and restaurants (Diagram 7). In contrast, the gross capital stock is rising by only 2 to 3 per cent in manufacturing and in commodity exporting industries (agriculture and mining combined). While the recent rise in capacity in the traded goods sector is difficult to judge[21], on balance, it would appear that some further expansion is necessary. High levels of investment would accelerate the introduction of new technology, thereby leading to an increase in competitiveness over the longer term. Some increase in aggregate saving may, therefore, be called for if the external deficit is to narrow.

The medium-term development of savings

Aggregate saving can be increased by raising government saving further and there is undoubtedly some scope for further spending cuts, particularly at the level

of state governments. It needs to be recognised, however, that this may be partly offset by lower private sector saving. Where additional government expenditure cuts reduce the supply of quasi-collective goods (for example, health) this may be replaced by increased private spending, thereby neutralising the impact on aggregate saving. If a larger surplus also leads to expectations of lower taxes, private spending may also be stimulated. There may also be political limits to the size of the surplus. If it is held at a high level for a sustained period, pressure may build up for increased government spending. Increases in aggregate saving may therefore need to rely more on higher private saving over the medium term.

To this end, distortions to private saving should be removed. The authorities have already taken some measures going in this direction. First, from the beginning of 1987, the superannuation (retirement saving) system has been gradually extended to a wider range of the workforce and upgraded where it already existed. Retirement saving has increased sharply and superannuation fund holdings now represent around one-third of household financial savings. Second, the reduction in marginal tax rates in the tax reform in 1985 (for personal income tax) and 1988 (for corporate tax) and further reductions in rates in mid-1989 have increased the after-tax return on savings. Third, the government has announced a retirement income policy aimed at improving the access to superannuation for part-time workers and married women re-entering the work force. Incentives to encourage retirement saving by the self-employed and by employees who have little or no employer superannuation support will be increased by allowing a larger amount of superannuation contributions to be deducted from taxable income. At the same time, the Government is putting forward a proposal aimed at reducing disincentives to retirement saving which result from the combination of the tax system and means- and asset-testing of pension benefits. To reduce the effective marginal tax rate on additional pensioner income (the combination of the marginal income tax rate and the withdrawal rate of pension benefits as the pensioner's private income increases); pensioners are to be exempted from income taxation over the income range where pensions are reduced[22]. There will also be greater incentives to take benefits as superannuation pensions or as annuities rather than as lump-sum payments, thereby reducing the chances that assets will be spent, in order to then receive a government pension.

These policies, while going in the right direction, may need to be buttressed by other policies. A greater share of future wage increases could be channelled into retirement saving, though it is necessary to ensure that this would not lead to increases in overall labour costs in excess of productivity growth. Stronger measures to shift from lump sum payouts to annuities could also be introduced or, at

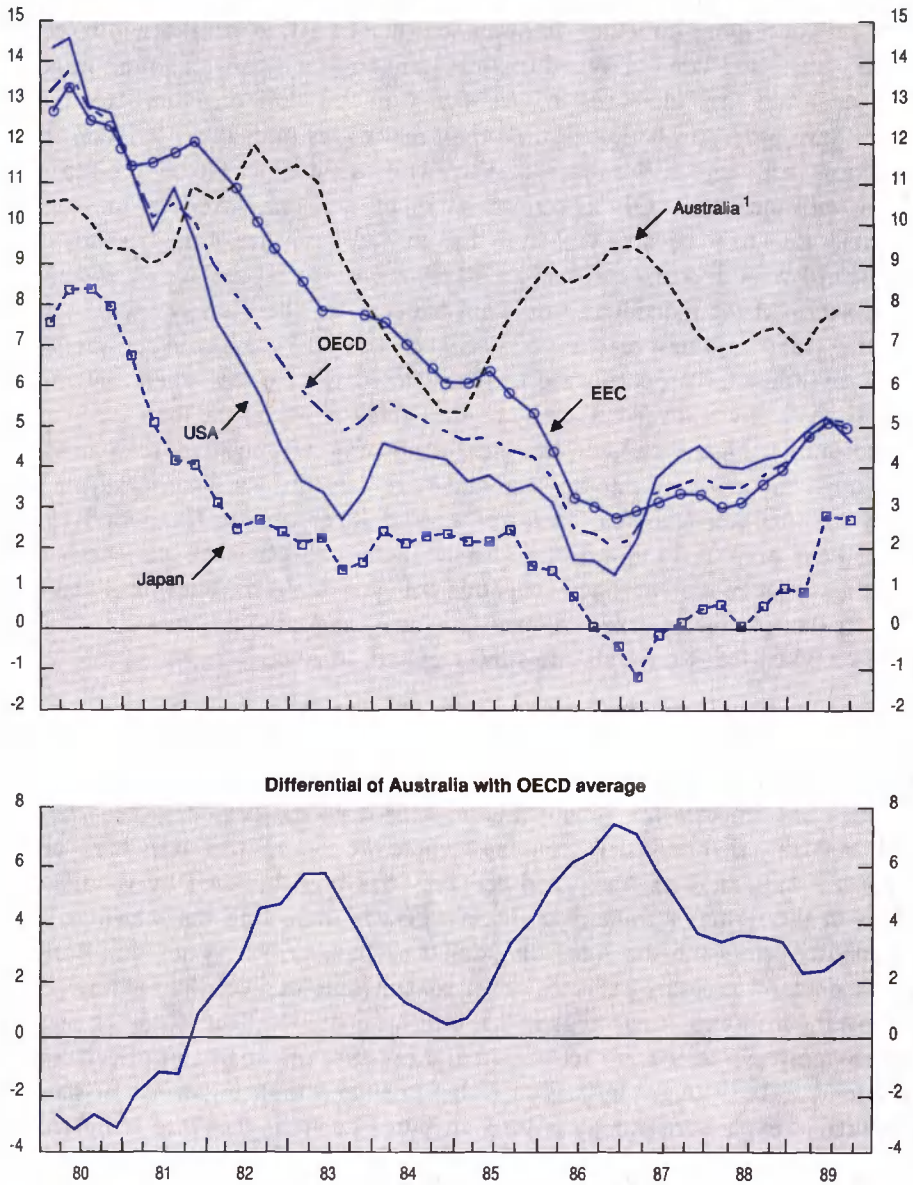
the very least, restrictions imposed on payout before the age of retirement. Later payouts would reduce potential dependency on government old-age pensions, at least in the period just after retirement. Nonetheless, increased institutional saving, in the absence of more general improvements to the incentive to save, may result only in the substitution of increased superannuation saving by lower saving in other forms. Further reforms to the tax system could therefore be considered. Australia already obtains a substantial proportion of taxation revenue from indirect taxation. However, this revenue is collected from high rates on a relatively narrow base resulting in significant distortions in relative prices. Moreover, the existing wholesale sales tax only imperfectly removes taxation on inputs used in the manufacture of goods so that an element of indirect taxation remains on exported goods. The introduction of a "broadly-based consumption tax" as suggested by the Government at the time of the Tax Summit in 1985 would have a favourable effect on relative prices and would permit further reductions in marginal income-tax rates. A broadly based indirect tax would also have a favourable effect on price competitiveness for goods for export which would not be subject to the tax[23]. However, the overall impact on savings could be limited given that the scope for additional reductions in marginal tax rates would not necessarily be large. Finally, incentives to save could be enhanced by lowering the rate of inflation. As suggested above, the tax system is not "inflation neutral", and price increases will continue to reduce real returns to saving and distort business and household decisions more generally.

Reducing inflation proneness

As noted in Part I, the rate of inflation as measured by the private consumption deflator declined somewhat in 1988 and 1989 compared to the period 1985-1987, even though it has edged up more recently with the increased pressure on capacity. This pattern has been accompanied by more rapid inflation in other OECD countries so that the gap between Australian and the average OECD inflation rates has been narrowing in recent years (Diagram 8). However, this differential is still significant and currently amounts to 2 to 3 percentage points. The scenario presented above suggests that, unless productivity growth picks up significantly, slower growth in nominal wages will be needed if the inflation rate is to be progressively brought down to rates found in Australia's major trading partners. Wage restraint, will need to be supplemented by greater competition in product markets and appropriate macro-policy settings.

Diagram 8. **COMPARATIVE INFLATION PERFORMANCE**

Per cent change at annual rates, quarter on 4 quarters earlier



1. Adjusted for medicare.

Source : OECD Secretariat estimates.

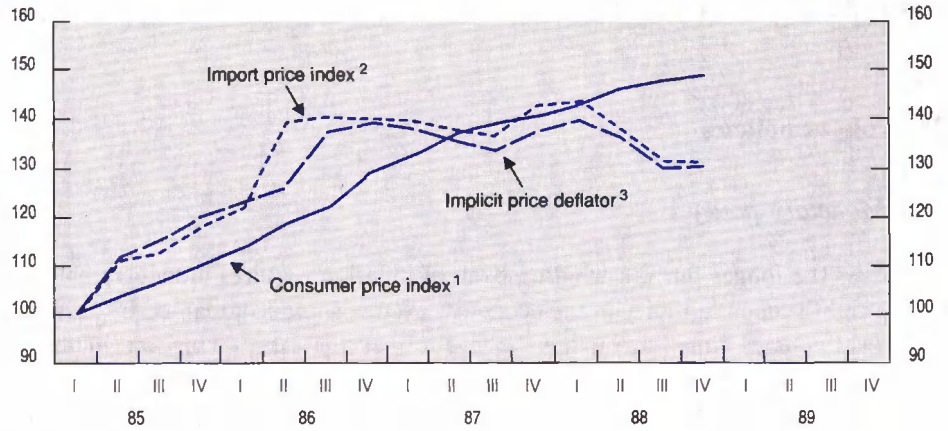
Some structural impediments to reducing inflation

Certain features of price and wage formation may make the task of winding back inflation more difficult. As discussed in Part III, Australia has largely followed centralised fixing of award (mainly minimum) wages with strong wage-wage links ensuring that increases in one sector quickly flow on elsewhere. Nominal wages have proved to be less flexible than real wages to changes in labour-market conditions, although in this regard, Australia does not appear to be significantly out of line with most other OECD countries. Nonetheless, employer resistance to wage increases may have been weakened by the multi-firm nature of many awards. Since any award wage increases will affect all firms covered by the award, the competitive position of the individual firm is not affected. Further, in some sectors such as building, there is widespread use of so-called "rise-fall" clauses in contracts. These generally allow for proportionate increases in contract prices where *award* wages are raised. The employer is thereby readily able to pass on the increase in costs to the consumer. Nonetheless, in the present upswing, wage-rate developments have been quite moderate despite tight labour-market conditions. Indeed, with an average yearly reduction in real wages of around 1 per cent in the period 1984-88, profits have been on an upward trend since the trough. Recent experience suggests that pursuit of consistent macroeconomic policy within a medium-term framework and greater product-market competition may be needed to ensure that further wage restraint feeds through into slower growth of prices.

The continuing gap between the rates of inflation in Australia and the rest of the OECD area may also partly reflect the impact of large swings in the terms of trade. Countries like Australia, where exports are concentrated in primary commodities and imports are mainly manufactured goods, exhibit greater terms-of-trade volatility than industrial countries where the composition of their exports and imports is similar. The Australian economy has been buffeted by volatile movements in the terms of trade over the last decade, reflecting sharp swings in both commodity prices and the Australian dollar exchange rate. As noted in Part I, the recent demand pressure reflected, to a considerable degree, the spill-over of the improvement in export earnings and the terms-of-trade effects to other sectors of the economy. Since the impact of demand pressure on wage and price formation may tend to be stronger in periods of high demand than in periods of slack, the volatility of export prices may have contributed to the higher rate of inflation[24].

In addition, changing behaviour of importers after the exchange rate depreciation in 1985 and 1986 may also have played a role. Movements in commodity prices and the exchange rate tend to be positively correlated, particularly since the

Diagram 9. **PRICES OF IMPORTED CONSUMER GOODS AND IMPORTED GOODS COVERED BY THE CPI**



1. For imported goods.
2. For consumer goods excluding mineral fuels and civil aircraft.
3. For endogenous consumer goods.

Source : Price Surveillance Authority, derived from ABS, *Import Price Index, Australia, Cat. No. 6414.0 ; Balance of payments, Australia, Cat. No. 5302.0* and *CPI : Effect of Changes in Prices of Imported Items.*

floating of the Australian dollar in 1983[25]. The change in the exchange rate ought to dampen domestic price effects – arising from higher export prices and the impact of export earnings on demand-- *inter alia*, through the flow-through of lower import prices. However, the pass-through of lower import prices into consumer prices of imported goods as the exchange rate rose from the third quarter of 1986 has been modest, even after allowing for a rebuilding of margins in the wake of the preceding depreciation (Diagram 9). While there is normally some lapse of time between the change in the exchange rate and the impact on domestic prices, this lag appears to have lengthened during the recent appreciation. A possible explanation may be the more extensive use of forward exchange cover in delivery contracts between importers and their foreign trading partners. These arrangements usually fix the relevant exchange rate at the date of contract in order to reduce the risk of

exchange rate losses for both parties during the time span between signing the contract and the actual delivery of the goods[26]. Taken together, the terms-of-trade deterioration in 1985 and 1986 and the subsequent improvement in 1987 and 1988 seem, up to the present, to have worked against redressing inflation, although some of the effects of lower import prices on domestic prices may still be in the pipeline.

The role of policies

Monetary policy

Over the longer term, a winding back of inflation requires monetary policy to keep a tight rein on liquidity in the economy, even where accompanied by fiscal and structural policies aimed at raising the level of net domestic saving and increasing the efficiency of markets. Nonetheless, as noted by the Reserve Bank, "Monetary policy (is) sometimes described as the 'balancing factor" in the overall policy package, i.e. bridging the gap between macroeconomic objectives and the setting of other policies' [27]. Being the most flexible arm of economic policy, monetary policy plays a short-term, fire-fighting role to a varying degree in almost all countries. For a country like Australia, which is subject to large swings in commodity prices and is trying to reduce inflation, relatively large shifts in interest rates and/or exchange rates may, therefore, be desirable[28]. Within this context, there can be some apparent conflict between external and internal adjustment where upward pressure on the nominal exchange rate leads to reduced international competitiveness. However, where monetary policy is eased to prevent exchange rate appreciation in nominal terms, the impact on the *real* exchange rate may only be temporary if an acceleration in demand and inflation ensues, requiring even sharper subsequent increases in interest rates. Indeed, this has been demonstrated in the recent upswing. The easing of monetary policy in 1987 – at a time when commodity prices were rising – has been partly responsible for recent demand and balance-of-payments pressure. The short-term orientation of monetary policy need not be incompatible with the goal of price stability over the longer haul. But for this to be the case, monetary policy needs to be consistently directed towards keeping demand growth in check over the medium-term, contributing to a sustained reduction in inflation and thereby anchoring medium-term expectations. A strong commitment to medium-term price stabilisation is essential and should help ensure future wage moderation. The recent statements by the authorities giving greater prominence to the anti-inflationary role of monetary policy and, more specifically,

the authorities preparedness to maintain a very tight monetary stance as the economy continues to slow are helpful in this regard. The greater the competition in product markets and the flexibility of nominal wages, the higher will be the level of resource utilisation at which the anti-inflationary objective can be pursued.

Policy affecting competition in product markets

Government policy favouring competition can help promote conditions where cost improvements are increasingly passed on to prices. Policy can also affect costs and prices by ensuring that public enterprises or regulated private firms improve efficiency. Market structures are not noticeably conducive to competition in Australia. Concentration of ownership is high in many sectors. While effective competition from imports can occur in many industries within the traded goods sector, a number of mergers have occurred in recent years in areas such as retail trade and other service industries which are not exposed to international competition. In certain cases, high concentration may be inevitable (and desirable) in a small market like Australia if it results in economies of scale or of scope. Competition can be intense even between very few firms, particularly if they strive for market dominance. Nonetheless, oligopoly or near-monopoly conditions appear to exist in many markets – because of a narrow range of producers and/or the fragmentation of domestic markets as a result of the size of the country – thereby increasing the risk of collusive behaviour and exercise of market power. International competition can help offset the effects of increased domestic concentration in traded goods sectors. This has been increased through the 1988 decision to reduce the effective rates of protection by 30 per cent by 1992 and the Closer Economic Relations Trade Agreement, which will completely free trade with New Zealand by mid 1990. However, reduced tariff barriers and increased import penetration do not always indicate that competition has been increased[29].

Australian competition policy under the Trade Practices Act 1977 (TPA) allows action where market dominance may arise as a result of horizontal mergers or takeovers. Experience suggests that the Act would allow horizontal concentration to proceed, without public scrutiny, up to the point where two large firms still exist in the sector. While vertical mergers and integration are not proscribed, there are restraints on abuse of market power in the form of retail price maintenance, exclusive dealership, price discrimination or predatory behaviour where the intent is to reduce competition. Collusive behaviour is also forbidden. In common with other countries, it has been difficult to distinguish between normal business practice on the one hand and misuse of market power or predatory behaviour on the other.

Notwithstanding these difficulties, a recent parliamentary inquiry into mergers and takeovers and monopolies found that there was insufficient evidence to support the need for major redrafting of the provisions of the TPA which regulate anti-competitive behaviour in the corporate sector[30,31]. Competition policy has been limited to the areas of Commonwealth jurisdiction over corporate affairs and its ability to restrain anti-competitive behaviour is virtually non-existent in the unincorporated sector, for example in professional services.

Competition is also constrained by a range of government regulations. This is largely found in public utilities, transport and communications, sectors where public enterprises dominate. Australia appears to be in the upper range of OECD countries as regards the share of public enterprises in total output, and certainly higher than in the United States, Japan and the United Kingdom. Public enterprises absorb a large share of inputs (they represent 15 per cent of total enterprise wages and are highly capital intensive) and they provide important inputs to the private sector. While some public enterprises (e.g. banking) face private sector competition, the majority have been protected from competition. This, combined with the absence of clear-cut financial objectives and restrictive award conditions and work practices, has probably led to increased average production costs through over-manning and higher wage costs, over-investment (particularly in electricity generation), and less incentive to innovate. There appears to be considerable room for improvement in a number of areas. While open to large error, OECD comparisons of productivity levels in the public utility sector indicate that labour productivity in Australia is less than half the OECD average and capital productivity is a

Table 12. **Comparative productivity levels**[1]

	Capital productivity			Labour productivity		
	1970-73	1973-79	1979-85	1970-73	1973-79	1979-85
Agriculture	1.000	1.280	1.391	1.447	1.574	1.320
Manufacturing	0.956	0.930	0.950	0.934	0.907	0.823
Public utilities[2]	0.357	0.429	0.538	0.424	0.425	0.423
Construction	0.892	0.869	0.854	0.969	0.954	1.070
Wholesale and retail trade	0.875	0.838	0.791	0.923	0.860	0.821
Transport	0.826	0.909	1.150	0.787	0.853	0.960
Financial services	0.923	0.917	0.917	0.854	0.820	0.796
Total of above sectors	0.839	0.865	0.910	0.943	0.931	0.913

1. Average for indicated periods for Australia *vis-à-vis* the average of total OECD excluding Austria, Greece, Iceland, Ireland, Switzerland, Portugal, Spain, Turkey and New Zealand.
2. Electricity, gas and water.

Source: OECD Secretariat estimates.

little more than half (Table 12). Recent estimates of the transport sector suggest that there are potential savings of 17 to 18 per cent of total business shipping and shore-based transport costs, the present airline policy is thought to have increased air transport costs by 8 to 10 per cent over comparable U.S. airlines, and international comparisons and recent improvements in electricity generation in Queensland suggest that there is scope for improvements in labour productivity of up to a quarter and in capital productivity of up to one-fifth[32]. Estimates of the total impact, partly based on applied general equilibrium models – and, as such, open to wide margins of error --, suggest that the removal of inefficiencies in these areas could lead to an increase in GDP of over 3 per cent[33].

Reform of the major Commonwealth enterprises is currently underway and the benefits in terms of improved performance are expected to be built up over the coming years. These reforms, commonly termed "corporatisation", involve the reduction of government controls over the day-to-day management decisions with greater focus on setting goals and monitoring of performance against rate of return and other targets. Similar strategies are also beginning to be introduced by state governments, such as New South Wales, which is important as they control the larger part of public enterprises. The degree of success in this area depends importantly on the degree of independance of management.

A range of reforms have been announced to increase competition and reduce costs. Air transport is to be deregulated from 1990 and a number of restrictions on air cargo and charters have been removed already. During the recent pilots' strike, foreign airlines were allowed to carry domestic passengers. Those areas of grain handling that are under Commonwealth control have been largely deregulated. Reform of rail transport is under way in New South Wales and under study in a number of other states. The government has reached agreement to reform work practices and manning costs in coastal shipping and to allow more use of foreign shipping for cabotage. Discussions are under way for major changes in the ports, but there has been considerable delay in obtaining agreement between business and labour on the scope of the changes. Reforms to telecommunications have allowed greater competition outside of basic telephone and associated switching (with the exception of "first phone" installation which will be reviewed in 1990). Prices and the boundary between monopoly and competitive services will be administered by an independent authority (AUSTEL). Some important reforms are still lacking, particularly in transport and electricity generation at the State level.

A major policy issue concerns the setting of price structures in line with marginal costs in regulated monopolies. Both telecommunications and electricity

generation have price structures which imply significant cross-subsidisation between users. In general, long-distance communications subsidise local calls and, in electricity generation, businesses subsidise private households. In addition, peak load pricing is generally not practised. The absence of timed local calls has led to overuse of local telephone systems and with no differential in the tariff over the day, the system is overused during business hours. Electricity generation is marked by large diurnal and seasonal fluctuations in demand and only limited use of peak load pricing is made. These practices tend to distort costs, fail to signal adequately the true costs of supply to users and, as a consequence, raise capital and other input costs. Pricing issues may also have to be considered in land transport. Rationalising of rail operations should be carried out with the broad assessment of overall transport needs and social, as well as private, costs. In particular, the environmental impact (road congestion and air pollution) and the wear and tear on the road system need to be taken into account in setting licensing or other fees on road transport.

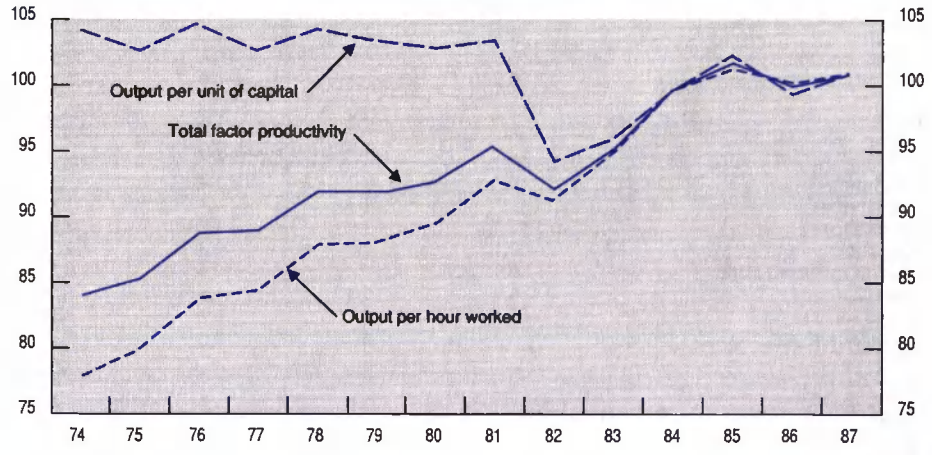
Increased competition is likely to lead to improved productivity as firms respond to keener market conditions. Higher productivity growth would reduce cost pressures and act to slow the underlying rate of inflation as well as improving the competitive position. To the extent that this helps establish a stronger non-commodity export base over a somewhat longer time horizon, the vulnerability of the economy to commodity-price fluctuations could be reduced[34].

Productivity performance

As noted, higher productivity growth eases the difficulties in restoring better economic balance over the medium term, permitting faster growth in supply at lower resource cost, higher growth in real incomes and/or lower rates of inflation. OECD estimates of productivity *levels* based on purchasing power parities (PPPs) suggest Australian labour productivity lies slightly below the OECD average at the macroeconomic level and more so in manufacturing, public utilities and financial services (Table 12). This appears to be in line with case studies which suggest that the comparative performance of Australia in terms of productivity levels is not good, especially in manufacturing and electricity generation[35]. Although such results should be interpreted with caution as international comparisons of productivity levels are open to a wide range of possible errors, particularly at a sectoral level, there are some reasons to believe that such estimates for manufacturing could be over-estimated[36].

Aggregate productivity *growth* performance has been about on par with the OECD average (Table 13), although labour productivity growth has been somewhat lower in the 1980s. Growth of capital productivity, which is normally negative (due partly to definitional problems)[37], has been somewhat better than for other OECD countries. Average rates of growth of labour productivity in Australia declined in the 1970s relative to the preceding decade, as in most OECD countries. Growth rates fell further in the 1980s, with the level of labour productivity remaining virtually unchanged over the period 1986-88, a result that went together with very strong growth in employment (Diagram 10). Measured capital productivity growth, while also declining somewhat in the 1970s, has remained in the same range in the 1980s. But as measurement problems probably became more serious in the 1980s, the true rate of capital productivity growth may actually have increased[38]. Growth of total factor productivity (TFP) – an average of labour and capital productivity weighted by their shares in national income – has shown a pattern similar to labour productivity, reflecting labour's large share in the total. The fall in labour productivity growth and the stability (or a possible rise after adjustment for measurement problems) of capital productivity growth seems to

Diagram 10. **PRODUCTIVITY PERFORMANCE, 1974-75 TO 1987-88**
Index 1984 - 85 = 100



Source : Australian Bureau of Statistics, Cat No. 5229.0.

have resulted from a shift to more labour-intensive methods of production, particularly in the 1980s as the real wage fell and real interest rates rose.

Differences with other OECD countries become more marked at a sectoral level (Table 13). TFP growth in agriculture, public utilities and construction is generally better than the OECD average. In contrast, the relative performance in manufacturing appears rather weak (especially in the period 1979-85), particularly

Table 13. **Comparative productivity growth**

	Australia		OECD[1]	
	1973-1979	1979-1985	1973-1979	1979-1985
	Capital productivity			
Agriculture	2.2	1.3	−3.5	0.3
Manufacturing	−1.4	−0.9	−1.8[2]	−0.9[2]
Public utilities[3]	2.7	1.6	0.2	−0.7
Construction	−4.9	−2.6	−3.6	−2.4
Wholesale and retail trade	−3.2	−2.0	−1.9	−1.8
Transport	1.7	2.4	−0.9	−0.8
Financial services	−1.5[4]	1.0[4]	−1.5	−1.6
Community and social services	−0.1	−1.5	−1.4	−2.6
Total	−1.3	0.4	−1.5	−1.0
	Labour productivity			
Agriculture	4.9	1.2	3.0	4.1
Manufacturing	2.7	2.5	2.4[2]	3.1[2]
Public utilities[3]	1.8	2.6	2.8	2.0
Construction	1.6	2.4	0.8	0.8
Wholesale and retail trade	−0.1	0.2	1.3	0.9
Transport	4.6	4.2	2.2	2.1
Financial services	−0.2[4]	−0.2[4]	0.6	0.5
Community and social services	0.3	−0.1	0.9	−0.1
Total	1.4	1.2	1.5	1.5
	Total factor productivity			
Agriculture	4.2	1.2	1.4	3.2
Manufacturing	1.7	1.7	1.4[2]	2.2[2]
Public utilities[3]	2.4	1.9	1.0	0.2
Construction	−0.1	1.2	−0.3	0.0
Wholesale and retail trade	−0.9	−0.4	0.5	0.2
Transport	3.9	3.8	1.6	1.5
Financial services	−1.1[4]	0.6[4]	−0.2	0.1
Community and social services	0.2	−0.5	0.5	−0.7
Total	0.6	0.8	0.7	0.8

1. Total OECD excluding Austria, Greece, Iceland, Ireland, Switzerland, Portugal, Spain, Turkey and New Zealand.
2. Excluding basic metals.
3. Electricity, gas and water.
4. Including real estate.

Source: OECD Secretariat estimates.

if account is taken of the likelihood that measured productivity growth in Australian manufacturing may be biased upwards by the method employed to measure real output. While there may have been some improvement in relative productivity performance in the period after 1985, the extent depends significantly on the measurement procedures employed[39]. Productivity growth in service industries appears to be on par with that in most other OECD countries, although international comparisons of service sector productivity may not be very reliable as measurement methods applied to service sector real value added are not uniform across OECD countries[40].

The observed weakening in labour productivity growth in the 1980s may have reflected a variety of factors. There may have been a declining trend in overall productivity growth as the gap between Australian technology, management and organisation and best world practices narrowed[41]. However, while some sectors in Australia are close to those in most advanced countries, in others, such as manufacturing and public utilities, the scope for further catch-up in labour efficiency is still likely to remain large. Slower aggregate labour productivity growth may have reflected the combined effect of a decline in real labour costs and a rise in the cost of capital as real interest rates rose. Secretariat estimates[42] suggest that this factor may have lowered labour productivity growth by ½ of a percentage point per year (by one-third) during the period 1980 to 1988. Lower real wage costs might have led to more labour hoarding and more intensive use of the capital stock[43]. But, with most of the rise in employment occurring in service sectors where labour intensity has been high, this apparent "substitution effect" may also be capturing some of the underlying changes in industrial structure in response, for example, to a shift in the pattern of demand towards services.

The relatively poor productivity performance in manufacturing, in terms of both levels and rates of change, is partly attributable to the small size of the Australian domestic market, high trade barriers in the past and distance from major world markets. Firms have tended to focus on the domestic market. Intra-industry trade has been low, potential economies of scale through increased specialisation have not been fully exploited and the average plant size has remained small. The structure of industry has been characterised by a few large firms, often with quasi-monopoly power, in some sectors, combined with a large number of very small enterprises in others. Inadequate international competition in the past for many larger firms has probably been a major cause of low levels of R&D, sluggish introduction of new technology and little product innovation. Smaller firms have not had the financial and management resources to undertake research, initiate change or expand into export markets[44].

Summary

The scenario presented above indicate that a stabilisation of the ratio of external debt to GDP by the mid 1990s with high resource use is possible but remain subject to a number of risks and uncertainties including the terms of trade, the level and structure of potential output and competitiveness. Domestic absorption will have to be restrained and it seems likely that some fall in investment shares as well as some increase in aggregate saving rates will have to occur if the gap between investment and savings is to be reduced adequately. Nominal wage restraint is also required to reduce domestic costs and improve competitiveness. The fight against inflation would be facilitated by an increase in competition in product markets and consistent monetary policies. Heightened competitive pressure in the economy would also contribute to improved medium-term productivity performance. While open to significant measurement error, estimates of productivity levels and case studies suggest that there may still be significant productivity reserves to be tapped in the economy, particularly in manufacturing but also in other sectors. Impediments to more productive resource use include conservative management attitudes which have been nurtured behind tariff barriers and government regulation or other constraints to competition in a range of sectors. Part of past difficulties appears to have originated from work patterns and industrial relations behaviour which have grown up within protected markets. Recent institutional labour-market reforms and their potential impact on productivity are the subject of the next section.

III. Industrial relations reform and the labour market

There has been growing recognition that better productivity performance will require increased microeconomic flexibility at all levels, including the labour market. Compared to other OECD countries, Australian labour markets are in some respects already reasonably flexible. Real wages have adjusted fairly rapidly to changes in unemployment levels. Labour mobility and turnover between firms appear to be high by international standards suggesting, at first view, that relative wages are sufficient to bring about the necessary reallocation of labour. However, conditions inside enterprises are impeding their capacity to adjust to changes in the economic environment, and inadequate *internal* labour flexibility may have been reflected in the higher *external* flexibility just referred to. In Australia, the framework of employer-employee relations appears to be a key factor affecting internal labour flexibility and enterprise adaptability. The legal arrangements setting out the rights of employers and employees (referred to as "awards" in Australia) differ significantly from most other OECD countries; they are legally enforceable decisions of the industrial tribunals; they have been set up largely on an occupation or craft basis; and they determine a complex structure of work classifications and working conditions which limit the horizontal and vertical mobility within the firm, impede the adoption of flexible work practices and discourage enterprise training. They have proved difficult to change. Australia is also distinguished from most other OECD countries by its method of wage fixing and continued exercise of incomes policies. This has constrained movements in relative wages in recent years.

There has been growing consensus over the need for change between employers, the union movement and federal and state Governments, and reforms are progressing on a number of fronts. These include modifications to the legal and institutional framework governing industrial relations, productivity-related bargaining at the work-place level, changes to awards to permit greater flexibility in labour use, reforms to encourage greater skill acquisition and a more responsive education and training system and efforts to reduce segmentation of the labour market. This Part of the Survey focuses on the industrial relations aspects,

although it should be stressed that other aspects of reform, including product market deregulation, will have an important bearing on the overall improvement in labour-market performance.

This part begins by describing the industrial relations set-up, the implications for enterprise flexibility and adaptability and the impact on productivity performance. A description follows of the method of fixing wages and of implementing aggregate incomes policies. Vertical wage relativities may have been compressed in recent years and some additional narrowing appears to be in prospect. Nonetheless, the need, as expressed by the authorities, for an incomes policy – at least until the impediments to moving to a more decentralised system have been removed – may be limiting the scope for and speed of change in this area as well as restricting the ability of firms to attract labour to areas of greatest shortage. Progress made in changing work practices and contractual arrangements ("award restructuring") in order to improve various dimensions of labour flexibility inside enterprises is discussed next. Changes to the legal and institutional framework for industrial relations are then described, emphasising how this might aid the process of change and encourage more coherent and less conflict-prone employer-employee relationships. One issue here is the degree to which the widespread use of more flexible contract arrangements between management and labour might weaken the exercise of incomes policies. A final section deals with the need for further changes and the impediments to progress, and discusses some of the factors shaping the industrial-relations system in coming years.

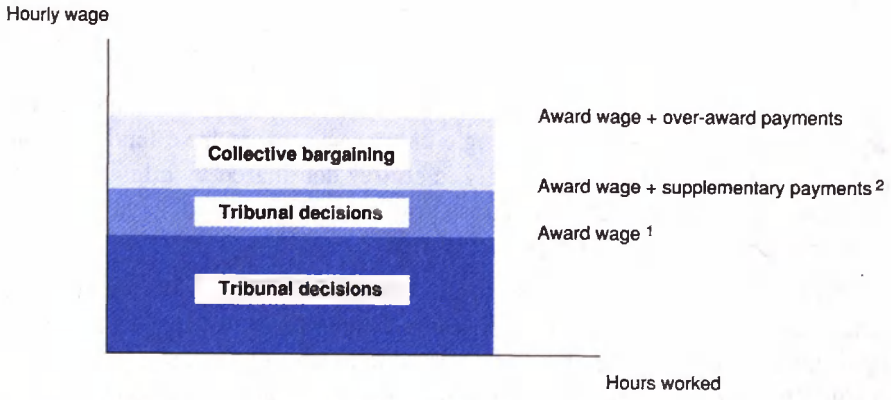
The industrial relations set-up: the implications for enterprise flexibility

The industrial relations system in Australia is, with the exception of New Zealand and Ireland, qualitatively different from those found in other OECD countries. Because of constitutional constraints, the Commonwealth government does not legislate directly on industrial relations matters or in the setting of wages. These are placed in the hands of industrial tribunals. At the Commonwealth level, the principal tribunal is the Australian Industrial Relations Commission (referred to as "the Commission" or the AIRC in the remainder of the text). There are independent but parallel State (six) and territory (two) commissions or boards[45]. State systems cover intra-state disputes while the Commonwealth covers disputes extending beyond any one state and takes precedence over state awards where there is any inconsistency between them. The State and Commonwealth system taken together also contains specialist and industry tribunals. The multiplicity of

tribunals has not militated in favour of consistent decisions in similar disputes across jurisdictions. Bargaining between management and labour has grown up within the context of obligatory conciliation and arbitration by these tribunals. It has been argued that their existence has led to less emphasis on internal dispute resolution and more recourse to defending polarised positions within a court environment. Within this context considerable emphasis was placed on wages and wage-related matters.

Wages and conditions of employment are governed by "awards" which are legal instruments recording the outcome of negotiations between management and labour or of arbitration if a negotiated settlement cannot be reached. Awards take the place of collective agreements in other systems. The awards set out, in detail, the rights of employees to certain employment conditions and the obligation of the employers to provide them[46]. Since the 1920s, awards have been variable during their term. Initially these changes concerned the adjustments of wages to allow for price changes. But the parties progressively moved towards a practice of reconsidering all aspects of awards[47]. It should be noted that awards most often set only

Diagram 11. **THE COMPOSITION OF WAGES**



1. Minimum rate specified separately for each classification in an award.
2. Supplementary payments are derived from several key awards and seek to create consistent minimum rates across awards based on "work value" or responsibility. Adjustments to award wages and supplementary payments in the most recent national wage cases have aimed at establishing relativities acceptable to the employers and unions, thereby permitting different awards to be collapsed together at some time in the future. In addition, the AIRC has suggested that the supplementary payment component could provide a market element in award wages, which, at some time in the future, may vary between industries, sectors or regions.

minimum conditions. Scope has always been available for negotiation on "over-the-award" wages or conditions in an individual enterprise, adding an element of "collective bargaining" to the system (Diagram 11). Sometimes these "over-award" payments have been integrated into the award itself in the form of "paid rate" awards, where the minimum and the actual wage is the same.

A salient feature of the present system is its craft or occupational focus. The early encouragement of representative bodies of employers and employees under the Commonwealth Conciliation and Arbitration Act 1904 occurred at a time when Australian unions were structured around occupation and crafts as in the United Kingdom. This pattern of unions was reinforced by the system of registration under the Act. A registered union was allowed to represent all workers who could "conveniently belong" to that union, giving it a virtual monopoly to represent workers in a particular occupation or trade. A steady increase in coverage resulted from State Acts allowing the extension of award coverage to all relevant employees within each individual state, a federal interpretation allowing employers to be made party to an award even if they employed no union members and further amendments aiming at establishing uniform conditions of employment across industries. Awards now cover approximately 85 per cent of employees[48]. There are now around 300 registered unions or occupational groups; approximately 80 have 5 000 members or more and roughly 40 large unions cover 85 per cent of total union members (Table 14). Employer organisations were also encouraged under the Act and their role was reinforced by tribunal decisions which bound firms to an award by virtue of their membership in an employer association negotiating the award. There is a complex pattern of awards to which the unions and employers or employer associations are respondents. They can fall under State or federal jurisdiction and can cover single enterprises, a number of enterprises, industries, or a range of firms in a variety of industries. In general, single enterprise awards have tended to increase over the past quarter century, largely in sectors dominated by a few large employers[49]. But even firms with enterprise awards are likely to have part of their workforce covered by other types of awards.

The incidence of awards appears to depend significantly on the size of enterprises. Of the some 600 000 enterprises in the non-farm private sector, 95 per cent have fewer than 20 employees, and union representation tends to be low (Table 15). For these firms, working arrangements and negotiations tend to be firm specific and the pattern of awards is less likely to affect the work environment significantly. Smaller firms are, nonetheless, still legally bound by the minimum wages and conditions prescribed in the awards covering the type of work performed in the enterprise. In the remaining 5 per cent, which nonetheless employ over half

Table 14. **Size and distribution of non-manual and manual unions**

	Non-manual unions		Manual unions	
	1969	1983	1969	1983
Very small union (less than 1 000 members or no size data)	102	116 (79)	47	25 (23)
Small unions (1 000 to 4 999 members)	42	52 (22)	50	30 (15)
Medium unions (5 000 to 19 999 members)	27	20 (11)	22	21 (3)
Large unions (20 000 to 49 999 members)	8	16 (17)	16	12 (1)
Very large unions (more than 50 000 members)	2	3 (1)	8	11 (–)
Total	181	207	143	99

Note: ( ) indicates state-registered unions.
Source: Business Council of Australia, Industrial Relations Study Commission, *Enterprise-based bargaining units; a better way of working*, October 1989.

Table 15. **Union membership by enterprise size**

Percentage of workforce unionised	Enterprises broken down by number of employees						
	0-10	11-25	26-50	51-100	101-500	501-1 000	Over 1 000
0	72.8	47.2	22.6	10.4	5.1	0	0
1-25	13.0	24.4	32.6	25.2	19.5	9.5	22.2
26-50	3.8	8.7	9.5	16.5	25.4	4.8	0
51-75	4.5	5.9	12.1	23.5	23.7	23.8	33.3
76-99	3.1	8.1	19.4	19.1	20.3	52.4	33.3
100	2.4	4.4	2.6	2.6	5.1	9.5	11.1
Not stated	0.5	1.6	1.1	2.6	0.8	0.8	0

Source: Business Council of Australia, Industrial Relations Study Commission, *Enterprise-based bargaining units; a better way of working*, October 1989.

of the private sector workers, industrial relations and human resource management are more complex. A recent survey of larger enterprises provides the following picture of the bargaining environment[50]. The "average firm" in the sample was covered by four different awards and had to negotiate with five different unions.

Around 40 per cent of the sample had awards under both federal and state jurisdictions. Eighty per cent of surveyed work-places had to deal with more than one union, 50 per cent with more than four unions, 29 per cent between six and ten unions and about 6 per cent over ten unions. The number of awards and unions has tended to increase with the size of the enterprise[51]. Many significant awards are negotiated at the industry level and under such circumstances it is difficult to adequately take into account the needs of individual firms. This is not to say that there are no negotiations at the enterprise level. Firms have partly avoided award rigidities by negotiating enterprise awards, even though these are most often supplements to parent awards (rather than substitutes) and may still cover only the occupations of the parent award[52]. In addition, many firms reach agreements that are not registered with the commissions, and most have agreed practices of one form or another that reflect local conditions. Many of the larger firms (if not most) pay "over-award" wages.

The implications of this interlocking system of awards and unions for industrial relations, organisation and adaptability has been far-reaching.

- The sometimes rigid demarcation of work between different unions and awards in enterprises has lead, in numerous cases, to inefficient work patterns and wasteful disruptions and blockages to career paths and multi-skilling[53];
- The complexity of the system may also have led labour and management to rely on the offices of the tribunals in dispute resolution, rather than on active negotiation at the enterprise level. As a consequence, labour-management contacts at the plant level may have been allowed to atrophy, even where internal dispute resolution procedures existed.
- The locus of negotiation over wages and conditions of employment has tended to be at the industry rather than the firm level and in such cases less account can be taken of conditions in individual enterprises. Further, craft- or occupation-based unions, with members in a number of industries, are less concerned with conditions and problems at the enterprise level, and may oppose changes in individual firms, even where desirable and acceptable to employees directly affected, on the grounds that it sets precedents for members elsewhere;
- Business may have been reluctant to negotiate changes in a multi-award and multi-union workplace because of the risk of flow-on to other awards. Where changes to work practices have been "bought" by wage increases in one award, this is likely to lead to pressures to reestablish previous wage relativities, even where the initial increases were offset by productivity

gains. Tribunals may have been reluctant to ratify agreements which exceed wage guidelines for fear of flow-on effects into other firms and industries.

- Change and innovation appears to be impeded by the complexity of union and award structures themselves. In medium- and large-sized firms, introducing new methods or organisation of work has generally required reaching agreement with a number of employee groups, significantly increasing the complexity of negotiating change and making a successful outcome more uncertain. Managers may have considered that the cost of change was too high, particularly where competitors were faced with similar constraints and enterprises were shielded from overseas competition by trade barriers. Such difficulties may have been compounded where the enterprise is covered by both federal and state awards, with different rules and procedures governing industrial relations. Under such a framework, management may not always have been aware of the procedural possibilites for introducing change.

Enterprise awards have, where introduced, partly compensated for some of these problems, but the existing award structure does reduce the scope for fruitful negotiations and innovation within Australian enterprises.

Additional effects include:

- Disputes between management and labour may have been encouraged by the absence of fixed periods of contract before reopening awards negotiations and, in the period prior to the Accord in 1983, the possibility of obtaining "over-the-award" improvements in pay and conditions;
- Incentives to improve the skill base of the labour force may have been weakened. Firms have been disinclined to invest in widening employees' skills if demarcation rules prevent those skills from being used or if other firms "poach" workers once trained. Workers have also been reluctant to upgrade or broaden their qualifications as there has been little upward mobility within the award structure[54].

Labour productivity has been affected through over-manning, poor work organisation, unnecessary loss of machine time, high maintenance costs, time lost over demarcation disputes and/or heavy time loss by management in industrial relations matters. Capital productivity may also have been reduced by constraints on the number of hours plant can be economically operated as a result of restrictive award conditions. The skill base of the economy has suffered. The complexity of the system, combined with the protection afforded by tariffs, may have induced the

choice of smaller-scale plants aimed specifically at servicing the Australian market rather than a larger-scale internationally-competitive production. The speed of adaptation to new market conditions has been slowed. Larger firms have been most affected by these problems. As they are concentrated in the traded goods sectors such as mining and manufacturing, progress in widening the export base and competing with imports may also have been curtailed.

Incomes policy and the industrial relations system

Problems of aggregate wage inflation are more important in Australia than most other OECD countries. With exports concentrated in primary commodities, the economy has been more prone to commodity price shocks than countries with a similar pattern of exports and imports. This has affected wage formation via a variety of channels. Change in commodity prices have been accompanied by sizeable movements in exchange rates. Higher import prices have given a positive shock to wage formation which to some extent may have proved difficult to wind back fully[55]. Improvements in terms of trade have followed periods of strong world economic activity. Increased demand for raw materials has led to higher natural resource investment. With higher investment and income, demand and output grew and pressures on labour markets soon developed. These factors variously contributed to the sharp rise in wages in 1973-74 and 1981-82. At the same time there has been a widespread attachment to "comparative wage justice" such that wage increases in one sector should be matched by similar increases elsewhere. The practice of economy-wide wage increases decided by the federal Commission in national wage case decisions may have strengthened the idea that all workers should receive equal pay increases. In the event, strong wage-wage links have become embedded in the system. These links have been underwritten by the pattern of awards discussed above: wage increases to workers covered by an award flow to other awards inside a firm. Such increases then tend to flow to other firms covered by the same (multi-enterprise) award. In light of this experience, aggregate incomes policy has maintained its prominence in Australia long after being discarded as ineffective in most other countries. To some degree wage formation system may have reinforced the need for incomes policy: strong wage-wage links make an incomes policy necessary while the wage-wage links have been strengthened by the current centralised approach to wage fixing.

As noted, the Commonwealth Government has no constitutional powers to control wages. Incomes policy has had to be implemented "at arms length" by

convincing the AIRC and the State tribunals and boards – which are legally independent – of the desirability of constraining the increase in wages specified in awards. Allowing for more marked movements in relative wages outside the purview of the AIRC and the State tribunals and boards will weaken the ambit of policy. There is some potential for conflict between centralised wage policy and the ability of individual firms to negotiate their wage rates and other condition of employment.

As discussed in Annex II, incomes policy in Australia, up to the beginning of the Accord in 1983, was only partly effective. The wage tribunals controlled award wages – which are largely minimum wages – but allowed "over-award" payments where they were agreed between the parties, even certifying them in the form of "consent awards". "Over-award" increases became prevalent in the two periods of rapid wage increases in 1973-74 and 1981-82.

The experience over the preceding decade and a half revealed that incomes policy was ineffective over the longer haul if commitment by employers and, particularly, unions was lacking as the Commission has no effective way of controlling "over-award" payments. In light of this, the incoming Labor Party Government attempted to establish a broader consensus for restraint, partly by widening the range of issues to be taken into consideration. Key elements of this were: the Accord between the Australian Council of Trade Unions (ACTU) and the Labor Party for wage restraint and a return to centralised wage fixing in exchange for a commitment to expenditure, income support and tax policies; and discussion with employer and employee groups (e.g. the National Economic Summit in 1983 and discussions within EPAC) leading to greater consensus over the causes of the difficulties and necessary changes. There was agreement that centralised wage fixing be conducted through the Commission and compliance has been aided by the Commission's requirement that individual unions make a "no-extra-claims" commitment before receiving the increases under national wage case decisions. Initial decisions were largely based on indexation. But with worsening economic conditions, declines in real wages were accepted. Nonetheless, the current "corporatist" approach complicates wage fixing. Initial discussions, largely between the union movement and the Commonwealth Government, set the range of overall wage increases. This is then reviewed by the Commission in hearings, taking into account the views of all parties. The Commission's decisions have broadly followed these, despite disagreement by employers, although various devices have been used to slow the flow-through of wage increases. As noted in Part I incomes policy appears to have been successful up to the present in preventing an acceleration in wage growth as labour markets have tightened.

Many non-wage factors such as education and training, career paths, and external labour mobility may affect labour-market flexibility and some progress has been made on these fronts. Nonetheless, there has been concern that the award system and incomes policy, while assisting aggregate wage restraint, have impeded proper resource allocation in labour markets by compressing wage differentials and not allowing changes to wage relativities in the face of market developments. There is some evidence that wage relativities for skills in the first half of the 1980s were at par with those found in a number of other OECD countries under alternative industrial relations systems[56]. External labour mobility also appears to have been rather high although this may partly reflect the substitution of labour flexibility and mobility inside the firm for external mobility. For example, firms tend to purchase skills from the market rather than train them themselves. More recent centralised wage-case decisions have tended to narrow wage differentials at the bottom by giving flat rate increases (or combining flat rate and percentage increases). Further, constraints on "over-award" payments under the present incomes policy, while assisting aggregate wage restraint, may be affecting the flow of workers with given occupations or skills from low to high productivity firms and industries. Variance in productivity of individual workers within an occupation is probably higher than the variation between occupations and awards. The inability to widen inter-firm "over-award" wage differentials may slow the expansion of more dynamic enterprises[57].

In the most recent wage decision, concern over relativities has been of a more institutional nature, related to establishing an *accepted* set of relative minimum wages as a prelude to further reform[58]. Widely accepted relativities are thought to be desirable to reduce the potential for wage leap-frogging and to permit the eventual collapse of occupational awards into single industry or enterprise awards covering the large majority of employees. Existing relativities contain *perceived* inequalities or inequities between awards. Inconsistent State and Commonwealth awards during the late 1970s and early 1980s resulted in higher minimum wages for some occupations than would appear to be merited *a priori* on the basis of training qualification or "work value". Internal instability of the system is therefore thought to have increased, limiting the possibility of a more fundamental change. The August 1989 national wage case decision allowed for "minimum rate adjustments" in addition to the general increases. The minimum rates adjustment seek to apply consistent minimum rates across awards, based on relativities reflecting recognition of skill levels and responsibilities. As noted in Part I, employees with earnings below the new minimum rate will have their wages raised to the new minimum[59]. This will tend to "level-up" actual wages paid in an industry but also

increase the risk of negative employment effects for the lower paid. The Commission appears to be aiming at eliminating anomalies in inter-award (minimum) relative wages to make them acceptable to the union movement through a judicious differentiation of this supplement.

Reforms from within: second tier negotiations and award restructuring

Second tier

Over the initial five years of the present centralised approach to wage fixing, aggregate wage restraint had been the focus of attention in a bid to wind down inflation. Since mid-1987, however, increasing emphasis has also been placed on the relation between the industrial relations system, labour flexibility and productivity growth. A first important change has been the abandoning of wage indexation as a principle for raising wages. Instead, wage increases have been used progressively to induce structural change. The introduction of a two-tiered wage increase for FY 1987-88 combined an initial flat rate increase of A$10 (2½ per cent of average weekly earnings) with additional increases up to 4 per cent linked to productivity improvements negotiated at a decentralised level. The latter (largely granted under the "restructuring and efficiency principle" for wage increases) included, *inter alia*, changes to work and management practices, reduced demarcation barriers and increased multi-skilling[60].

Most research on the second tier suggests a considerable measure of success in achieving objectives. Surveys indicate that most firms considered that important cost offsets had been agreed[61]. The effects of the changes can be categorised as affecting *numerical flexibility* (capacity to change the number of persons employed and to shift between full- and part-time workers); *time flexibility* (more flexible arrangements for working time including shift-work, starting and ending periods, or overtime); *wage flexibility* (the ability of wages to adjust to changes in output, productivity and profits in individual enterprises); *functional or technical-organisational flexibility* (job rotation, multi-skilling and grouping of tasks, and reduced demarcation); and *procedural flexibility* (concerning the degree to which consultation procedures enhance the ability of the firm to reorganise itself when faced with changes to its economic environment)[62].

It would appear that there has been little change to *numerical flexibility* or *wage flexibility*. As noted, numerical flexibility has not been considered a problem in Australia: layoffs face no official constraints, periods of notice are relatively short

and overly generous termination or redundancy provisions are not widespread in awards[63]. Although closed shop and preference agreements (some 30 per cent of federal awards have such clauses) may limit employers' freedom of action to some degree, Australian employers have a significant amount of flexibility relative to most OECD countries[64]. Aggregate wage flexibility appears to have been good since 1982. However, there has probably been little variation between firms which are doing well and those doing poorly. There was very little difference between wage increases received under the second tier across awards. This was despite the fact that the Commission stated that it did not expect that all groups would get the full 4 per cent. Incentive-based pay was introduced in very few cases.

Changes appear to have been most significant in *internal time and functional flexibility*, and in, the case of the latter, there may be more rigidity in Australia than elsewhere. There are few legislative constraints on work time although most states have legislations regarding opening hours for certain categories of firms (e.g. shops)[65]. Most constraints in this area are found in the awards themselves. Over the 1980s, there has been a reduction in the standard work week from 40 to 38 hours[66]. Generally, there are few provisions within awards which prohibit work during certain times. Rather, awards prescribe penalty rates for work outside specific spans of time, specific hours and/or days. These penalty rates are high enough to inhibit significantly the working arrangements outside standard hours. The cost has been increased by certain practices such as requiring that all workers work overtime when extra hours are required[67]. Second-tier time-flexibility offsets included changes to arrangements in normal working hours, changes to overtime practices and more flexible use of the "rostered day off" to permit continuous operation[68], improved shift work possibilities, more flexible annual leave, and changes to meal and coffee breaks, the choice varying across awards.

Progress was also made on *functional flexibility* through changes to work organisation and demarcation, training and supervision, increased multi-skilling and through the removal of unnecessary supervisory levels and improvements to management systems, (e.g. the introduction of "just-in-time" inventory control). However, the amount of change in this area may have been limited in the absence of more fundamental changes to the award structure[69]. Possibly the greatest success of the programme related to *procedural flexibility*, albeit in an indirect way. For reasons adumbrated above, past labour and management practices led contacts at the work-place level to atrophy. The Commission's encouragement of "grass roots" negotiations, with relatively little reliance on arbitration, has produced encouraging results in a number of key sectors[70]. Negotiating skills at the shop-floor level have been enhanced, discussion and reflection over common problems

has begun and, in many cases, this has helped ease the transition to a greater focus on more fundamental award modifications. In addition, work-place negotiating or discussion committees were set up in a number of awards.

However, there are a number of concerns and difficulties. First, there seems to have been considerable variability between firms over the commitment to the second tier[71]. While there is little evidence of management-labour "collusion" to present non-existent changes, there is no assurance that workers and management may not eventually slip back into old work practices. This risk would appear to be greatest where the focus has been on direct cost offsets, often considered as loss of "hard-won gains" by employees. Second, there is little evidence of an improvement in aggregate labour productivity growth. This may, however, be appearing in higher capital productivity where more flexible working arrangements have led to a more intensive use of the existing capital stock. Finally, the impact of the second-tier on bargaining practices and on productivity has probably tapered off outside the major awards. While over 80 per cent of workers are covered by awards, slightly over half of these are covered by 72 large awards. The remainder come under 5 000 to 5 500 smaller awards (partly federal, partly state). Union efforts were concentrated on the larger occupational or enterprise awards. In smaller firms or work-places with little union representation, negotiation often simply did not take place and the Commission or state tribunals were unable to intervene to help[72]. While this held back aggregate wage increases, many work-places did not review how productivity could be improved. It may also have meant that procedural flexibility was not enhanced in these cases, limiting the pace of future award restructuring.

Award restructuring

Partly in light of these difficulties, the Commission shifted its emphasis toward a more fundamental reform of awards rather than the *ad hoc* approach of cost and productivity offsets under the second tier. The concept of "structural efficiency" was broadened. It was not to "be applied in a negative cost-cutting manner or to formalise illusory short-term benefits" but rather to aim at longer-term reform, thereby "improving the efficiency of the industry and ensuring that award structures are relevant to its modern competitive requirements; and, providing workers with access to more varied, fulfilling and better-paid jobs"[73]. This process began over the 1988-89 fiscal year, with wage increases of roughly 6 per cent in two instalments predicated on a *review* of the award with a view to restructuring. The Commission laid out a non-exclusive list of areas which should be open to initial

discussion including: skill-related career paths, eliminating impediments to multi-skilling and broadening the tasks undertaken by individual workers, creating appropriate wage relativities between work categories and ensuring that work patterns and arrangements enhanced industry flexibility and the efficiency. The wage increases flowed through quickly and could be interpreted as a "downpayment" by employers for union commitment to negotiate over a broad agenda of issues. Nontheless, the Commission expressed some disappointment in February 1989 at the progress achieved in award restructuring and concern that unduly narrow negotiating agendas would restrict the potential benefits to be achieved by both parties.

With the August 1989 National Wage Case decision, the process of award restructuring has moved into a more active phase. This was promoted by making wage increases – which were in the range of 6 per cent in two instalments[74] – subject to commitment of the parties to abide by the principles of wage fixation and *progress* in award restructuring. The second instalment was to be given after the Commission was satisfied that the restructuring was having its intended effect. The Commission went to great pains in the August 1989 wage case to emphasise that the award restructuring should be as broad as possible, particularly with regard to working patterns and arrangements[75]. This was to permit the greatest possible flexibility for individual enterprises within a broader framework. In addition, updating and/or rationalising the list of award respondents (i.e. the unions) and reducing the number of awards covering any one enterprise were also added to the list of subjects for consideration. By and large, the State tribunals and boards have followed the Commission's lead, with a resulting broad coherence in approach across all awards.

The restructured awards agreed between management and the unions and presented to the Commission indicate the broad outlines of the new system. Upward mobility is provided by establishing a number of skill levels or classifications linked directly to progressively higher skill qualifications. For example, in the metal trades industry there are to be ten levels, running from trainee production or engineering workers to fully qualified engineers at the top[76]. Advancement up the scale is conditional on undertaking training and obtaining the appropriate qualifications. This upward mobility would take place within streams covering broad work classifications. In the the case of the metal trades award, this would cover fabrication, mechanical and electrical and electronic work; the storemen and packers would have a warehousing/distribution and a manufacturing/production stream; and the clerks would have clerical, accounts, keyboard, computer and

secretarial streams. There would be virtually no restrictions on the types of tasks undertaken within streams with some overlapping allowed between streams where skills permit. Inter-award relative wages across skill levels are still being discussed in most awards, but ACTU proposals for the metal trades award would range from 76 to 78 per cent of a qualified trades-person's wage at the bottom to 160 per cent at the top. A number of other restrictions are also being removed, for example allowing adult apprenticeships, and necessary training and skill enhancement programmes are being considered.

Government policies to aid award restructuring

The Commonwealth Government has supported the process of award restructuring through a Work-place Reform Programme made up of three parts:

- The *Work-place Resources Scheme* provides advisory and support services to firms aiming to improve competitiveness as part of restructuring;
- *Work Change Assistance* provides financial assistance to employers and unions in key industries for pilot projects, use of consultants and activities likely to further award restructuring[77];
- *Work Change Training* will expand training for management and labour in the area of participative practices and work-place change.

In FY 1988-89, efforts and resources were concentrated in key industries where award restructuring was relatively advanced[78] and will be extended in the current fiscal year to a wider range of industries. Budgetary allocations remain relatively modest, totalling $A12 million in FY 1989-90. Promotion of participative practices through ACTU-CAI initiatives should be an important help in getting things under way and forthcoming surveys by the authorities should improve understanding of where extra resources should be concentrated.

Reforming the industrial relations framework

Two very different agendas for change arose from the debate over changes to the Australian industrial relations system in the first half of the 1980s. On the one hand, there were calls for a radical deregulation of the labour market, moving in the direction of a North American model of free collective bargaining with an enterprise focus. The proponents argued that freedom to contract under common

law with no compulsory arbitration or state intervention in disputes would improve flexibility and economic welfare by a better matching of the needs of employers and workers. Greater enterprise focus would improve adaptability and attitudes towards change. The end to a court system and union registration as award respondents, combined with greater contestability of existing unions through an end to closed shop or union preference agreements and "increased union democracy", would reduce the inclination towards dispute. On the other, there has was a desire to maintain the existing system in modified form, by making amendments to allow for some greater flexibility, to improve the coherence of the system (particularly across the differing jurisdictions), to increase the ability to resolve disputes and sanction non-compliance and to pay greater attention to the "public interest" particularly with regard to "excessive" wage claims. The need for aggregate wage control was one of the arguments in favour of the continuation of the existing approach, but a recognition of the importance of a continuing role for the Industrial Relations Commission and fear that the wholesale abandonment of the present system would lead to a protracted period of labour unrest were also important considerations.

Recent reform moves

Following a review of Commonwealth legislation completed in 1985, the Commonwealth *Industrial Relations Act 1988* was promulgated on 1st March 1989[79]. Under the industrial relations system established by the new Federal Act, the Australian Industrial Relations Commission occupies a key position similar to that of the former Australian Conciliation and Arbitration Commission under the old system, but with slightly wider powers, jurisdiction and functions[80]. The Act places greater emphasis on the wider economic effects of decisions taken by the AIRC and to greater co-ordination with state systems. While the ability to ensure compliance with decisions has not significantly changed, there are expanded powers to deal with demarcation (disputes related to the employment of members of unions and/or the demarcation of functions between unions) and to set the procedures under which it operates which should increase its flexibility in dealing with new situations. Modifications to the Queensland *Industrial Conciliation and Arbitration Act* were passed in 1987 and further amended in 1989, providing alternative forms of contracts between employers and employees[81]. In New South Wales, a Green Paper presented proposals more strongly oriented towards a decentralised system. After tripartite negotiations, the NSW Cabinet has now announced its recommendations for legislative changes[82]. The NSW proposals strive to reduce the role of arbitration and conciliation tribunals by lowering the "centre of gravity" of negotiations through increased enterprise bargaining and placing greater emphasis on

internal dispute resolution by the parties themselves. Both the Commonwealth changes and NSW proposals would provide for a greater co-ordination by allowing exchanges of judges on the benches of both courts. In the event, all changes, either enacted or proposed, have retained a system of compulsory arbitration. However, there are considerable differences with respect to the level at which labour-management negotiations should be carried out, conditions under which strikes are allowed, union democracy and power and the means to improve flexibility through some measure of "opting out".

The legislative changes most likely to influence labour-market flexibility relate to alternative forms of contract between labour and management. Differences in approach between the Commonwealth and the States have partly reflected the different weights attached to the need for aggregate wage restraint on the one hand and to flexibility in setting wages and other conditions of employment at the enterprise level on the other. The new federal Act allows "certified agreements" (CAs), a fixed-term "island" agreement which is ratified by the Commission (certified) and cannot be varied during its life except under certain circumstances[83]. They must include dispute prevention and settlement procedures if they cover a substantial part of an employment agreement. They cannot be rejected by the Commission unless they are "contrary to the public interest". While the concept of the public interest is not defined, the Commission *cannot* refuse to certify agreements simply because they breach the wage guidelines subject to certain specified conditions. This should permit more flexibility in wage fixing. Nonetheless, the AIRC remains concerned that extensive recourse to certified agreements may interfere with aggregate wage policy and award restructuring. Consequently, it placed some restrictions on their use in the February 1989 Review decision[84]. While there have already been some important certified agreements to date it is too early to judge their likely impact.

The Queensland amendments provided for two types of Voluntary Employment Agreements (VEAs): between an employer (or group of employers) and a union; and between employers and at least 65 per cent of their employees. They are registered and enforceable as awards, have a minimum life of one and a maximum of three years, secret ballots are required to ensure adequate employee support and certain minimum standards must be maintained[85]. The NSW Green Paper proposals aim at a "lowering of the centre of gravity" and encouraging more enterprise-level negotiations. Two types of registered agreements are provided to displace eventually State awards. Certified Collective Agreements (CCAs),similar to the CAs under the federal act, involve single or multiple enterprises and could be signed directly with individual employees, groups of employees or with unions.

These agreements would come under close scrutiny and be subject to a public interest test. Enterprise Collective Agreements (ECAs) would be between single enterprises and registered trade unions. They would not be subject to a public interest test (thereby allowing firms to bypass aggregate wage controls completely) but would be required, among other things, to contain dispute-handling procedures. In the event, the NSW government has decided to proceed only with the introduction of the ECAs but this appears unlikely to occur before 1990.

Another area where flexibility may be enhanced is the coverage of awards, demarcation concerns, and union amalgamation. Under the new federal Act, the Commission received additional powers to resolve demarcation disputes, to order changes in coverage of unions and to change union rules to obtain the desirable results. This could allow, for example, the Commission to take cognizance of agreements between local unions and management even though they may be at odds with national unions who are, in principle, respondents to the award. A greater role is also given to the ACTU and employer groups in settling disputes of this nature. Measures designed to achieve a reduction in the number of unions by encouraging unions to amalgamate and by making it easier for them to do so will also tend to reduce demarcation problems. The future registration of unions will be restricted, except under special circumstances, to associations with at least 1 000 members and unions with less than 1 000 members will have their registration reviewed periodically by the Commission and may be deregistered in the absence of special circumstances. State legislation and proposals encourage enterprise bargaining and allow greater "contestability" of existing unions whose position has been purportedly reinforced through registration. The 1989 amendments to the Queensland Act allowed for the recognition of an employee association for the life of a VEA, with the group having to follow the rules applied to unions. The NSW proposals also aim at rationalising trade-union structures, developing enterprise- or industry-focused unions and of reducing the number of unions in an enterprise. Again, unions with less than 1 000 members would have to amalgamate unless they have an enterprise focus. Rules for amalgamation would be eased and the state Commission would be given stronger powers to change union coverage. Scope for creating enterprise unions would also be provided.

All of the legislative changes have aimed, in one way or another, to reduce the frequency to disputes needing arbitration and the number of strikes. Certain provisions in the new Federal Act are aimed at reducing industrial disputes[86] and the need for arbitration, e.g. by encouraging the use of grievance procedures and by facilitating union amalgamations. Others are designed to increase the Federal tribunal's ability to deal with such disputes as do arise, whatever the reason. The

NSW proposals also have as one of their aims the reduction of industrial disputes through such measures as increased emphasis on conciliation and grievance procedures, fixing the life of enterprise agreements with no renegotiation allowed except by mutual consent, significant increases in the sanctions and fines for non-compliance with decisions and by limiting the right to strike. Compulsory arbitration is to be maintained, and strikes are prohibited during the term of a contract or an award (rights disputes) *and* during the renegotiation of contracts (interest disputes)[87].

Some policy issues and problems

A successful introduction of new award structures, carefully adapted to individual industries, should sweep away a large number of outdated and restrictive classifications[88]. This will permit a major improvement in *functional flexibility* and the adaptability of Australian firms. By anchoring upward mobility to skills and training, there is a potential incentive to improve the skill base of the economy and to raise spending on skill formation and training in enterprises. Award restructuring negotiations by necessity are time consuming, given a wide range and difficult nature of the issues which have to be covered. While negotiations are well advanced in a wide range of industries it will take a good deal of time for new arrangements to be fully introduced. The definition of the new skill levels and associated qualifications, the establishment of curricula and training schemes, and the subsequent achievement of qualifications required to shift to new awards are all hurdles which will take time to overcome. For example, the metal trades proposal, one of the most advanced, has taken nearly three years to prepare and is likely to take three more years to bed down[89]. As noted in discussion of the outcome of the second tier, difficulties may be more pronounced in the many smaller awards and smaller firms where union or employee representation is weak and negotiating skills are low. This may be only natural given the scope of the reforms. However, during this transition period, developments are unlikely to remain unchanged in competing countries, making it more difficult for Australian firms to catch up to best foreign managerial, production or manning practices.

There are several additional concerns. First, the agenda for award restructuring may not cover the major potential constraints to enterprise flexibility. The Commission stressed in the August 1989 decision that negotiations should attempt to remove a range of restrictions on part-time work, improve flexibility of work time, rationalise overtime arrangements, eliminate unnecessary costs associated with the mode of payment of wages and reduce abuse of sick leave. It would seem essential, as has already occurred in some instances, that particular attention be

paid to establishing appropriate internal dispute-settlement procedures to reduce further the incidence of industrial stoppages, as well as to shedding restrictions that limit the more intensive use of the capital stock, as this may be one of the quickest means of improving aggregate productivity. Second, there is some disquiet over the cost impact of the shift to the new award structure. As noted above, the Commission's August 1989 decision gave (on top of a 6 per cent increase) supplementary payments, generalising part of existing "over-award" payments. These are to be introduced over an extended time period and to be "absorbed" by existing "over-award" payments such that the impact on aggregate wage growth seems likely to be small[90]. Supplementary payments could be considered as a necessary cost to cement the commitment of the workforce to the process of award restructuring and to provide the foundation for further reform. Nonetheless, they will increase costs in low-wage firms and may have negative employment effects. Wage costs could also be affected if workers are slotted into higher skill categories in the new awards than they "merit"[91]and if employees are paid for the skills obtained rather than skills required[92]. However, the extent of any effect will depend fundamentally on whether management is capable of making good use of its available skill base. International experience suggests that more highly skilled workers are likely to be more flexible and adaptable and better able to adjust to technological change[93].

Third, there are a number of training-related problems[94]. It is not yet clear that the relative wages agreed by management and labour under the new awards will be sufficient to induce worker interest in additional training. Higher *total* wages (as supplementary payments are extended) at the lower end of the wage scale will raise wage-related training costs in many firms. Increased training costs are likely to fall more on smaller firms, which tend to pay lower wages and have lower profit margins, and this may again have unintended employment effects. The government has decided to impose a training levy initially equal to 1 per cent of wages[95] partly to reduce the risk of "poaching", i.e. where skilled workers, which have been trained in-house, are bid away by other firms. Potential "market failure" will be attenuated by forcing all firms to assume part of the overall training cost. However, the additional charge is likely to fall most heavily on small- and medium-sized firms as most larger firms seem to spend more than this amount already.

There needs to be a closer link between the award-related skill needs and the education and training system more generally. As noted, effective moves to the new award structures will require new curricula and increased demands on existing training institutions for instruction and courses. The authorities at both state and federal levels are co-operating to establish a nationally-harmonised competency-based education and training system which is more closely attuned to emerging

labour market needs[96]. The key to this is the technical and further education sector (TAFE) whose lack of response to the needs of industry has been criticised in the past[97]. More coherent funding by the federal government and reforms in a number of states have been helping improve the situation and TAFE systems are beginning to focus on the needs arising from award restructuring; the implications of the new awards for training are being examined and some TAFE authorities are already heavily involved in the development of new training arrangements.

Finally, the change-over to the new award structure may create temporary labour-market problems. In general, older workers and the unskilled are at a disadvantage where wages are linked closely to skill levels. Enterprises tend to favour funding for those who already have undergone prior training and younger people who may cost less in terms of lost wages and who have a longer span of working life before them. As younger, more educated, workers gravitate towards the new industrial jobs, a core of older, less well-educated workers remain in the traditional job grades, producing a segmented labour market. While this may be only a transitional phenomenon, it raises the question of the Government's role in providing a more equitable pattern of training opportunities.

Directions for further change

Up to the present, there has been relatively minor modification to the legal framework underlying industrial relations in Australia. The modifications to the federal Act have maintained the system of compulsory arbitration, although the Commission has received somewhat greater powers to initiate change and there are some possibilities for greater flexibility through certified agreements. Modifications to the Queensland Act and proposed changes to legislation in NSW provide for a wider range of contractual arrangements and, in the case of the latter, limits to industrial action through increased sanctions for breach of rules or decisions. Little use has been made so far of the Queensland voluntary employment agreements or of certified agreements.

In contrast, change within the system appears to have been far more marked. The link between wage increases and inflation has been broken. And while the practice of centrally-imposed wage increases has been maintained, the focus of attention has moved to more decentralised negotiations over productivity offsets and changes to award structures. Even though it is difficult to see much aggregate productivity impact, the second tier negotiations appear to have been successful on

a number of fronts: potential cost offsets or productivity improvements seem to have been widespread and improved contacts between management and labour should create a more favourable environment for future change. The current procedure of award restructuring is a natural extension of this process and it was appropriate that a somewhat broader approach be taken, particularly where negotiations over the second tier had concentrated on immediate cost offsets rather than changes to more fundamental impediments to enterprise adjustment. Although it is too early to assess the final outcome, the initial results in a number of larger awards indicate that changes are clearly going in the right direction.

However, even after the completion of the current phase, the award system and the union movement will still be structured to a significant degree along occupation and craft lines. Both factors can keep the number of bargaining units in individual work-places above desirable levels and will continue to affect flexibility of enterprises. The award restructuring under the current wage principles should, therefore, only be considered as an intermediate step. The legal framework *per se* does not appear to be an impediment to moving towards a more rational award and union structure. The most important factors impeding progress appear to be archaic union structure and labour and management attitudes toward change.

Past history suggests that rationalisation of unions will be a difficult task, given that some of the most ardent defenders of the *status quo* are craft or occupational unions which are widespread across industries. The union movement's approach is towards a more gradual move to 20 or so larger industry-based unions. These would provide the infrastructure for union "locals" in individual firms and the number of unions in any one industry would be sharply reduced. There is now much greater acceptance within the trade union movement of the need for a reduced number of bargaining units in each enterprise and some unions actively seeking single union agreements in new enterprises. Some union amalgamations have been occurring – although it is not clear that this has always gone in the direction of creating a more coherent union structure along industry lines. More recently, the ACTU has begun encouraging rationalisation of union coverage through exchange and/or transfer of membership between unions and this is a welcome development. The steady decline of the union membership in recent years bears witness to the need for major modifications in union attitudes and behaviour. Part of this decrease has resulted from the rapid growth in the service sectors where unionism has been weak while employment in its traditional areas of strength have stagnated or fallen. But it may also reflect the fact that new employees see little interest in joining unions which are highly segmented, fraught with internal disputes and more concerned with protecting acquired rights and work practices than

addressing emerging needs of their members. Unionists aspirations are likely to be best served by relatively few large unions with solid support services, as suggested by the ACTU, combined with a substantial decentralisation of negotiating responsibility to affiliates at the firm level on local working conditions.

Certain aspects of the system may have reduced the need for employers to change their approach. There may have been some benefits from having a fragmented union movement in maintaining perceived management prerogatives. High tariff barriers and regulation in many sectors protected most Australian firms from market pressures. In these circumstances, management had little incentive to improve its performance. Managers, in many cases, agreed to wage increases and to many work practices which are now claimed to be reducing productivity and flexibility. Certain features of the system may have induced "collusion" between workers and management. If, for example, inefficient work practices can be inserted into multi-enterprise awards, the same conditions would then be faced by all competitors. Individual employer resistance to excessive demands by employees is reduced. In addition, employer agreement to wage increases has also been encouraged by widespread use in some sectors of "rise-fall" clauses in contracts, permitting increases in award wages to be passed on directly into higher prices. Management attitudes now appear to be changing with increased competition after a lowering in tariff barriers and increased deregulation. But these measures need to be pushed further: tariff reductions should continue once the phasing in of the most recent reduction is completed in 1992 and the scope of deregulation should be widened, particularly at the level of the States. Finally, limitations on the use of "rise-fall" clauses could be considered.

Speed of reform would be enhanced if management were to take a more active role in initiating change. Indeed, up to the present, much of the present momentum has been generated by the union movement, albeit on its own agenda. Business can initiate change in several ways: ensuring that appropriate negotiating structures are established, increasing line management's role in industrial relations, undertaking negotiations with the various union groups to improve co-ordination and making clear the costs of existing rigidities. Success will also be enhanced if such changes are integrated into a broader review of business strategy and organisation rather than a narrow emphasis on reductions in direct labour costs. Such a broad review would in any case be necessary in order to compete successfully in an increasingly global market environment. Within this broader context, enterprises under Commonwealth jurisdiction appear to have various options available to it: including rationalisation or simplification of multi-enterprise awards, appendices to parent awards over local conditions; enterprise awards and possibly certified agreements.

Voluntary employment agreements and the proposed collective enterprise agreements may provide additional flexibility in Queensland and New South Wales respectively. Single enterprise awards, certified agreements, VEAs of CEAs would appear particularly useful for new firms or plants.

New State measures or proposals to increase contestability of existing unions or sanctions for illegal industrial activity are likely to have a positive effect only when buttressed by better communications between labour and management and more widespread use of internal dispute settlement procedures. In their absence inter-union rivalry over membership could slow further reform to the labour movement, and tougher sanctions against illegal industrial action (for example strikes) may simply change the form of industrial action. When better industrial relations practices become embedded in labour and management attitudes, *negotiated* fixed-term settlements including agreed restrictions on industrial action may become more broadly acceptable.

While overall wage restraint will be needed during a transitional phase, standard wage increases for all firms may limit the expansion of the more dynamic sectors and enterprises. The narrowing in vertical wage differentials in recent years may limit incentives to increase education, training and skills, one of the foundation stones of the new award system. Higher minimum wages may have potential negative employment effects for low-productivity workers. A breakdown of wage-wage links through rationalisation of union and award structures leading to a more decentralised pattern of negotiation, over time, may lessen the need for aggregate wage policies.

Two "models" of a more decentralised system which might emerge are:

- A system of enterprise agreements with only one or two unions or representative employee groups negotiating on behalf of employees in the work-place and greater freedom to contract with employees to reflect the needs of the enterprise and its workforce;
- A set of industry awards setting minimum conditions for employment negotiated at an industry level by one representative union and employer group. Minimum conditions would be as unrestricted as possible, leaving detailed negotiation of working conditions to union and management at the enterprise or work-place level.

Industrial structure may have an important influence on the appropriate approach for individual firms. As noted above, the enterprise sector is characterised by relatively few larger firms, which are the largest exporters, make the largest investments in fixed capital, in R&D and on training and are most exposed to

changes in world product markets. They also face a large number of unions and awards and the potential for productivity gains is purported to be large[98]. In contrast, there is a large number of small enterprises where problems are of a much different nature: management skills are not necessarily well developed, the number of unions is small, employee-employer relations are probably closer and more formal labour-management procedures absent and efforts on education and training are more dispersed. The "second tier" negotiations demonstrated that there were gains for many small firms from carrying out negotiations at an industry level on the minimum conditions. They are likely to benefit from the scale economies associated with industry-based training programmes, portability of skills and to widespread acceptance of new qualification structure. For these firms, industry negotiation over basic conditions may make more sense, particularly if the associated award provides a structure for further training and education. These two approaches may reveal themselves as complementary rather than substitutes for each other.

IV. Conclusions

The previous *Economic Survey of Australia* foresaw a progressive reduction in the current account deficit and in inflation. This was to be achieved within a framework of restrictive monetary and fiscal policy, aggregate wage restraint and increased emphasis on microeconomic reform. A variety of factors, including the large rise in commodity prices, has led to significantly stronger private sector demand than expected, and supply constraints appear to have been reached in a number of sectors. As a consequence, there has been a reversal of the previous improvement in the external balance in terms of GDP. After falling to around 4 per cent in the second half of 1987, the current external deficit climbed back to 5¼ per cent of GDP in the first half of 1989 and to over 6 per cent more recently, and foreign debt has begun to rise again relative to GDP. Price pressures increased during this period.

Despite this slippage, the underlying economic situation has improved in a number of respects. First, the widening in the current account deficit appears largely associated with an increase in private capital formation. The share of business investment in GDP is now at historically high levels, and capacity seems to be increasing rapidly. Second, profitability has increased further, providing underlying support for investment as interest rates have risen. Third, the public sector is in financial surplus although the process of fiscal consolidation may slow in FY 1989-90. Fourth, employment growth has continued to be strong and unemployment has fallen to levels seen around the beginning of the 1980s. Finally, wages have not accelerated appreciably in the most recent period despite high profits and the tighter labour market. If these patterns can be maintained, the risks of a repeat of the deep recessions in 1974-75 and 1982-83 will be much reduced and medium-term prospects enhanced.

A turning point appears to have been reached in the second half of 1989. Despite tight fiscal policy and restrained real wages growth, interest rates have had to be raised by around 7 percentage points over the past eighteen months to counter an overheating of the economy. Tighter policy and the unwinding of a number of

temporary factors (including auto sales and office construction) suggest that domestic demand growth is now slowing to a more sustainable rate and inflationary pressures should ease as a consequence. Higher interest rates appear to be inducing a sharp slowdown in private construction, and there are some indications that labour market pressures are also weakening. Higher interest rates have probably contributed to the appreciation of the Australian dollar and some further erosion of competitiveness, which, if maintained, could slow the pace of longer-term external adjustment. But in present circumstances, such concern is clearly outweighed by the need to dampen domestic demand.

Fiscal policy was further tightened in FY 1989-90. The interpretation of policy for the current fiscal year is complicated by the adoption of tax-based incomes policies. The union movement has reduced its wage demands in exchange for significant tax cuts. Although it is difficult to judge what would have happened in the absence of the tax cuts, incomes policy had come under considerable pressure, and it seems likely that aggregate wage control would have proved more difficult given the tightening in labour market conditions. The alternative of a faster rise in wages would have undesirable medium-term repercussions if it provoked an acceleration in inflation, a squeeze on profits, a fall in business confidence, a decline in investment and a shakeout in employment. To the extent that greater wage moderation has been achieved, fiscal policy can be thought of as being more restrictive than might appear on the basis of the budget figures themselves.

On the customary assumptions of unchanged exchange rates and announced policies, the OECD projects a slowing of domestic demand growth in 1990, strengthening slightly in 1991. The current account might narrow to around 3½ per cent of GDP by the second half of 1991 and inflation could decelerate to between 5 and 6 per cent. However, even at the end of this period, the ratio of foreign debt to GDP is likely to be still increasing and the rate of inflation will probably remain above the average of Australia's trading partners. As discussed in Part II, the achievement of a sustainable improvement in economic performance calls for a further shift in resources to net exports and sustained downward pressure on price increases. Success is not likely to be easy and a conflict of objectives may occur from time to time. A reduction in the external deficit consistent with a stabilisation of the debt to GDP ratio by mid-decade will require exports to rise at a considerably faster rate than imports. While capacity in the traded goods sector seems to be increasing, achievement of higher exports will require that competitiveness be substantially improved and that domestic absorption be constrained. Some reduction in capital formation as a share of GDP from current very high levels is projected over the next two years but appears unlikely to constrain the necessary

rise in productive capacity or medium-term housing needs. However, an increase in domestic saving is likely to be required as well.

One way of raising the level of domestic saving is for the Government to improve the budget balance. The record of fiscal consolidation over the past four fiscal years is laudable. The Commonwealth budget position has improved from a deficit of 4.2 per cent of GDP in FY 1983-84 to a budgeted surplus of 2.5 per cent in FY 1989-90, largely through expenditure restraint. Continued expenditure restraint is desirable, particularly at the state and local government level where higher growth of expenditure has been partly financed by asset sales. Nonetheless, there may be practical limits to increasing domestic saving through ever higher budget surpluses. Political pressures to increase expenditures or cut taxes will inevitably arise. But even if the lower government expenditure were balanced by tax cuts, public sector calls on resources would be reduced, potentially allowing more output to be shifted to the external sector.

Further increases in private sector saving are likely to be required over the longer haul if a better balance-of-payments position is is to be achieved and sustained. The spread of superannuation arrangements and the introduction of a retirement income policy provide a vehicle for retirement saving, and the latter may help to remove some of the disincentives to saving from means- and income-testing of government pensions. However, there is no assurance that higher retirement saving in, for example, superannuation funds will not be substituted in part for other saving. Other measures may need to be taken. In general, selective benefits for specific forms of saving should be eschewed as this may distort the pattern of saving rather than increase its overall level. The level of aggregate saving is likely to respond more favourably to a sustained improvement in general economic conditions, including a reduction in the rate of inflation.

Real wages have declined for the past several years. Nonetheless, nominal wage increases now appear locked in the range of 7 per cent a year while price increases are currently running in the range of 6½ to 7 per cent. Bringing inflation down to levels nearer to trading partners is likely to prove difficult, given the slow growth in real incomes in recent years, the high levels of profits and continuing high demand for skilled labour. It will require resolute action in a number of areas. Nominal wages will need to increase more slowly. Impediments to competition in product markets need to be reduced so as to help ensure that slower growth in wages is passed on to domestic prices. Dismantling trade restrictions must continue. Higher profits resulting from the exercise of market power would then be less likely to occur and the chances of obtaining union agreement for continued wage restraint

increased. Further deregulation and competition in a number of service industries, particularly in the public enterprise sector, are desirable and would go in the same direction. Finally, control of inflation is only possible over the longer run if monetary policy imposes adequate financial discipline. The monetary authorities have to show commitment to achieving a sustained reduction in inflation, recognizing that this will mean restraining demand growth for some time ahead, but firm in the knowledge that a better external balance and lower inflation will result in lower real and nominal interest rates over the longer haul.

Better medium-term performance would be facilitated by higher productivity growth. Aggregate productivity levels in Australia appear to be not far from the OECD average, though they seem to be below the average in manufacturing and in public utilities. Furthermore, there seems to be considerable scope for improvement in productivity growth. Enhanced productivity growth can permit faster output growth, making it easier to reduce the external deficit. At the same time unit costs will also be reduced, allowing inflation to be wound back more quickly. While slower employment growth may result in the short run, this does not appear to be a major problem in the face of current tight labour markets. While problems of labour market and workplace efficiency are being increasingly tackled, productivity improvement continues to be held back by a web of outdated and restrictive working arrangements, a craft and occupation-based union structure, poor management practice, and an industrial relations environment which makes change difficult.

Since the last *Economic Survey of Australia* was published, considerable attention has been paid to reform of labour markets, the wage-fixing system and the underlying industrial relations framework. Consensus has emerged over the need to change industrial relations practices. Initial reform measures have aimed at a shift away from indexed wage increases towards productivity-related bargaining and a progressive removal of constraints to higher productivity. The changes associated with award restructuring should go a considerable way to breaking down functional rigidities, increase the attachment of the workforce to particular industries and enterprises, reduce wastage of skills and lead to more enriching and productive patterns of work.

The recent reforms are important and go in the right direction, but they should be considered as the first steps. Awards may still be too prescriptive and unnecessarily constrain local negotiations. A move towards a more rational award structure is vital. The pattern of multi-enterprise awards continues to impede change and limit adaptability, and it reduces the scope for productivity improvement. For the larger

firms, the move to single-enterprise awards with a minimum number of worker groups is probably the most likely and desirable outcome. Single enterprise awards already exist and there are new contractual forms which can provide other alternatives, although their usefulness remains largely untested. For smaller firms, industry-based awards covering basic conditions but allowing greater possibilities for negotiation in individual firms over local conditions could have advantages, particularly if the award provides a framework and vehicle for increased training. Industry awards also exist in a number of sectors, and certified agreements can perhaps be used by individual firms to allow for variations to the award. There appears to be little within the legislative framework which prevents either outcome, and the two approaches may prove to be complementary.

The main obstacle now appears to be the attitudes of management and labour and the pattern of unions. Management will need to be more forward-looking, better able to manage its human resources and capable of creating a coherent strategy of workplace reform, benefiting the workforce as well as the firm. Best results are likely to be achieved when communication with the workforce is high and common goals established. The decline in union membership suggests that many unions are failing to respond to members' needs. Union structures will have to be reformed. The ACTU's programme to move towards a set of broad industry unions along with other recent ACTU initiatives designed to rationalise union coverage seems therefore highly desirable if it permits a significant reduction in the number of unions in a single enterprise. Industry unions with affiliates at the firm level are likely to be in a better position to represent workers' interests.

Several difficulties remain, however. First, excess demand for skilled labour is likely to remain in many sectors, even if there is some short-term easing in overall labour market pressures. Strong wage-wage links could generalise any increases in wages for skilled workers. On this basis, there seems to be a wide measure of agreement in Australia that aggregate wage limitation may be necessary for some time to come. However, this may limit the pace of structural change. While the creation of career paths in restructured awards should increase the scope for employees to invest in education and training, the possible narrowing of wage relativities in recent years may work in the other direction as well as limiting the broader allocative function of labour markets. Moreover, the largely uniform nature of wage increases, however, makes it more difficult to attract labour and to negotiate significant changes to work practices. For these reasons, more widespread use of new contractual arrangements (e.g. certified agreements or voluntary employment agreements) seems desirable. However, in order to reduce the risk of flow-on to other awards, these arrangements may need to be reserved for cases

which represent a major departure from present structures and practices. Such changes may act as a beacon for other firms to follow.

A question remains as to the best method of inducing change. It has been argued that stronger powers in the hands of the industrial tribunals to enforce decisions and greater contestability of existing unions (by encouraging enterprise unions) are necessary to encourage more positive attitudes towards change within the union movement. There seems nothing wrong with increasing the variety of contracts potentially available to management and workers. There is no apparent risk to the union movement because existing unions can play a role in forming enterprise groupings and changes in such a direction are unlikely to take place unless management is offering an attractive enough package to persuade workers to accept. But as discussed in Part III, such an approach, all elements combined, will produce positive results only if management is capable of providing the appropriate environment for change. Institutional change is likely to be of greatest help where it places positive pressure on the "social partners" to move towards a better industrial relations environment, marked by common objectives, good communications and mutual respect for the needs of each side.

Labour market behaviour is affected by a wide range of factors extending beyond labour market institutions. High levels of protection and inadequate competition have insulated many enterprises from market pressures, permitting various groups or sectors to capture monopoly rents. In such an environment, Australian management may have remained less flexible, and more paternalistic and autocratic in style than elsewhere, while some parts of the union movement have had very conservative attitudes towards change, focusing most of their attention on wage-related matters. Over the last decade there has been a considerable increase in market pressures due to a fall in trade protection, some deregulation and growing integration of Australia into the world economy. Increased competition, including through a further lowering in trade barriers and a review of "rise and fall" clauses (which allow higher award wages to be automatically passed through into contract prices), should help instil price discipline and stimulate the adoption of new technology. It should also create a more favourable environment for a movement towards a more flexible labour market. For such microeconomic improvements to be transformed into better overall performance, however, they need to be carried out in the context of a firm macroeconomic policy geared to medium-term economic stability.

Notes and references

1. Comparisons with other indicators suggest that the national accounts estimates, particularly for the recent quarters of 1989, may be revised heavily. In particular, it appears that household wage income may be substantially underestimated. In this case, the fall in the saving ratio may be less marked.
2. Sales of assets are subtracted off of investment in the government and national accounts.
3. The personal income tax reform in 1985-87 removed a number of ways of avoiding tax by households, including the deduction of losses on rental housing (i.e. where rental payments were less than interest and other costs) from other income. This measure was rescinded in the 1987-88 budget after shortages of rental housing began to appear. Investment in housing remains one of the few remaining methods of avoiding tax by households in Australia.
4. See for example D.T. Coe, "Nominal wages, the NAIRU and wage flexibility", *OECD Economic Studies* No. 5, Autumn, 1985.
5. Flat rate increases are specified for lower wage workers and, for tradesmen and above, it is a flat rate or 6 per cent whichever is greater.
6. New minimum rates are set at levels which establish appropriate relativities between different categories of workers. Employees will only receive an increase from minimum rate adjustments (i.e. beyond the basic 6 per cent for award restructuring) to the extent that their current total wage is below the new minimum. Firms already often pay additional wages above the minimum ("over-award" wages). Consequently, employees currently receiving an "over-award" wage which gives them a total wage above the new minimum will not receive any increase from minimum rate adjustments. Employees receiving no "over-award" wages or a level of "over-award wage which gives them a total wage less than the new minimum will receive an increase sufficient to take their total wage to the minimum level. Accordingly, the impact of minimum rate adjustments on total wage costs will depend on the number of persons receiving 'over-award" wages and on the size and distribution of existing "over-award" wages.
7. See for example R.M. Simes and C.J. Richardson, "Wage determination in Australia", *Economic Record*, Vol. 63, No. 181, June 1987; P.E.T. Lewis and M.G. Kirby, ' The impact of incomes policy on aggregate wage determination in Australia', *Economic Record*, Vol. 63, No. 181, June 1987; and results quoted in D. Moore, "Industrial relations and the failure of the Accord: what should be done", *Australian Bulletin of Labour*, Vol. 15, No. 3, June 1989.

8. Five existing wage equations estimated by Australian researchers have been used to test for a "structural break" in 1983II. Two techniques have been employed: *i)* parameters estimated on the pre-accord period are used for forecasting wages in the Accord period, the residual being ascribed to the Accord effect, *ii)* equations estimated for the whole period with an "accord-dummy". Most equations pointed to a structural break. It is striking that the residual under method *i)* tends to become bigger over time. It is always possible that the effect has resulted from a more general change in attitudes after the 1982-83 recession. However, the results make it implausible that the Accord had adverse results, as some have suggested. See B.J. Chapman and F. Gruen, "An analysis of the Australian consensual incomes policy: the Prices and Incomes Accord", paper presented at the Symposium on Full Employment and Unemployment Policy, University of Limburg, The Netherlands, 28th to 30th September 1989.
9. "Exogenous" imports (including government purchases, ships and planes and petroleum products) have been included in the investment category.
10. In particular, oil companies decided not to produce oil from certain fields at existing oil prices and excise tax rates.
11. See e.g. EPAC, *Model-based evidence on Australia's external debt*, August 1989, and OECD, *Economic Surveys for Australia*, 1987 and 1988.
12. See for instance J.D. Pitchford, "A skeptical view of Australia's current account and debt problem", *The Australian Economic Review*, 2nd quarter, 1989, pp. 5-14.
13. See Australian Bureau of Agricultural and Resource Economics, 1989, *Outlook for Australian Mineral and Resource Exports to 2000*, AGPS, Canberra 1989.
14. Aggregate gross saving has steadily decreased as a share of GDP since the beginning of the 1970s. The gross saving rate, which has averaged 24.8 per cent in the 1960s, was only 19.3 per cent in the 1980s. The government saving ratio declined more than private saving ratios, although the pattern may have been exaggerated to the degree that higher inflation pushed private saving ratios upwards. Similar trends in saving are found in other OECD countries, but in general, the declines have been less pronounced, even after inflation adjustment. Factors tending to lower private sector saving propensities include: changes to the age distribution of the working population, the rise in the number of transfer recipients, greater income testing of transfers, low after-tax rates of return on saving and transitory effects resulting from the interaction of reforms to the tax and financial systems. See A. Dean, M. Durand, J. Fallon and P. Höller, *Saving trends and behaviour in OECD countries*, OECD Working Paper, No. 67, June 1989, and EPAC, *Trends in Saving Behaviour*, Council Paper No. 36, December 1988.
15. Private sector saving is treated as a residual and includes the statistical discrepancy. Between 1982 and 1988, the discrepancy as a share of GDP has moved by approximately 2 percentage points of GDP, possibly biasing the movement in the private sector saving ratio downwards.
16. The Indicative Planning Council estimates, which are partly based on population trends and expected levels of immigration, suggest that underlying housing demand

could be met by 153 000 new housing units over the next four years. The investment level necessary to keep the housing stock rising at around 3 per cent per year – in line with the expected increase in the population of working age plus some increase in the average size of houses – is estimated to be between 5 and 5½ per cent of GDP.

17. The assumptions are that with GDP growth of 2¾ per cent *per annum* and continued restraint on government output growth, business sector output would rise by around 3 per cent. The scrapping rate was set at 3 per cent per year while capital productivity growth was set at ½ per cent per year in line with long run trend estimates. A rise in the scrapping rate by 1 percentage point would increase the required investment ratio by 2 percentage points and a rise in capital productivity growth by ½ a percentage point to 1 per cent would decrease the required ratio by 1 percentage point.

18. If scrapping has increased, the "true" rise in the capital stock may be less than the measured increase which is based on standard rules for depreciation and scrapping. There is mixed evidence on this point. Some surveys indicate that business now attaches considerable importance to replacement relative to expanding capacity. (See Australian Chamber of Manufacturers, "The Manufacturing Report" No. 3, February 1989, Confederal of Australian Industry/Westpac Bank, "Report of the one hundred and eleventh survey: June 1989"). However, a recent Bureau of Industry Economics survey of larger firms presented a more favourable picture; higher levels of investment have led to an increase in capacity of around 6 per cent over the last two fiscal years with planned increase in output for exports over the next few years of around 15 per cent per annum. M.K. Emmery, "Role of investment and related strategies in the outlook for manufacturing", Paper presented to the BIE/BRW Manufacturing Outlook Conference, Melbourne, 11th September, 1989.

19. It should also be noted that these calculations relate to gross capital stock. Net capital stock is currently growing at a slightly faster pace. On this basis, there could be some scope for greater falls in investment rates than assumed here.

20. See House of Representatives Standing Committee on Expenditure, *Report on Inquiry on Infrastructure*, 1988.

21. On the one hand, the amount of investment attributed to manufacturing may be underestimated because of continued problems in allocating material purchased by business services' sector to sectors leasing the equipment. Higher investment in business services may also reflect increased subcontracting by manufacturing for non-essential services which were formerly supplied within the manufacturing sector itself. On the other hand, as noted in footnote 18, surveys suggest that replacement investment is now a more important consideration for new investment than formerly.

22. Pensioners receiving government pensions are allowed to receive a small amount of income from other sources. Above this level, the pension is reduced by 50 cents for each dollar of additional income. As the additional income is also taxed, the effective marginal rate on income can be higher. The measures would ensure that the marginal tax rate would be 50 per cent up to the point where the recipients' government pension disappears entirely.

23. This absence of a general consumption tax is generally viewed as an obstacle to improving the export performance in Australia, see: Committee for Review of Export Market Development Assistance, *Australian exports; performance, obstacles and issues of assistance*, Canberra, 1989. The Canadian Government has recently decided to replace its single-stage sales tax primarily on manufactured goods with a multi-stage broadly-based sales tax. Among the reasons cited for the change is the difficulty of completely removing the existing tax from the price of exports.

24. It should also be noted that developments in the rate of inflation has taken place against the background of a rebuilding of profit shares from the low levels in FY 1982-83. Hence, the impact of lower export prices in 1986 and the sluggish development of demand may have had less of an effect on prices than otherwise as firms attempted to reestablish margins. However, as most countries were also experiencing an recovery in profit shares during the 1980s, this may not explain the continuation of the differential between Australia and other OECD countries in inflation rates.

25. See A. Blundell-Wignall and R.G. Gregory, "Exchange rate policy in advanced commodity exporting countries. The case of Australia and New Zealand" paper prepared for the international conference on "Exchange Rate Policy in Selected Countries", sponsored by the IMF, 12th to 14th October 1989.

26. See for recent evidence: Prices Surveillance Authority, *Inquiry into the effects of exchange rate appreciation on prices of consumer goods*, Report No. 21, May 1989.

27. See Reserve Bank of Australia, *Report and Financial Statements*, 30th June 1989, pp. 13. Insert by OECD.

28. See A. Blundell-Wignall and R.G. Gregory, *op. cit.* See also I.J. MacFarlane and W.J. Tease, "Capital flows and exchange rate determination", paper presented to the BIS meeting of central bank economists, Basle, 15th and 16th November 1989.

29. Import competition may be limited where low-value or bulk imports make competition with local production less effective, where there are long delivery times or where the capital costs facing foreign suppliers in setting up distribution systems and product promotion are high. Alternatively, firms may complement their product range with imports allowing them to specialise in products where scale economies can be achieved or where proximity to the market offers a premium. Further, the exclusive licensing of individual imports, prohibiting parallel imports, can create a monopoly position for certain importers. See EPAC, *Promoting competition in Australia*, Council paper No. 38, April 1989.

30. *Mergers, takeovers and monopolies, profiteering from competition*, House of Representatives Standing Committee on Legal and Constitutional Affairs, Canberra, May 1989.

31. Furthermore, a recent court decision has indicated that successful prosecution against misuse of market powers can be mounted under existing provisions of the TPA. (The Queensland Wire Industries case).

32. See OECD, *Economic Survey of Australia, 1987/88*, July 1988, pp. 66 and reference therein; IAC, Inquiry into Government (Non-tax) Charges: The electricity Supply Industry in Australia, Information paper No. 6, 17th March 1989; EPAC, *Economic Infrastructure in Australia*, June 1988, particularly Appendix 6; and E.A Mayer (BCA), "Reducing Australia's transport costs" EPAC discussion paper 88/11, October 1988.

33. Industries Assistance Commission, *Annual report 1988-89*, AGPS, Canberra 1989.

34. A necessary condition being that manufacturing industries specialise in exports of goods that have no close price-price links with commodities, see e.g. W.J. Martin, "Implications of changes in the composition of Australian exports to export sector instability", *The Australian Economic Review*, 1st Quarter 1989, pp. 39-50, and P. Brundell, H. Horn, and P. Svedberg, "On the causes of instability in export earnings", *Oxford Bulletin of Economics and Statistics*, Vol. 43, No. 3, 1981, pp. 301-313.

35. See EPAC, *Productivity in Australia: results of recent studies*, Council Paper No. 39, April 1989 and Industrial Relations Study Commission, Business Council of Australia, *Enterprise based working units: A better way of working*, Volume 1, July, 1989.

36. The standard practice is to translate standard measures of value added and productivity into a common currency by PPP exchange rates which approximate real purchasing power of an individual country's currency relative to a benchmark currency. Although this may yield an acceptable relative measure of a country's potential to generate a specific level of real income per head, it may not say very much on the efficiency of production by sector. For example, the PPP method will tend to overestimate comparative productivity for Australian manufacturing. The relatively high level of protection boosts the level of measured manufacturing value-added and productivity compared to countries with lower industry support, because the value added includes the quasi-rents that eventuate from protection in addition to the "underlying" contributions of the factors of production. Unfortunately, no better alternative to PPP deflation seems readily available. This problem can partly be solved by using sectoral PPP's, see D.J. Roy, "International comparisons of real value added, productivity and energy intensity in 1980", *Economic Trends*, No. 404, June 1987, pp. 87-98, but there is still no satisfactory adjustment for the effect of tariffs on the level of value added.

37. See the explanatory notes in: Australian Bureau of Statistics, *Capital stock, 1987-88*, ABS Catalogue Number 5221.0, Canberra, 1989. As regards problems of measuring capital productivity, estimates of changes in the quality of the capital stock are registered in the data as increases in the stock itself and therefore do not appear as productivity growth. This effect can be sizeable. Further, capital stock is constructed using the perpetual inventory method and this does not take into account accelerated scrapping, for example following lengthy underutilisation of capital or increased bankruptcy as in 1974-75 and 1982-83. See also EPAC, *Productivity in Australia: results of recent studies*, Council Paper No. 39, April 1989.

38. This reflected higher scrapping rates in the 1982 to 1983 period. See footnote 37.

39. In particular, ABS does not, in general, use the so-called double-deflation method. While there is no negative or positive bias in using single as opposed to double deflation methods, double deflation estimates produces significantly lower productivity growth rates for Australian manufacturing than ABS single deflation series over the 1980s. See R. Lattimore, *The productivity performance of Australian manufacturing: an overview*, September 1989 (mimeographed).

40. Official statistics of labour productivity growth in services industries appear to be underestimated to some extent in all countries, since value added data are usually constructed on the basis of inputs (labour) – rather than on the basis of output valued at (deflated) market prices – although they are sometimes adjusted for some *a priori* estimate of productivity growth. See OECD, Department of Economics and Statistics, *Measurement of value added at constant prices in service activities*, Paris, 1987 and T. Elfring, *Service sector employment in advanced economies, a comparative analysis of its implications for economic growth*, Aldershot, United Kingdom, 1988.

41. This catch-up model has been built into the OECD Interlink model supply blocks. According to this hypothesis, the rate of productivity growth in a country may slow down as the level of productivity approaches some best practice level, which is usually assumed to be located in the United States.

42. See Annex I for more details.

43. This explanation has been suggested in the Treasury's *Budget Statement No. 2*, Canberra, 1989, pp. 2.40-2.42.

44. See EPAC, *Promoting competition in Australia*, Council Paper No. 38, April 1989.

45. The States have plenary powers and, in contrast to the Commonwealth Government, can legislate directly on matters such as wages. Nonetheless, they have chosen not to do so and, in most cases, have adopted systems similar to the Federal system.

46. In addition to setting out pay rates, a typical award will also include: the essential elements of the contract of employment (hourly, weekly or monthly hire, notice requirements, etc.); hours of work; overtime, shift and holiday pay rates; annual, sick and other leaves; allowances of various kinds; and conditions for retrenchment and redundancy. The conditions set down in the award may be *maxima* or *minima* or they may prescribe procedures to be followed in certain circumstances. Most multi-employer awards set minimum rates of pay and conditions and negotiation of "over-award" conditions are allowed – although increases in "over-award" payments have been limited by the principles governing centralised wage increases since 1983. Awards may also prescribe paid rates on the understanding that there will be no "over-award" payments. Awards may set maximum hours of work to the degree that the number of hours of work at normal pay are specified, grievance procedures, consultations for health and safety problems, work procedures, new technology, demarcation and apprenticeships.

47. Awards do have a specified period but they continue in force after the expiry date until the Commission orders a change or there is a dispute requiring a change. This has meant that awards are rarely reviewed and, as noted above, remained relatively indeterminate in duration.

48. The remainder of employees are covered by a range of alternative contracts, including individual contracts (particularly for management) and some firms have made agreements with their workforce which establish themselves outside the jurisdiction of the Act.

49. See Malcolm Rimmer, *Enterprise and business awards*, Business Council of Australia, Melbourne, 1988.

50. See National Institute for Labour Studies, *Employee and Industrial Relations in Australian Companies, a Survey of Management*, Report prepared for the Business Council of Australia Industrial Relations Study Group, March 1989. The Survey covered over 340 enterprises employing 170 000 persons. Ninety-five per cent of firms were unionised and around three-quarter of employees in the sample belonged to unions compared to around one-third in the private sector as a whole.

51. See National Institute of Labour Studies, 1989, *op. cit.* The average number of unions was 1.5 for firms with fewer than 50 employees and almost 11 for firms with over 2 000 employees.

52. See Malcolm Rimmer, *op. cit.* The author found that single-enterprise awards grew rapidly in the 1970s and early 1980s and, at the Commonwealth level, there are more awards of this type than industry awards, although the majority of employees are covered by multi-employer awards. Single-enterprise awards attempt to deal with some of the rigidities in parent industry awards, but rarely replace the award with an entirely new format. Changes largely concern: higher rates of pay in the form of "over-award" or paid-rate awards which combine elements of both minimum and "over-awards"; simplified classification structures often allowing for multi-skilling; shift-work and non-standard hours.

53. Demarcation disputes covered a range of issues; of the some 1 560 disputes of this nature during the period 1975 to 1981, 64 per cent concerned unions and occupations, with three-fifths of these being over two unions claiming each others' work, 18 per cent were over supervisors of apprentices doing the work of union members, 9 per cent arose from work allocation, 7 per cent were over union jurisdiction, 2 per cent were intra-union conflicts. See M. Wright, "Unionisation in Australia and the coverage of the closed shop", *Australian Bulletin of Labour*, Vol. 7, No. 3, 1981. Cited in BCA, *Enterprise-based bargaining units, a better way of working*, Vol. 1, July 1989.

54. See OECD, *Economic Survey of Australia 1987/88*, Paris, July 1988, pp. 70 to 78 for a discussion of this issue.

55. However, it should be noted that the June 1986 National Wage Case discounted the price-related wage increase by 2 percentage points to prevent higher import prices feeding through into wages.

56. For a discussion see G. Withers, "Labour", in R. Maddock and I.W. McLean, *The Australian Economy in the long run*, Cambridge University Press, Cambridge, 1987. Chapter 10; also the 1987 report by the tripartite National Labour Consultative Council in Australia.

57. It is, nontheless, worth noting that there are avenues for flexibility within the centralised system, e.g. certified agreements and provision for "special cases", and some

adjustments have been made for awards where rates were clearly out of line with marked conmditions (e.g. nurses). Given the institutional constraints encouraging flow-on pressure, the need to allow scope for relative wage flexibility must, in the authorities' view, be balanced by the need for aggregate wage restraint.

58. An associated issue concerns the existence of paid-rate awards. As noted, most awards specify only minimum conditions but are supplemented by negotiated "over-award" rates. Some minimum awards were converted into "paid-rate" awards combining both elements. These largely exist in the public sector and in some large complex organisations, but their relation to the relative minimum award rates is not always clear and can result in dispute and catch-up demands.

59. See Diagram 12 and footnote 6.

60. National Wage Cases establish a number of "principles" or rules for wage increases. Second-tier rises of the type mentioned were classified under the "restructuring and efficiency" principle. In the event, nearly all increases were in this category, the most frequent offsets being: payments methods, broad banding and multi-skilling, dispute settling, demarcation, and various elements of work time (rostered days off, reductions in breaks, shift-work etc.).

61. An unpublished Business Council of Australia survey conducted in August 1988 indicated that 60 per cent had achieved up to 4 per cent and the remainder reported gains above this level. A CEDA survey at about the same time indicated that around half felt they had made gains between 0 and 4 per cent and slightly over a third that the gains were over 4 per cent.

62. See OECD, *Labour Market Flexibility: Trends in Enterprises*, Paris, 1989, for more detail on the different types of flexibility as well as a comparative study of these in selected countries.

63. There are relatively few constraints on firing in federal laws, as the constitution largely prevents legislation in this area. The Commonwealth Industrial Relations Act 1989 imposes penalties on an employer for dismissal in particular circumstances (largely in relation to union activities) and in New South Wales minimum periods of notice are specified. A 1984 federal Commission decision on termination, change and redundancy (TCR) established guidelines in this area for awards, but the flow-through of these provisions have been slow and only an estimated 10 per cent of federal awards are now covered, perhaps because the provisions of the TCR decision have already been by-passed by other awards. Commonwealth employees (administration and public enterprises) are somewhat more protected than those in the private sector. Nonetheless, conditions relating to use of part-time and casual labour and outside contractors have been relaxed in a number of awards, and this may enhance flexibility in labour-intensive sectors subject to production and trading peaks such as the retailing, hospitality and entertainment industries.

64. Closed-shop agreements refer to agreements whereby only union members will be employed. Preference agreements give union members the first refusal for employment of new personnel and union members are the last to leave when employment is reduced. Closed shop practices are probably more widespread on the basis of tacit

agreements between management and the unions. Forthcoming New South Wales legislation intends to allow closed shop agreements where agreed by 65 per cent of workers but rule out preference agreements.

65. However these have been relaxed in certain areas, particularly where tourism has been on the increase.

66. The federal Commission has stated that it is not prepared to allow further reduction in the standard work week.

67. There may have been some use of these provisions by unions to force overtime work on firms at higher rates of pay; for example where employees work more slowly during normal working hours. Many awards or agreements with individual firms also followed the "one in, all in" rule where all workers would have to work overtime if overtime was required.

68. The reduction from 40 to 38 hours in a standard work week has often been achieved by the introduction of a nine day fortnight or nineteen day month, together with a flexible "rostered day off".

69. For example, allowing workers to undertake a wider range of tasks could be limited if the tasks came under different awards and where unions defend the demarcation of their tasks.

70. Most notably in the metal trades award. See M. Rimmer and J. Zappala, "Labour Market Flexibility and the Second Tier", *Australian Bulletin of Labour*, September 1988.

71. See S.J. Frenkel and M. Shaw, "No tears for the second tier: productivity bargaining in the Australian metal industry" *Australian Bulletin of Labour*, March 1989, pp. 90-114.

72. This did not necessarily mean that the 4 per cent was not paid. Many small firms simply paid the increase, without reference to the Commission, as an "over-award". In others none was paid at all.

73. Australian Industrial Relations Commission, *National Wage Case*, August 1988, Print H4000.

74. The instalments were flat weekly rates of A$20 to A$30 (depending on skill level) or 3 per cent. Lower-paid workers would, therefore, obtain a higher percentage increase. Supplementary payments – which extend existing "over-award" payments in higher-paying firms to all workers were also agreed but were to be phased in over a slightly longer period.

75. Some of the specific suggestions of the Commission were: averaging overtime rates, compensating overtime with time off, flexible hours and annual leave, part-time work, pay periods, sick leave, and consultation procedures.

76. There will be ten levels in the transport industry, three for storemen and packers and six for clerks.

77. The programme will be supported by a public communication strategy which will enhance initiatives aimed at explaining the award restructuring process to companies, unions and employees.

78. Initial industries receiving support were metal manufacture, automobile assembly, timber, and clothing, textile and footwear.

79. The legislation was based in large part on the Report of the Committee of Review into Australian Industrial Relations Law and Systems (Hancock Report), AGPS, Canberra, 1985. Legislation was subsequently introduced in 1987 only to be withdrawn in the face of employer protests. These largely related to the proposal to limit employers access to common law injunctions against industrial action while the same dispute was before the Commission. This was to be balanced, under the new Act, by substantial increases in penalties for unlawful industrial action. New legislation omitting these proposals was introduced and passed in 1988.

80. The AIRC takes over the responsibilities of a number of specialist tribunals.

81. Voluntary employment agreements (see below) were introduced from the beginning of 1988. In Queensland a further examination of the industrial relations system was undertaken. See Report of the Committee of Enquiry into the Industrial Conciliation and Arbitration Act 1961-1987 of Queensland (Hangar Report), Brisbane, November 1988. It recommended a fine tuning of the existing system over a period of twelve years, to increase the flexibility of the industrial relations system but under the control of the Queensland Industrial Conciliation and Arbitration Commission (ICAC). It rejected a wholesale move to a collective bargaining system and rejected the concept of enterprise unions (unlike the Niland Report). Nonetheless the Queensland Government decided to allow for enterprise unions in the 1989 modifications.

82. Government of New South Wales (Green Paper), *Transforming Industrial relations in NSW* (Niland report), Vol. 1, Sydney, 1989.

83. See footnote 47.

84. Before certifying an agreement the Commission must be satisfied that:

- It is justified on its merits;
- It relates to circumstances of a special and isolated nature;
- It is not a device to circumvent the general wage fixation principles and thus threaten the orderly operation of the industrial relations system.

See AIRC February 1989 Review, Print H8200, pp. 10-11.

85. These are: the minimum hourly award rate, 19 per cent higher wages for casual workers, hourly rate for part-time equal to full-time workers, four weeks annual leave with two weeks possible at one time, payment of 2½ times the ordinary rate for work on public holidays, long service leave, minimum sick leave, termination and superannuation conditions.

86. While the total number of days lost per employee is in the mid range of OECD countries, a pattern of short disruptive strikes amongst small sections of the workforce in an enterprise seems more prevalent than elsewhere.

87. *Rights* disputes are associated with interpretations of the terms of a contract. *Interest* disputes relate to the renegotiation of contracts when they come to the end of their life. The Green Paper proposals allowed for legal strikes in interest disputes but would have made them illegal in rights disputes. The New South Wales Government decided

to keep both illegal. The proposals also opt for a sharper distinction between arbitration and conciliation (to be handled by an Industrial Relations Commission) and judicial functions (dealt with by a separate Industrial Court). The latter will deal with breach of contract and non-compliance with arbitrated decisions.

88. In the metal industry there were over 300 classifications and in the clothing trades there were over 700. These will be reduced to about 20 in each case.

89. J. Matthews, "Towards an 'Australian model' of wages-linked structural adjustment", Swedish Centre for Working Life, Stockholm, 1989.

90. Those workers having "over-award" payments above the supplementary payment would have no increase in salary. Only lower-paid workers with little or no "over-award" payments would benefit. This will narrow relative wages overall.

91. This could occur in tight labour markets where employers agree as a means of bypassing national wage case limits to wage increases.

92. Employers wish employees to have a "skill reserve" so that they can be more flexibly deployed. This reserve is necessary to underwrite the package of award restructuring, work reorganisation and broad-banding of skill requirements.

93. See OECD, *Flexibility in the labour force, the current debate*, Paris, 1986.

94. See Kerry Madigan, "Further education and training in collective bargaining – the case of Australia", MSA document for general distribution, OECD, 1990, (forthcoming) for a more detailed discussion of some of these issues.

95. The Training Guarantee scheme will operate as follows: all enterprises with an annual national payroll above some threshhold level – at this stage thought to be A$200 000 per annum (equivalent to 10 full-time employees) – would be required to spend a minimum amount on approved training activities. This is likely to be set initially at 1 per cent of payrolls from 1990-1991, rising to 1½ per cent after two years. Any shortfall between required and actual expenditures is to be collected as Government revenue to fund additional training activities. The definition of training is to be broad, aimed at encouraging structured training and qualified by a list of approved and non-approved training expenditures.

96. See OECD, *Economic Survey of Australia 1987/88*, Paris, July 1988, pp. 70 to 78. Measures include the introduction of the Australian Trainee System, the Youth Training Programme, increased higher education places, greater priority in spending in areas where there are skill shortages, changes to the CRAFT programme for apprenticeship with an emphasis on improving quality.

97. See for example, Ministry for Employment, Education and Training, *Industry Training in Australia, the need for change*, AGPS, Canberra, 1989.

98. See BCA, *Enterprise-based bargaining units, a better way of working*, Vol. 1, July 1989.

Annex I

An analysis of labour-productivity growth in Australia: a macroeconomic approach

The supply block of the Interlink submodel for the Australian economy provides an analytical framework which can be used to identify the determinants of labour-productivity growth in Australia[1]. It produces a measure for "underlying" labour productivity, defined as the level of labour productivity which is consistent with cost-minimising behaviour at full capacity. Discrepancies between actual and "underlying" labour productivity can occur within the model because of lagged response to desired values, reflecting, for example, labour hoarding and dis-hoarding during cyclical downswings and upswings. "Underlying" labour productivity growth is the net result of *improvements in labour efficiency* and the effects of *substitution between labour and capital inputs.*

Supply blocks jointly determine factor demand, output supply and producer prices consistent with an estimated aggregate production function. The production function combines two factor inputs, labour and capital, within a CES-structure having *i)* a constant elasticity of factor substitution; *ii)* constant returns to scale; and *iii)* Harrod-neutral (labour augmenting) technical progress. The functional form is:

$$QBSV = [\ \beta(ELEFF \cdot ETB)^{\rho} + \gamma\, KBV^{\rho}\ ]^{1/\rho}$$

where ETB and KBV are labour and capital stock inputs, QBSV is "normal output" at actual levels of factor inputs (which may differ from actual output due to over-or underutilisation of actual inputs), β and γ are scale parameters, ELEFF is the labour-efficiency index and $\rho = (\sigma - 1)/\sigma$ where σ is the elasticity of substitution between the two factor inputs.

The production function has been estimated in two steps. First, the elasticity of substitution between capital and labour and the index of labour efficiency was estimated jointly, through an auxiliary equation which equates the marginal product of labour to the real product wage. This gives the following labour-productivity growth equation:

$$\Delta\ln (QBSV/ETB) = \sigma\, G(L)\Delta\ln (WSSE/PGDPB) + (1 - \sigma)\ \Delta\ln ELEFF$$

where WSSE is the business sector wage rate, PGDPB is the business sector gross value-added deflator and G(L) is an Almon polynomial distributed lag function. The labour-efficiency index ELEFF is expressed as a function of time trends (approximating changes in autonomous, disembodied technical progress), capital accumulation (representing embodied technical progress) and a catch-up variable. The "catch-up" hypothesis assumes that

the United States is the country with the highest level of total factor productivity, and implies that rates of growth of labour efficiency in the other OECD countries converge in the long run to the U.S. rate, which is taken to be exogenous.

In a second step, the labour and capital scale parameters are obtained by estimating the underlying CES production function directly, measuring "normal" by actual business output and capital input by business gross capital stock in constant prices. In the Australian case, this yields an estimated elasticity of substitution of 0.42 (t = 1.9) while values for β and γ are $0.79 \cdot 10^{-6}$ and 1.9 respectively. The former is roughly in line with the average value for all smaller OECD countries.

In the supply-block framework, factor-inputs per unit of output and hence productivity of factor-inputs, are determined through cost-minimising behaviour of firms. Therefore, labour productivity depends on relative factor prices. In formal terms the cost-minimising level of labour productivity (QBSTAR/EBSTAR) can be written as:

$$\text{QBSTAR/EBSTRAR} = \text{ELEFF} \cdot \{ \beta + [\gamma (\beta \cdot \text{UCC} \cdot \text{ELEFF}/(\gamma \cdot \text{WSSE}))^{1-\sigma}]\}^{-\sigma/(1-\sigma)}$$

where UCC is the user cost of capital. This equation says that the cost-minimising or underlying level of labour productivity rises relatively to the labour-efficiency index if the ratio of wage cost per effective unit of labour to the user cost of capital increases. This effect is the *substitution effect* on labour productivity.

Since in the Australian case, EBSTAR and ETB both relate to the *number of persons employed*, it is necessary to correct ELEFF for changes in labour time per person employed. As it stands now, the labour-efficiency index measures both the impact of "pure" labour efficiency and the impact of the number of hours worked per person. This gives rise to a correction of the efficiency index through the following relation:

$$\text{ELEFC} = \text{ELEFF}/\text{H}$$

where ELEFC is the "corrected" efficiency index and H is a two period moving average of an index of hours worked per person, taken from ABS statistics. Under this definition a fall in hours worked would lead to a lower ELEFF and hence lower productivity growth.

Actual labour productivity, GDPBV/ETB, can be defined as:

$$\text{GDPBV/ETB} = (\text{QBSTAR/EBSTAR}) \cdot (\text{GDPBV/QBSTAR})/(\text{ETB/EBSTAR})$$

in which the term QBSTAR/EBSTAR, again, is the underlying level of labour productivity, while the other term, (GDPBV/QBSTAR)/(ETB/EBSTAR), captures the effects of cyclical deviations of actual output and actual employment from their potential or planned levels. Since cyclical swings in output are generally more violent than the associated swings in employment (Okun's law), the cyclical component of labour productivity growth will tend to be positively correlated with fluctuations in output growth.

In summary, the approach set out above allows labour productivity growth of firms to be broken down into:

i) "Underlying" or cost-minimising growth of labour productivity;
ii) Changes in "corrected" labour efficiency;

iii) Changes in the number of hours worked per person;
iv) Substitution effects;
v) Cyclical effects.

This decomposition of the labour-productivity growth of the Australian business sector is made for the period 1980-88 (Table A1). This analysis is based on aggregated data for the total business sector (including public enterprises) and may be subject to considerable margins of error. The calculations point to a substantial negative contribution to labour-productivity growth of *substitution effects*, amounting to –0.6 per cent on average annually, mainly concentrated in the period 1985-87. Note that the rate of growth of corrected labour efficiency decelerated after 1983, reflecting both "catch-up" and "embodiment" effects, the latter being the result of a slowdown in the growth of the capital stock after the 1982/83 trough. The decline in average hours worked led to a decrease in productivity growth in the period 1980-83, probably reflecting the mounting share of part-time employment. In the period 1984-87 average hours worked has raised labour productivity growth, as overtime has increased. Cyclical effects have, on average, positively contributed to labour-productivity growth (capacity utilisation at the end of the period is higher than at the beginning), but there are substantial positive and negative swings on a year-to-year basis. For the period as a whole, the following picture emerges: labour productivity in the business sector has grown 1 per cent annually on average, 0.3 per cent of which was cyclical (i.e. capacity utilisation was at a higher level at the end of the period) and 0.7 per cent "structural". The effective labour-efficiency growth has been 1.4 per cent (annual average), half of which has been offset by negative substitution-effects and a reduction in average labour time.

Table A1. **Decomposition of labour productivity growth in the Australian business sector, 1980-1988**[1]

	1980	1981	1982	1983	1984	1985	1986	1987	1988	Average 1980-88
Labour efficiency	2.5	2.4	2.3	1.4	0.7	0.9	1.0	0.7	1.1	1.4
Labour time	– 0.2	– 0.5	– 1.0	– 0.6	0.2	0.3	0.1	0.3	– 0.1	– 0.1
Substitution effects	– 0.7	– 0.2	– 0.4	– 1.0	0.0	– 1.2	– 1.6	– 0.8	0.3	– 0.6
"Underlying" productivity	1.6	1.7	0.9	– 0.2	0.9	0.0	– 0.5	0.2	1.3	0.7
Cyclical effects	– 3.0	0.2	– 1.3	2.5	3.5	2.0	– 0.8	1.5	– 1.3	0.3
Actual productivity	– 1.5	1.8	– 0.4	2.2	4.5	2.0	– 1.3	1.7	– 0.0	1.0

1. Percentage changes from previous year.
Source: OECD Secretariat estimates.

Notes

1. For a more detailed description see P. Jarrett and R. Torres, "A revised supply block for the major seven countries in Interlink", *OECD Department of Economics and Statistics Working Paper*, No. 41, April 1987. These models employ a three-factor production function. The supply blocks for the smaller OECD countries are discussed in: R. Torres, P. Jarrett and W. Suyker, "Modelling business sector supply for the smaller OECD countries", *OECD Department of Economics and Statistics Working Paper*, No. 7, October 1989. The supply blocks for these countries are based on two-factor production functions.

Annex II

A brief description of centralised wage fixing in Australia

The industrial tribunals and courts have been involved, since their inception, in fixing both relative wages and aggregate wages growth although the procedures and principles have evolved over time. In the period from 1907 to 1967, the impact of the tribunals were largely felt through movements in the federal basic wage. This was initially defined as a minimum income for a three-child family, but, in retrospect, seems to have reflected prevailing market conditions in the early years of the century. "Margins" for various skills and women and youth were built onto the basic wage. The basic wage was indexed from 1912 (on a discretionary basis up to 1922) and this lasted until 1953. But the Commission did reduce the basic wage by 10 per cent in 1931 on the basis of the economy's capacity to pay, and raised the basic wage in three occasions (1937, 1946 and 1950) with "prosperity loadings". "Margins" were varied according to a different procedure. Initially, they reflected the relativities established in free bargaining, but were subsequently varied through a process of "work value" enquiries which increasingly came to consider similar economic issues to those addressed in "basic wage cases".

Automatic indexation was abandoned in 1953 as the earnings moved ahead of wages during the Korean war. A system of national wage cases was instituted to govern award wages. Decisions took account of a range of economic and industrial relations factors. During this period, the principle of "comparative wage justice" (i.e. wage increases in leading sectors should be enjoyed by all) was often invoked with one award (the Metal Trades Industry Award) acting as the yardstick establishing skill-related wage differentials within awards and relationships between awards. Increases in the benchmark award flowed through into other awards on this basis, heightening the awareness of existing differentials. Wage-wage links became strongly entrenched and the risk of flow-on from changes to relative wages was high. Indeed, "work-value" adjustments giving certain groups higher relative wages than before tended to resurface later as employees under other awards attempted to re-establish previous differentials. In 1967, the basic wage – and the connection with a socially acceptable minimum income – was replaced by a "total wage", establishing the present system of a minimum wage for each classification in an award.

The Commission gave greater weight to controlling aggregate wages from 1967. Nonetheless, it had difficulty in doing so when labour markets tightened. As noted in the main text, the tribunals control award wages – which are largely minimum wages – but allowed "over-award" payments when agreed between the parties, even certifying them in the form of "consent awards". This pattern became widespread in the early 1970s, culminating in the first wage explosion in 1973. The Commission then reverted to indexation,

which was neither automatic nor full. With increased activity due to the resource investment boom from the late 1970s, collective bargaining reappeared as it had in the early 1970s and earnings growth accelerated. In the face of this, the Commission abandoned attempts to control aggregate wages in July 1981, reverting to accepting negotiated settlements or arbitrating agreements on their individual merits as they appeared. A negotiated and substantial increase in wage rates in the key award, agreed between employers and employees, quickly flowed through the rest of the system. Following the second wage explosion, Commonwealth and State governments agreed to a wage freeze in late 1982 which lasted for ten months.

As noted in the main text, wage fixing is largely limited to minimum rates in the private sector. Some awards specify actual rates (paid rate awards) but these are largely found in the public sector and in large complex organisations in the private sector. Employers under minimum rate awards pay most often pay additional wages ("over-award") freely negotiated with the labour unions or employees. High labour mobility between firms has encouraged firms to adopt "over-award" rates similar to those found in the neighbouring firms. Firms estimate local "over-award" wages on the basis of surveys. This has helped reinforce the wage-wage links even for the "over-award" component. Since 1983, the unions have been bound by a "no extra claims" commitment, under which they would not demand additional wage increases above those allowed under the decisions of the AIRC. The employers, however, have not been bound by this commitment and have been offering higher wages in some cases, possibly to retain workers in demand and possibly because profits have been very high. Much of this increase has been going to management and to white-collar employees.

Annex III

Calendar of main economic events

1988

1st January

Australian crude oil market deregulated (see 21st June).

13th January

The Treasurer announced the suspension of future issues of Australian Savings Bonds, reflecting the expected budget surplus and reduced demand due to financial deregulation.

5th February

The Arbitration Commission announced a flat $6 per week wage increase.

13th April

Quotas on car imports abolished and tariffs on car imports reduced from 57.5 per cent to 45 per cent.

24th June

The Minister for Primary Industry and Energy and the Minister for Trade Negotiations announce the signing of a new beef trade agreement with Japan. The Japanese beef import quota is to be abolished within three years. It will be replaced by an *ad valorum* tariff which will then be reduced to 50 per cent over the succeeding three years.

12th August

The Arbitration Commission announced the outcome of the National Wage Case: an initial wage increase of 3 per cent on 1st September 1988 is to be followed by a further increase of $10 six months later, conditional on union agreements to co-operate in award reviews and no extra claims until 1st July 1989.

24th August

The 1988-89 Commonwealth budget was delivered by the Federal Treasurer, projecting a budget surplus of $5.5 billion. Total outlays were expected to increase with 4.1 per

cent in nominal terms, while nominal revenues should grow by 8.3 per cent. The budget included a reduction in indirect taxes of $400 million, the end of the distinction between trading and savings banks, the replacement of the 7 per cent SRD requirement for trading banks with a 1 per cent deposit requirement on total liabilities and reductions in the personal income tax as from 1st July 1988.

3rd October

Exporters of steaming coal reached agreement with Japanese electricity generation firms on an increase of export prices in fiscal year 1988-89 by 21¼ per cent.

7th October

Changes in the award proposed by the Coal Industry Tribunal were accepted by the Miners Federation, which covers workers in the coal industry. These changes include the introduction of a work roster, the extension of shifts from seven to eight hours, work on Saturdays and the abolition of the three-week Christmas shutdown.

17th October

New legislation passed the Parliament under which the Australian Conciliation and Arbitration Commission should be replaced by the Industrial Relations Commission. Further changes include the provision for certified agreements between unions and employers which can be outside the wage fixing principles provided the Commission does not find the agreement to the contrary to the public interest.

23th November

The Minister of Finance and the Treasurer released the Forward Estimates Report. Commonwealth outlays are to decline by 0.7 per cent in real terms in 1989-90, down to a level of 25.6 per cent of GDP.

6th December

The Minister for Industry, Technology and Commerce announced a decrease of tariff protection for steel down to 10 per cent on 1st July 1992.

1989

10th April

The Minister for Primary Industries announced legislation to enable exemption of grain trading corporations from State regulation impeding the efficient storage, handling, transport and marketing of grain being traded interstate and internationally.

12th April

The Treasurer delivered the *April 1989 Economic Statement* to Parliament. Major taxation measures were announced, including a cut in personal income taxes by $4.9 million from 1st July 1989, and the introduction of higher levels of income-tax rebates for persons with dependent spouses, sole parents and beneficiaries of pensions. A $710 million social-security package for 1989/90 was introduced, including an increase of family allowances and supplements, and a bringing forward of the indexation of pensions by twelve weeks. These measures were accompanied by offsetting cost savings, including containing of defence expenditures to zero real growth in 1989/90. an average earnings growth rate of 6½ per cent for 1989/90 was accepted by the ACTU on the basis of the announced tax cuts and assistance measures.

The Minister for Industrial Relations in his April 1989 Statement set out the broad outline of reforms to award structures and working arrangements and the role of the Commonwealth Government therein. The Minister for Employment, Education and Training announced reforms to training in the framework of award restructuring, reforms to the recognition of overseas skills (in conjunction with the Minister of Immigration, Local Government and Ethnic Affairs) and reforms to the working of the Trademen's Rights Regulation Act.

18th May

The Treasurer announced a reduction of State borrowing limits from around 4.8 billion in FY 1988-89 to around 3.8 billion in FY 1989-90. General Revenue Grants to the States were decreased by 2.8 per cent in real terms.

20th May

The Prices Surveillance Authority reported on its inquiry into the effects of recent exchange rate appreciations on prices of consumer goods (see Part II of the Survey).

1st June

The Minister for Transport and Communications announced reforms to shipping and waterfront industries and telecommunications, including a reduction in crew sizes of major trading ships, inquiries in coastal shipping rates and price cap arrangements for standard telecommunication services.

28th July

The Minister of Finance released the final 1988-89 Budget outcome, announcing a surplus of A$5.9 billion.

7th August

The outcome of the *August 1989 National Wage Case* was announced by the Industrial Relations Commission. A wage increase of around 6 per cent would be awarded contingent upon restructuring of industrial awards. A first instalment provides for a pay increase of

$10 per week for trainees and unskilled workers, a $12.50 increase per week for semi-skilled workers and a $15 increase – or 3 per cent whichever is the greater – for tradesmen and higher skill levels. A second instalment at least six months after the first instalment would be granted if the Commission is satisfied with the implementation of award changes agreed at the time of the first instalment. A new minimum rate award was adopted of $407 for the tradesperson classification per week in the building and metal trade industries.

15th August

The Treasurer delivered the *1989-90 Commonwealth budget*. The budget surplus would further increase to $9.1 billion. Outlays were projected to fall by 0.6 per cent in real terms while revenues would grow in real terms by 2.5 per cent. Changes in the retirements incomes policy were also announced, including increased pensioner benefits and the easing of transferability of superannuation rights if a person changes from one fund to another when changing a job. Furthermore, the Industries Assistance Commission, the Interstate Commission and the Business Regulation Review Unit were announced to merge into the new Industry Commission.

29th August

The Commonwealth's rating for its long-term debt was reclassified from AA1 to AA2 by Moody's Investors Services.

19th September

The second stage of the North West Shelf oil and gas project was officially opened by the Prime Minister. It will generate exports of liquid natural gas (LNG) worth more than $A2 billion a year by the mid-1990s.

24th October

Standard and Poors rerated Australia's long-term sovereign debt to AA2.

STATISTICAL ANNEX

Selected background statistics

	Average 1979-88	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
A. Percentage changes from previous year at constant 1984/1985 prices											
Private consumption	2.8	2.7	2.9	4.0	3.1	1.5	3.0	4.5	1.2	1.6	3.4
Gross fixed capital formation	3.8	3.8	5.1	9.5	−2.4	−8.6	9.0	10.2	−1.7	2.9	9.9
Government	−0.9	−5.1	−8.6	−7.4	−2.6	3.1	8.3	10.9	9.1	−4.6	−12.2
Private	4.5	5.4	7.4	11.9	−2.4	−10.0	9.1	10.1	−3.2	4.1	13.0
Residential	4.1	9.3	12.0	2.7	−13.1	−10.8	20.6	2.9	−7.6	1.3	24.0
Non-residential construction	8.1	3.6	9.3	16.8	3.0	−20.2	1.0	23.1	9.4	13.4	21.6
Machinery and equipment	5.6	3.2	2.8	19.0	−1.2	−11.2	14.0	11.8	−3.9	5.5	16.2
Public enterprises	1.1	4.7	6.3	11.7	8.2	0.8	−6.2	9.2	−5.0	−2.5	−16.5
GDP	3.2	3.9	2.5	3.3	−0.2	0.3	7.3	5.2	2.2	4.1	3.5
GDP price deflator	8.6	9.6	11.3	9.5	11.0	8.2	6.3	6.2	7.2	7.5	9.0
Employment	2.1	1.2	2.8	2.1	−0.0	−1.8	3.0	3.1	4.1	2.2	3.7
Compensation of employees (current prices)	10.9	9.5	13.7	15.9	16.2	3.5	10.7	9.4	10.9	8.6	10.7
Productivity (GDP/employment)	1.1	2.7	−0.4	1.2	−0.2	2.1	4.1	2.0	−1.8	1.9	−0.2
Unit labour costs (compensation/GDP)	7.5	5.4	11.0	12.2	16.5	3.2	3.2	4.0	8.5	4.2	6.9
B. Percentage ratios											
Gross fixed capital formation as % of GDP at constant prices	24.0	23.6	24.2	25.7	25.1	22.9	23.2	24.3	23.4	23.1	24.6
Stockbuilding as % of GDP at constant prices	0.3	1.2	0.5	0.8	−0.1	−0.8	1.1	0.5	−0.3	−0.2	0.6
Foreign balance as % of GDP at constant prices	−1.5	−0.1	−1.1	−3.1	−3.2	−1.6	−2.4	−1.8	−0.5	0.8	−1.5
Compensation of employees as % of GDP at current prices	52.1	52.4	52.2	53.5	56.1	53.5	51.9	50.9	51.5	50.0	49.0
Direct taxes as per cent of household income	17.5	15.9	16.1	16.8	17.9	16.3	17.6	17.6	18.9	18.9	19.2
Unemployment as per cent of total labour force	7.5	6.2	6.0	5.7	7.1	9.9	8.9	8.2	8.0	8.0	7.1
C. Other indicator											
Current balance (bill. $US)	−7.6	−2.5	−4.1	−8.4	−8.4	−5.9	−8.6	−8.9	−9.6	−8.5	−10.6

Source: Australian Bureau of Statistics.

Table A. Gross domestic product

$ million

Calendar year	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
	Current prices									
1. Private consumption[1]	67 959	77 378	87 988	100 068	110 942	121 445	135 924	149 494	163 974	181 368
2. Government current expenditure[1]	19 874	23 122	26 614	30 327	34 024	38 065	42 448	47 030	50 224	54 923
3. Gross fixed capital formation[2]	27 258	31 921	38 670	42 012	41 342	47 180	56 466	61 004	67 522	78 580
a) Private	19 307	23 008	28 526	29 824	27 904	32 922	39 631	42 726	48 681	61 610
b) Public enterprises	4 382	5 190	6 326	7 897	8 672	8 662	10 231	10 574	11 027	9 854
c) Government	3 569	3 723	3 818	4 291	4 766	5 596	6 604	7 704	7 814	7 116
4. Change in stocks	2 117	824	1 508	−498	−1 370	2 626	1 195	−1 296	110	2 208
5. Exports of goods and services	19 732	22 535	22 441	24 973	26 399	31 195	38 038	40 352	46 261	52 574
6. Imports of goods and services	19 236	23 353	26 723	30 105	28 893	35 554	44 046	46 914	49 667	55 878
7. Statistical discrepancy	−1 770	−764	−1 709	−2 437	−3 196	−321	−2 071	−493	1 683	2 456
8. **Gross domestic product at purchasers' values**	115 934	131 663	148 789	164 340	179 248	204 636	227 954	249 177	280 107	316 231
9. Indirect taxes less subsidies	11 941	14 180	15 788	18 223	20 419	23 921	28 067	29 038	34 230	38 225
10. **Gross domestic product at factor cost**	103 993	117 483	133 001	146 117	158 829	180 715	199 887	220 139	245 877	278 006
	Average 1984-1985 prices									
1. Private consumption[1]	108 379	111 651	116 172	119 690	121 480	125 052	130 649	132 240	134 443	139 088
2. Government current expenditure[1]	33 007	34 256	35 440	35 360	37 253	39 018	41 209	42 679	43 360	45 120
3. Gross fixed capital formation[2]	43 363	45 630	49 917	48 584	44 467	48 707	53 665	52 632	54 331	59 715
a) Private	29 914	32 259	36 118	34 203	29 845	34 010	37 521	36 466	38 652	46 366
b) Public enterprises	7 332	7 753	8 641	9 332	9 471	8 972	9 780	9 255	9 053	7 570
c) Government	6 117	5 618	5 158	5 049	5 151	5 725	6 364	6 911	6 626	5 779
4. Change in stocks	3 242	810	2 098	−625	−1 175	2 802	894	−1 039	−307	1 588
5. Exports of goods and services	28 823	28 469	27 407	29 331	28 485	32 942	36 216	38 097	41 898	43 218
6. Imports of goods and services	29 130	30 544	33 539	35 318	31 643	38 122	40 194	39 022	40 216	47 132
7. Statistical discrepancy	−2 840	−1 135	−2 209	−2 889	−3 456	−366	−2 012	−471	1 370	1 905
8. **Gross domestic product at purchasers' values**	184 844	189 137	195 286	194 133	195 411	210 033	220 427	225 116	234 879	243 502

1. Not adjusted for the impact of the introduction of Medicare from 1 February 1986, which had the effect of transferring certain expenditures on health care, formerly included as private consumption expenditure, to public consumption expenditure.
2. Not adjusted to remove the impact of the sale to the private sector of public sector assets under leaseback and similar arrangements.

Source: Australian Bureau of Statistics.

Table B. **Income and expenditure of households (including unincorporated enterprises)**

$ million, current prices

	Calendar year	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1.	Compensation of employees	60157	68939	79405	92363	95774	106044	116104	128763	139802	155227
2.	Income from property and entrepreneurship	21824	23165	25101	25597	29557	34255	37865	42472	48909	54535
	a) Farm	4409	3348	2743	806	1793	3009	1901	639	2484	4287
	b) Non-farm	17415	19817	22358	24791	27764	31246	35964	41833	46425	50248
3.	Current transfers from government	9790	10899	12154	14336	17759	20223	22020	23979	26431	28502
4.	Grants to non-profit institutions	936	1124	1467	1687	1908	2506	2804	3117	3162	3481
5.	Third party insurance transfers	387	510	656	756	985	1366	1492	1596	1751	1792
6.	Unrequited transfers from overseas	492	655	751	880	1157	1232	1690	1982	2478	2973
7.	**Income**	93586	105292	119534	135619	147140	165626	181975	201909	222533	246510
8.	*less:* Direct taxes paid on income	13776	15824	18816	22952	22362	27561	30100	34973	40626	44847
9.	Consumer debt interest	915	1072	1454	1954	2236	2441	3029	4096	4235	4541
10.	Other direct taxes, fees, fines, etc.	840	828	901	987	1063	1217	1257	1379	1678	1818
11.	Current transfers to the rest of the world	386	396	471	563	678	699	691	748	765	805
12.	**Disposable income**	77669	87172	97892	109163	120801	133708	146898	160713	175229	194499
13.	Consumption expenditure	67959	77378	87988	100068	110942	121445	135924	149494	163974	181368
14.	Food	11280	13030	14714	16419	18080	19280	21448	23941	25616	27710
15.	Clothing	4916	5487	6164	6833	7585	8136	9233	9999	11066	12048
16.	Rents	11081	12732	14770	16982	18937	20801	23129	26093	29223	33080
17.	Other	40682	46129	52340	59834	66340	73228	82114	89461	98069	108530
18.	**Saving**	9710	9794	9904	9095	9859	12263	10974	11219	11255	13131
	(Per cent of disposable income)	12.5	11.2	10.1	8.3	8.2	9.2	7.5	7.0	6.4	6.8

Source: Australian Bureau of Statistics.

Table C. **Prices and wages**

Calendar year	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
	Index 1984-1985 = 100										
1. Price deflators											
a) Gross domestic product	53.2	57.0	62.5	69.5	76.2	84.6	91.5	97.3	103.3	110.7	119.1
b) Private consumption	52.7	57.1	62.6	69.2	75.6	83.5	91.2	97.1	103.9	112.9	121.9
c) Gross fixed capital formation	53.5	57.8	62.8	69.9	77.4	86.4	92.9	96.8	105.1	115.8	124.2
d) Exports	57.2	57.8	68.4	79.0	82.1	85.1	92.5	94.6	105.0	105.8	110.4
e) Imports	54.2	58.0	66.0	76.5	79.7	85.2	91.3	93.2	109.4	120.0	123.5
2. Terms of trade	126.6	126.9	143.1	160.8	127.3	113.9	113.4	102.9	99.8	104.4	103.2
3. Consumer price index[1]											
a) Total	58.1	63.3	69.8	76.5	85.0	93.6	97.3	103.9	113.3	123.0	131.9
b) Food	55.6	63.3	71.3	77.9	83.8	92.3	97.3	103.3	112.6	118.7	128.1
4. Award rates of pay, adult persons	57.6	61.8	68.6	76.4	87.1	91.9	98.3	102.0	107.3	111.8	117.4
5. Average weekly earnings, all employees	..	..	..	..	82.9	89.0	97.8	102.5	109.7	115.4	123.1

1. Not adjusted for the effects of Medicare. Based on the six state capital cities prior to 1981.
Source: Australian Bureau of Statistics.

Table D. **Balance of payments**

$ A million

Calendar year	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Current account										
1. Exports, fob	16635	18930	18462	20471	21644	25965	31953	33159	37461	41823
2. Imports, fob	14375	17700	20489	22992	21618	27016	33835	36289	38145	43088
3. Trade balance	2260	1230	−2027	−2521	26	−1051	−1882	−3130	−684	−1265
4. Invisibles, net	−4528	−4830	−5267	−5735	−6557	−8798	−10887	−11388	−11434	−12326
5. **Current balance**	−2268	−3600	−7294	−8256	−6531	−9849	−12769	−14518	−12118	−13591
Capital account										
6. Government	453	−79	319	1064	529	1969	3794	5220	4395	5599
7. Balancing item[1]	−185	496	789	820	1356	1567	107	1951	3037	3540
8. **Capital account balance**	2453	3104	6505	7437	5177	8282	12663	12567	9081	10051
Official monetary movements										
9. Change in official reserve assets	−462	186	27	4967	3222	−1669	−3388	1028	396	6811
10. Allocation of SDR	−64	−35	51	39	−8	158	99	−10	−6	−21
11. Other transactions	1	108	−4	−262	128	90	2	0	0	26
12. *Net official monetary movements*	−525	259	74	4744	3342	−1421	−3287	1018	390	6816
13. **Changes in market value of official reserve assets**[2]										
a) Gold[3]	1918	674	−1120	718	−182	−348	680	917	672	−1456
b) Currency assets	−434	92	19	5235	3310	−1204	−806	2344	1166	3963
c) IMF: gold tranche	3	90	−16	−260	126	96	82	42	22	−48
d) Special Drawings Rights	−74	−38	46	42	1	164	202	42	9	−117
Total[4]	1413	818	−1071	5735	3255	−1292	158	3345	1869	2342

1. Includes discrepancies in the current account as well as errors, omissions and timing differences related to capital transactions.
2. Includes changes due to fluctuations in the foreign currency value of assets, variations in exchange rates and the receipt of compensation under the Sterling Agreement. Foreign currency value of currency assets has been based on market quotations.
   From 1st September 1984, figures for official reserve assets are not fully comparable with earlier data due to changes in the Reserve Bank's accounting procedures.
3. Prior to 1976 gold is valued at the IMF official price in SDRs converted to Australian dollars at the derived SDR/dollar rate. From 1976, gold holdings are valued at the average London gold price for the month, converted to dollars at a market rate on the last day of the month.
4. Any discrepancy in the table between the sum of the components and the total is due to rounding.

Source: Australian Bureau of Statistics.

Table E. **Foreign trade by commodity**

Calendar year	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	US $ million					Per cent of total				
SITC sections:										
Total exports, fob	19345	22358	21899	21489	24574	100.00	100.00	100.00	100.00	100.00
1. Food and live animals	4663	6150	5227	5607	5593	24.10	27.51	23.87	26.09	22.76
2. Beverages and tobacco	58	57	45	68	134	0.30	0.25	0.21	0.32	0.55
3. Crude materials, inedible, except fuels	5909	6165	6281	6298	7464	30.54	27.57	28.68	29.31	30.37
4. Mineral fuels, lubricants and related materials	4446	5393	5853	4838	5065	22.98	24.12	26.73	22.51	20.61
5. Animals and vegetable oils, fats and waxes	75	108	95	83	93	0.39	0.48	0.43	0.39	0.38
6. Chemicals and related products, n.e.s.	414	402	368	375	474	2.14	1.80	1.68	1.75	1.93
7. Manufactured goods classified chiefly by material	2208	2337	2224	2258	2987	11.41	10.45	10.16	10.51	12.16
8. Machinery and transport equipment	779	816	751	833	1240	4.03	3.65	3.43	3.88	5.05
9. Miscellaneous manufactured articles	369	389	346	388	525	1.91	1.74	1.58	1.80	2.14
10. Commodities and transactions not classified according to kind	425	542	709	740	999	2.20	2.42	3.24	3.44	4.06
Total imports, cif	19327	23621	23738	25219	27683	100.00	100.00	100.00	100.00	100.00
1. Food and live animals	813	971	939	1031	1161	4.21	4.11	3.96	4.09	4.19
2. Beverages and tobacco	165	178	189	214	225	0.85	0.75	0.80	0.85	0.81
3. Crude materials, inedible, except fuels	643	731	689	682	836	3.33	3.10	2.90	2.71	3.02
4. Mineral fuels, lubricants and related materials	2096	2078	1592	1160	1325	10.84	8.80	6.71	4.60	4.79
5. Animals and vegetable oils, fats and waxes	86	100	75	58	71	0.45	0.42	0.32	0.23	0.26
6. Chemicals and related products, n.e.s.	1707	2039	1994	2146	2674	8.83	8.63	8.40	8.51	9.66
7. Manufactured goods classified chiefly by material	3085	3940	3773	3942	4652	15.96	16.68	15.89	15.63	16.80
8. Machinery and transport equipment	7535	8949	9885	10315	10815	38.99	37.88	41.64	40.90	39.07
9. Miscellaneous manufactured articles	2544	2988	3095	3920	3720	13.16	12.65	13.04	15.54	13.44
10. Commodities and transactions not classified according to kind	652	1646	1506	1752	2203	3.37	6.97	6.35	6.95	7.96

Source: OECD, *Foreign Trade Statistics, Series C.*

Table F. **Foreign trade by area**

US $ million

Calendar year	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Exports, fob											
OECD Europe	2291	2863	3261	2803	3193	3210	3482	3305	3629	4760	5243
of which: United Kingdom	566	822	1043	747	965	1150	891	777	818	1139	1166
OECD North America	1915	2562	3050	2868	2594	2440	2905	2596	2760	3435	4088
Japan	4348	5169	5874	6131	5702	5698	6139	6304	6065	6789	8882
New Zealand	718	927	1044	1112	1131	1133	1409	1063	1032	1511	1629
Far East	2756	3867	4246	4542	4875	4275	5190	5092	5125	6273	8468
Other non-OECD countries	2235	3151	4456	4111	3868	3203	4095	3738	3545	3332	3894
Non-specified	100	86	126	205	710	787	637	515	381	404	463
Total	14366	18633	22062	21774	22077	20750	23861	22617	22541	26508	32670
Imports, cif											
OECD Europe	4179	4933	5367	5543	5936	4807	5939	6274	6871	7702	9394
of which: United Kingdom	1597	1757	1884	1740	1751	1316	1627	1653	1792	1950	2467
OECD North America	3368	4264	4964	6094	5808	4643	5598	5721	5710	6340	7982
Japan	2717	2578	3452	4688	4864	4264	5116	5432	5348	5321	6713
New Zealand	438	546	690	775	730	685	875	956	918	1109	1462
Far East	1768	2251	3015	3522	3905	2763	3638	3333	3572	4806	5935
Other non-OECD countries	1464	1875	2642	3030	2807	2132	2140	1740	1471	1698	1795
Non-specified	75	87	79	107	86	99	116	51	25	32	55
Total	14014	16535	20212	23764	24140	19397	23424	23511	23919	27010	33339

Source: OECD, *Foreign Trade Statistics, Series A.*

STRUCTURAL ANNEX

Production structure and performance indicators

Fiscal years[1]	1974	1980	1985	1986	1987	1974	1980	1985	1986	1987
	GDP share					Employment share				
A. **Production structure** (constant prices)										
Tradeables										
Agriculture	4.5	3.9	4.3	4.5	4.3	6.9	6.5	6.2	6.0	5.8
Mining and quarrying	6.3	5.6	7.0	6.6	6.2	1.3	1.4	1.6	1.5	1.4
Manufacturing	20.5	19.4	17.4	17.1	17.5	23.5	19.6	16.7	16.2	16.3
Non-tradeables										
Electricity, gas and water	3.0	3.3	3.5	3.6	3.6	1.8	2.0	2.1	1.9	1.7
Construction	7.6	7.6	7.0	6.9	7.0	8.6	7.7	6.9	7.1	7.0
Trade, restaurants and hotels	17.8	16.5	15.9	15.5	15.3	19.9	20.1	22.9	22.9	23.5
Transport, storage and communication	6.6	7.6	7.4	7.6	7.9	7.6	7.4	7.6	7.6	7.2
Finance, insurance, real estate and business services	16.8	18.2	18.8	19.5	19.8	7.3	8.5	10.1	10.3	10.7
Community, social and personal services	14.8	15.3	15.8	16.0	15.9	18.8	22.1	21.2	21.7	21.6
	Productivity growth[2]					Investment share				
B. **Economic performance** (constant prices)										
Agriculture	2.9	7.2	−6.9	8.1	−0.9	9.0	8.7	6.3	5.0	..
Mining and quarrying	−0.8	4.1	2.3	−1.0	−0.2	7.3	9.3	8.0	9.0	..
Manufacturing	4.0	2.2	5.1	−0.3	2.3	16.3	15.7	12.4	12.8	..
Electricity, gas and water	0.7	2.2	3.2	10.3	11.9	12.8	12.5	9.9	9.8	..
Construction	3.2	2.1	2.4	−6.0	4.8	2.3	3.3	4.0	3.8	..
Trade, restaurants and hotels	−0.3	1.6	−14.0	−4.5	−2.5	8.8	10.0	9.4	9.7	..
Transport, storage and communication	3.8	0.6	2.0	0.9	9.0	16.1	14.4	18.0	18.0	..
Finance, insurance, real estate and business services	0.6	−0.5	−3.4	−0.4	−1.3	11.0	10.2	13.3	14.9	..
Community, social and personal services	−0.4	0.7	13.3	−2.7	0.5	4.8	5.5	8.3	7.4	..
	1973	1976	1978	1980	1981	1984	1985	1986	1987	1988
C. **Other indicators** (current prices)										
Effective rate of protection, manufacturing	..	..	24	23	25	22	20	19	19	17
R&D in manufacturing/manufacturing GDP	1.3	0.7	0.8	..	0.8	1.2	1.4	1.5	..	..
Total R&D/total GDP	1.2	1.0	1.0	..	1.0	1.1	..	1.2	..	..
R&D financed by government/total R&D	..	74.7	76.5	..	73.6	68.5	..	60.7	..	..
Debt equity ratio of corporate trading enterprises	71.8	97.7	96.0	85.8	98.3	90.2	89.2	66.3	49.6	84.4
Levels of net foreign debt[3]/GDP	..	4.5	7.3	6.1	10.6	23.9	31.4	31.3	30.4	32.3
Levels of foreign direct investment[3]/GDP	..	..	..	17.8	17.1	17.2	16.9	20.2	20.5	20.2

1. Beginning 1st July of the year indicated.
2. Average rate of growth between periods.
3. At 30 June of the year indicated.

Sources: Australian Bureau of Statistics, NIF-10s Model and *Foreign Investment Australia;* Industry Assistance Commission, *Annual Report 1988-89;* OECD, *Main Science and Technology Indicators,* and *National Accounts.*

Labour market indicators

A. EVOLUTION

	Peak	Trough	1985	1986	1987	1988
Standardised unemployment rate	1983: 9.88	1981: 5.73	8.14	7.99	8.04	7.14
Unemployment rate:						
Total	1983: 9.86	1981: 5.72	8.17	7.99	8.04	7.17
Male	1983: 9.57	1981: 4.73	7.83	7.56	7.66	6.68
Female	1983: 10.37	1981: 7.42	8.76	8.70	8.61	7.89
Youth[1]	1983: 17.93	1981: 10.79	14.29	14.52	14.59	12.86
Share of long term unemployment[2]	1984: 31.19	1982: 19.01	30.92	27.48	..	..
Non-farm vacancies (thousands)	1981: 35.15	1983: 20.30	53.95	53.48	56.23	63.21
Average hours worked, weekly	1970: 39.50	1983: 35.63	37.00	37.13	37.38	38.05
Overtime hours per week, non-farm	1981: 1.49	1984: 1.11	1.23	1.23	1.28	1.38

B. STRUCTURAL OR INSTITUTIONAL CHARACTERISTICS

	1970	1980	1985	1986	1987	1988
Labour force (percent change)						
Participation rate[3]:	1.81[6]	1.59[6]	2.29	3.90	2.22	2.76
Total	71.38	70.67	70.59	71.99	72.22	72.80
Male	..	78.34	75.75	75.86	75.34	75.23
Female	..	44.76	46.27	48.30	48.93	49.85
Employment/population between 15 and 64 years	70.20	66.40	64.82	66.22	66.41	67.60
Employment by sector (percent of total):						
Agriculture	7.84	6.41	6.09	6.04	5.72	5.78
Industry	36.11	30.61	27.35	26.56	26.20	25.99
Services	53.71	61.71	65.59	66.03	66.72	66.88
of which: Government	12.68	16.98	17.17	16.11	15.60	15.01
Total	100.00	100.00	100.00	100.00	100.00	100.00
Employment by sector (percent change):						
Agriculture	−0.97[6]	−0.24[6]	2.15	3.23	−3.17	4.78
Industry	−0.49[6]	−1.69[6]	1.90	1.07	0.79	2.93
Services	2.80[6]	2.03[6]	4.45	4.77	3.27	3.99
of which: Government	4.57[6]	1.97[6]	−0.39	−2.36	−1.04	−0.22
Total	1.27[6]	0.80[6]	3.10	4.07	2.20	3.75
Part-time employment (percent of total employees)	..	19.95	22.19	23.00	23.87	24.11
Non-wage labour cost[4]	3.40	5.94	7.91	8.14	8.25	8.30
Unemployment benefits[5]	0.27[7]	0.24	0.26	0.27	0.27	0.28

1. People between 15 and 24 years as a percentage of the labour force of the same age group.
2. People looking for a job since one year or more as a percentage of total unemployment.
3. Labour force as a percentage of the corresponding population aged between 15 and 64 years.
4. Total social contributions as a percentage of total compensation.
5. Government unemployment benefits per recipient divided by average earnings of non-farm wage and salary earners.
6. Average rate of growth between periods.
7. 1973 figure.

Sources: Australian Bureau of Statistics; OECD, *Main Economic Indicators*, and Secretariat estimates.

The public sector

	1973	1980	1985	1986	1987	1988
Budget indicators: general government accounts (% GDP)						
Current receipts (excluding interests)	23.8	28.0	30.7	31.2	31.3	31.5
Non-interest expenditures	24.0	29.2	32.4	32.6	31.0	29.6
Primary budget balance	−0.2	−1.2	−1.7	−1.5	0.3	1.9
Net interest (including net capital transfers)	−0.2	−0.8	−1.8	−1.6	−1.7	..
General government budget balance	−0.4	−2.0	−3.5	−3.1	−1.4	0.3
Structure of expenditure and taxation (% GDP)						
Government expenditure	24.0	30.8	35.1	35.5	34.0	32.5
Transfers	6.9	9.5	11.3	11.2	10.9	10.5
Subsidies	1.1	1.5	1.7	1.7	1.6	1.4
General expenditures:						
Education[1]	3.6	4.5	4.4	4.2	4.0	3.8
Transportation[1]	1.5	1.6	1.5	1.4	..	..
Health[1]	2.0	3.1	3.2	3.3	3.3	3.2
Tax receipts	27.5	30.4	31.6	32.5	33.1	33.3
Personal income tax	11.1	13.4	14.4	15.3	15.0	14.9
Corporate tax	4.1	3.7	2.9	3.0	3.4	3.9
Payroll tax	1.4	1.5	1.5	1.7	1.8	1.7
Consumption tax	8.1	9.5	10.3	9.9	9.8	..
of which: Specific taxes on consumption	5.1	6.9	6.5	6.1	5.8	..
Other indicators						
Income tax elasticity	1.9[2]	1.1	1.0	1.8	1.0	1.2
Income tax as a percentage of total tax	43.7	45.8	45.4	48.5	47.5	47.1
Gross public debt as a percentage of GDP	30.4	24.8	26.6	26.8	23.6	19.7

	Prior to		After
Tax rates (%)			
Top rate of income tax	49	1st January 1990	47
Lower rate of income tax	24	1st July 1989	21
Corporation tax rate	49	1st July 1988	39

1. Fiscal years beginning 1st July.
2. 1974 figure.

Sources: Australian Bureau of Statistics; OECD, *National Accounts, Revenue Statistics of OECD Member countries* and Secretariat estimates.

	1960	1970	1980	1981	1982	1983	1984	1985	1986	1987	1988
Sector size											
Sector employment/total employment	..	..	2.6	2.9	2.8	2.9	3.1	3.1	3.2	3.3	3.3
Credits distributed by financial markets[1]/GDP	..	..	7.7	9.3	7.9	6.7	8.1	11.3	11.5	9.6	12.4
Domestic financial assets[2]/GDP	..	..	10.6	8.0	11.2	10.4	8.4	8.9	11.1	10.8	11.8
Density of banks networks[3]	..	45	41	40	40	39	37	39	39	39	38
Structure of financial flows											
Share of intermediated finance in external financing[4]	33.1	38.8	61.3	61.1	59.8	58.1	59.0	60.6	62.9	61.6	62.7
Financial institutions' share of domestic financial assets[5]			61.4	34.0	36.0	39.1	52.7	47.5	27.9	42.6	32.3
Securities issues in domestic credit flows[6]	22.1	21.9	14.1	19.1	9.7	7.8	7.4	7.9	12.7	28.7	16.6
Private non-financial sector's portfolio structure[7]:											
Deposits[8]	..	..	37.1	31.1	30.5	31.7	47.2	43.6	23.1	33.5	21.6
Bonds[9]	..	..	32.1	17.4	32.7	26.4	22.6	12.9	16.5	10.4	7.6
Shares[10]	..	..	9.7	16.6	7.3	5.9	4.8	5.7	12.6	4.8	11.9
Institutional investment[11]	..	..	20.3	24.1	18.3	20.8	20.4	22.7	24.9	36.4	41.3
Structure of non-financial corporate liabilities:											
Equity[12]	29.8	24.0	11.5	12.3	11.5	11.0	10.5	10.1	10.6	13.6	13.9
Bonds[13]	7.1	8.0	6.5	7.1	9.1	10.6	10.4	9.4	9.1	8.0	7.7
Other	63.1	68.0	82.0	80.7	79.4	78.4	79.1	80.5	80.3	78.3	78.4
Internationalisation of markets											
Foreign business of the banking sector[14]:											
Assets	..	..	0.6	0.6	0.2	0.3	1.3	2.0	4.0	4.6	3.8
Liabilities	..	..	1.0	1.1	1.1	0.9	1.8	3.9	9.9	10.3	8.1
International banking networks:											
Foreign banking presence[15]	3	3	2	2	2	2	2	10	18	18	18
Foreign banks' share of domestic assets (per cent)	..	..	1.6	1.7	1.6	1.4	1.5	1.4	6.5	10.9	10.9
Efficiency of markets											
Developments of interest rate margins[16]	..	..	..	..	..	4.1	4.3	4.1	3.9	4.0	..
Developments in banks' productivity[17]	..	..	..	..	69.1	72.3	68.9	68.5	68.9	65.8	..
Deviation of domestic interest rates from international levels[18]	..	..	−1.4	−6.9	−2.0	1.8	−0.7	3.3	7.0	5.6	3.3

1. Lending by banks and non-bank intermediaries to both public and private sectors.
2. Households' acquisition of financial assets.
3. Number of bank offices and branches per 100 000 inhabitants.
4. Credit from financial intermediaries in total liabilities of the private non-finance sector.
5. Share of bank and saving bank deposits, notes and coin in household financial assets.
6. Change in equity and corporate debentures, notes and deposits held by private non-finance sector in their total liabilities change.
7. Household and business financial assets. Total doesn't add up to 100 because some items, such as trade credit and direct investment abroad, are not included.
8. Bank and saving bank deposits, notes and coin.
9. Government and semi-government securities, debentures, notes and deposits.
10. Shares and deposits in co-operatives, ordinary and preference shares.
11. Net contributions to life insurance, interest on life and super-annuation funds.
12. Domestic share raisings and corporate equity investment from overseas.
13. Corporate debentures, notes and deposits and portfolio borrowings from overseas.
14. Per cent of the balance sheet of deposit money banks.
15. Number of branches and subsidiaries.
16. Difference between interest received and interest paid on average total assets.
17. Operating expenses divided by gross income.
18. Differential between domestic (3-month fixed deposits at trading banks) and Euro-dollar inter-bank deposit rate in London.

Sources: Reserve Bank of Australia, *RBA Bulletin*, December 1988 and *Bulletin Supplement, Financial Flows*, June 1986; IMF, *International Financial Statistics*, various issues; OECD, *The Role of Indicators in Structural Surveillance*, Working Party No. 1 of the Economic Policy Committee.

BASIC STATISTICS

BASIC STATISTICS :

INTERNATIONAL COMPARISONS

BASIC STATISTICS: INTERNATIONAL COMPARISONS

	Units	Reference period[1]	Australia	Austria	Belgium	Canada	Denmark	Finland	France	Germany	Greece	Iceland	Ireland	Italy	Japan	Luxembourg	Netherlands	New Zealand	Norway	Portugal	Spain	Sweden	Switzerland	Turkey	United Kingdom	United States	Yugoslavia
Population																											
Total	Thousands	1987	16 249	7 575	9 868	25 803	5 130	4 932	55 627	61 149	9 998	245	3 542	57 331	122 091	372	14 671	3 284	4 184	10 280	38 830	8 399	6 610	52 010	56 890	243 915	23 410
Inhabitants per sq.km	Number		2	90	324	3	119	15	102	246	76	2	50	190	328	143	432	12	13	112	77	19	160	67	232	26	90
Net average annual increase over previous 10 years	%		1.4	0.0	0.0	1.0	0.1	0.4	0.4	0.0	0.7	1.0	0.8	0.3	0.7	0.3	0.6	0.5	0.3	0.5	0.7	0.2	0.5	2.2	0.1	1.0	0.8
Employment																											
Total civilian employment (TCE)[2]	Thousands	1987	7 079	32 997	3 645 (86)	11 954	2 630 (86)	2 414	20 988	25 456	3 601 (86)	117 (86)	1 068 (86)	20 584	59 110	164 (86)	5 135 (86)	1 517 (86)	2 090	4 156	11 370	4 337	3 219 (86)	15 632 (86)	24 987	112 440	..
of which: Agriculture	% of TCE		5.8	8.6	2.9	4.9	5.9	10.4	7.1	5.2	28.5	10.3	15.7	10.5	8.3	3.7	4.9	10.5	6.7	21.9	16.1	4.2	6.5	55.7	2.4	3.0	..
Industry	% of TCE		26.6	37.7	29.7	25.3	28.2	31.2	30.8	40.5	28.1	36.8	28.7	32.6	33.8	32.9	25.5	28.9	27.0	35.8	32.0	30.2	37.7	18.1	29.8	27.1	..
Services	% of TCE		67.6	53.7	67.4	69.8	65.9	58.4	62.1	54.3	43.4	53.0	55.5	56.8	57.9	63.4	69.6	60.6	66.3	42.3	51.8	65.6	55.8	26.2	67.8	69.9	..
Gross domestic product (GDP)																											
At current prices and current exchange rates	Billion US$	1987	193.7	117.2	138.9	410.9	101.3	89.5	879.9	1 117.8	47.2	5.3	29.4	758.1	2 376.5	6.0	213.2	35.1	82.7	36.7	289.2	158.5	171.1	67.4	669.8	4 472.9	61.7 (86)
Per capita	US$		11 919	15 470	14 071	16 019	19 750	18 151	15 818	18 280	4 719	21 813	8 297	13 224	19 465	16 138	14 530	10 620	19 756	3 761	7 449	18 876	25 848	1 296	11 765	18 338	2 652 (86)
At current prices using current PPP's[3]	Billion US$	1987	204.9	88.4	116.5	444.5	68.4	63.3	712.2	814.7	63.6	3.8	26.7	702.5	1 609.4	5.5	179.7	35.3	64.5	61.4	337.1	115.7	104.9	220.9	702.5	4 472.9	..
Per capita	US$		12 612	11 664	11 802	17 211	13 329	12 838	12 803	13 323	6 363	15 508	7 541	12 254	13 182	14 705	12 252	10 680	15 405	6 297	8 681	13 771	15 842	4 247	12 340	18 338	..
Average annual volume growth over previous 5 years	%	1987	3.7	1.8	1.5	4.2	2.7	3.2	1.6	2.1	1.4	3.1	1.8	2.6	3.9	4.0	2.1	2.1	4.1	2.1	2.9	2.4	2.3	6.0	3.2	4.3	
Gross fixed capital formation (GFCF)	% of GDP	1987	23.8	22.6	16.3	21.0	18.8	23.5	19.4	19.4	17.4	18.8	17.4	19.9	28.9	22.6	20.3	21.2	28.0	25.3	20.7	19.0	25.2	24.5	17.3	17.3	21.6 (86)
of which: Machinery and equipment	% of GDP		11.5 (86)	9.7	7.0 (86)	6.9 (86)	7.8	9.7	8.3	8.4	7.1	6.5	9.4 (86)	10.0	10.5 (86)	9.0 (82)	10.0	13.1 (85)	7.9 (86)	14.7 (81)	6.4 (86)	8.5 (86)	8.8	8.6 (84)	8.1 (86)	7.6	..
Residential construction	% of GDP		4.7 (86)	4.6 (86)	3.4	6.4 (86)	4.4	5.5	5.2	5.2	4.6	3.5	4.6 (86)	5.2	5.0 (86)	4.7 (82)	5.2	4.6 (85)	5.0 (86)	6.4 (81)	4.0 (86)	3.8 (86)	16.4 (9)	2.7 (84)	3.8 (86)	5.0	..
Average annual volume growth over previous 5 years	%	1987	1.7	2.3	2.0	4.8	6.5	1.9	0.6	1.8	–2.2	1.8	–3.7	2.8	5.3	0.8	4.8	2.0	4.1	–0.7	3.8	3.6	6.0	7.3	4.7	7.0	..
Gross saving ratio[4]	% of GDP	1987	20.3	24.1	17.6	18.8	15.5	22.5	19.6	23.9	14.7	15.2	18.6	20.9	32.3	56.5	21.8	20.3	23.4	27.5	21.9	18.0	31.7	24.1	17.2	14.7	..
General government																											
Current expenditure on goods and services	% of GDP	1987	18.2	19.0	16.3	19.5	25.4	20.7	19.1	19.8	19.5	17.7	18.0	16.7	9.6	16.7	16.1	17.6	20.9	14.4	14.4	26.7	12.8	9.1	20.9	18.6	14.3 (86)
Current disbursements[5]	% of GDP	1987	35.0 (86)	46.6 (86)	51.6 (86)	43.3 (86)	53.4 (86)	38.2	48.4	43.0 (86)	42.9 (86)	27.3 (86)	49.2 (84)	45.2	27.4 (86)	45.3 (84)	54.0 (86)	..	47.8 (86)	37.6 (81)	36.1 (86)	60.0 (86)	30.1	..	42.9 (86)	35.5 (86)	..
Current receipts	% of GDP	1987	34.7 (86)	47.9 (86)	45.0 (86)	39.4 (86)	58.0 (86)	39.6	49.4	44.9 (86)	36.6 (86)	32.1 (86)	43.3 (84)	39.3 (86)	31.3 (86)	54.1 (84)	52.8 (86)	..	56.5 (86)	33.3 (81)	35.0 (86)	61.6 (86)	34.5	..	41.6 (86)	31.2 (86)	..
Net official development assistance	% of GNP	1987	0.33	0.17	0.49	0.47	0.88	0.50	0.74	0.39	..	0.05	0.20	0.35	0.31	0.10	0.98	0.26	1.09	0.08	0.06	0.88	0.31	..	0.28	0.20	..
Indicators of living standards																											
Private consumption per capita using current PPP's[3]	US$	1987	7 389	6 535	7 593	10 059	7 236	6 966	7 796	7 374	4 273	9 930*	4 378	7 543	7 623	8 694	7 461	6 236	8 155	4 167	5 521	7 273	9 349*	2 844	7 731	12 232	1 335 (86)*
Passenger cars, per 1 000 inhabitants	Number	1985	..	306 (81)	335 (84)	421 (82)	293	329 (86)	369 (86)	441 (86)	127	431	206 (83)	355 (84)	221 (83)	439 (87)	341	455	382 (86)	135 (82)	252	377	402	18 (82)	312 (83)	473 (84)	121 (83)
Telephones, per 1 000 inhabitants	Number	1985	540 (83)	460 (83)	414 (83)	664 (83)	783	615	614 (86)	641 (86)	373	525 (83)	235 (83)	448 (84)	535 (83)	425 (86)	410 (86)	646	622 (84)	166 (83)	381 (86)	890 (83)	1 334	55 (83)	521 (84)	650 (84)	122 (83)
Television sets, per 1 000 inhabitants	Number	1985	..	300 (81)	303 (84)	471 (80)	392	370 (86)	394 (86)	377 (86)	158 (80)	303	181 (80)	244 (84)	250 (80)	336 (83)	317 (86)	291	346 (86)	140 (80)	256 (82)	390	337	76 (79)	336 (84)	621 (80)	175 (83)
Doctors, per 1 000 inhabitants	Number	1985	..	1.7 (82)	2.8 (84)	1.8 (82)	2.5 (84)	2.3 (86)	2.3 (86)	2.5 (84)	2.8 (83)	2.4 (84)	1.3 (82)	3.6 (82)	1.3 (82)	1.9 (86)	2.2 (84)	2.4	2.2	1.8 (82)	3.4 (86)	2.5	1.4 (84)	1.5 (83)	0.5 (83)	2.0 (85)	1.6 (82)
Infant mortality per 1 000 live births	Number	1985	9.2 (84)	11.0	9.4	9.1 (83)	7.9	5.8 (86)	7.0 (86)	9.1	14.1	5.7	8.9	10.9	5.9 (84)	9.0	9.6 (86)	10.8	8.5 (86)	17.8	7.0 (84)	6.8	6.9	..	9.4	10.4 (86)	31.7 (83)
Wages and prices (average annual increase over previous 5 years)																											
Wages (earnings or rates according to availability)	%	1987	5.7	4.9	3.4	3.6	6.1	8.5	6.4	3.6	17.4	..	8.8	10.5	2.6	..	2.3	7.4	10.2	17.9	10.3	7.6	..	..	8.5	3.1	..
Consumer prices	%	1987	7.0	3.0	3.5	4.2	4.7	5.0	4.7	1.1	19.3	25.7	5.2	7.6	1.1	2.2	1.3	12.6	7.0	17.2	8.5	5.9	2.1	41.6	4.7	3.3	56.3
Foreign trade																											
Exports of goods, fob*	Million US$	1987	26 484	27 084	82 824[7]	94 320	25 632	19 404	147 936	293 424	6 516	1 368	15 948	116 004	230 220	..[8]	92 592	7 164	21 804	9 144	33 972	44 388	45 312	10 344	130 632	254 124	11 425
as % of GDP	%		13.6	23.0	59.8	22.8	25.3	22.1	16.8	26.2	13.9	25.8	54.8	15.4	9.7	..	43.1	20.1	26.2	25.3	11.8	27.9	26.6	15.7	19.7	5.7	16.3
average annual increase over previous 5 years	%		4.4	11.6	9.6	6.5	11.1	8.2	9.0	10.7	8.7	13.7	14.6	9.6	12.1	..	6.9	3.4	4.4	17.0	10.4	10.6	11.8	12.1	7.7	3.7	2.2
Imports of goods, cif*	Million US$	1987	26 964	32 580	82 992[7]	87 528	25 452	18 828	153 204	227 916	13 116	1 584	13 620	124 596	150 300	..	91 068	7 224	22 428	13 248	48 816	40 596	50 424	14 460	153 768	424 440	12 603
as % of GDP	%		13.9	27.7	59.9	21.1	25.1	21.4	17.4	20.4	27.9	29.9	46.8	16.6	6.3	..	42.4	20.2	27.0	36.7	17.0	25.5	29.6	21.9	23.2	9.6	18.5
average annual increase over previous 5 years	%		2.8	10.8	7.4	9.7	8.8	7.0	6.7	6.5	5.6	10.8	5.9	7.7	2.8	..	7.2	4.6	7.8	6.9	9.1	8.0	12.0	9.7	9.1	11.7	–3.1
Total official reserves[6]	Million SDR's	1987	6 441	6 049	7 958[7]	5 778	7 153	4 592	26 161	58 846	2 007	221	3 393	23 631	57 925	..	12 818	2 298	10 105	3 047	22 035	5 974	22 283	1 254	30 070	33 657	557
As ratio of average monthly imports of goods	Ratio		3.4	2.6	1.4	0.9	4.0	3.5	2.4	3.7	2.2	2.0	3.5	2.7	5.5	..	2.0	4.5	6.4	3.3	6.4	2.1	6.3	1.2	2.8	1.1	0.6

* At current prices and exchange rates.

1. Unless otherwise stated.
2. According to the definitions used in OECD *Labour force Statistics*.
3. PPP's = Purchasing Power Parities.
4. Gross saving = Gross national disposable income *minus* Private and Government consumption.
5. Current disbursements = Current expenditure on goods and services *plus* current transfers and payments of property income.
6. Gold included in reserves is valued at 35 SDR's per ounce. End of year.
7. Including Luxembourg.
8. Included in Belgium.
9. Including non-residential construction.

Sources:
Population and Employment: OECD *Labour Force Statistics*.
GDP, GFCF, and General Government: OECD *National Accounts*. Vol. 1 and OECD *Economic Outlook, Historical Statistics*.
Indicators of living standards: Miscellaneous national publications.
Wages and Prices: OECD *Main Economic Indicators*.
Foreign trade: OECD *Monthly Foreign trade Statistics, series A*.
Total official reserves: IMF *International Financial Statistics*.

EMPLOYMENT OPPORTUNITIES

Economics and Statistics Department, OECD

The Economics and Statistics Department of the OECD offers challenging and rewarding opportunities to economists interested in applied policy analysis in an international environment. The Department's concerns extend across the entire field of economic policy analysis, both macroeconomic and microeconomic, and it is also responsible for the collection, processing and dissemination of a wide range of internationally consistent statistics. On the economic side, its main task is to provide, for discussion by committees of senior officials from Member countries, documents and papers dealing with current policy concerns. Within this programme of work, three major responsibilities are :

- To prepare regular surveys of the economies of individual Member countries;
- To issue full twice-yearly reviews of the economic situation and prospects of the OECD countries in the context of world economic trends;
- To analyse specific policy issues in a medium-term context for the OECD as a whole, and to a lesser extent for the non-OECD countries.

The documents prepared for these purposes, together with much of the Department's other economic work and its statistical output, appear in published form in *OECD Economic Outlook*, *OECD Economic Surveys*, *OECD Economic Studies*, the Department's Working Paper series, and an extensive list of statistical publications.

The Department maintains a world econometric model, INTERLINK, which plays an important role in the preparation of the policy analyses and twice-yearly projections. The availability of extensive cross-country databases and good computer resources facilitates comparative empirical analysis, much of which is incorporated into the model.

The Department is made up of about 90 professional economists and statisticians from a variety of backgrounds from all Member countries. Most projects are done by small teams and last from four to eighteen months. Within the Department, ideas and points of view are widely discussed; there is a lively professional interchange; and all professional staff have the opportunity to contribute actively to the programme of work.

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b) Solid knowledge of economic statistics and quantitative methods; this includes how to identify data, estimate structural relationships, apply and interpret basic techniques of time series analysis, and test hypotheses. It is essential to be able to interpret results sensibly in an economic policy context.

c) A keen interest in and knowledge of policy issues, economic developments and their political/social contexts.

d) Interest and experience in analysing questions posed by policy-makers and presenting the results to them effectively and judiciously. Thus work experience in government agencies or policy research institutions is an advantage.

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g) The Department works on a tight time schedule and strict deadlines. Moreover, much of the work in the Department is carried out in small groups of economists. Thus, the ability to work with other economists, from a variety of professional backgrounds, and to produce work on time is important.

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