

MINIMUM WAGES CASE 2003

COMPOSITE EXHIBIT

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Economic Conditions – Tables and Commentary

Tag 1: Economic Conditions – tables and commentary

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Note: As in previous submissions, all data in these tables has been expressed in trend terms, unless otherwise mentioned. While seasonally adjusted estimates may provide a clearer focus on adjustments in the real economy, by abstracting from the effects of seasonal influence, they still include factors of volatility and irregularity, which can make interpretation difficult.

The trend estimates presented dampen out these irregularities using a moving average methodology. This provides a more reliable guide to the underlying directions of the data.

TABLE 1: PROPORTIONS OF REAL GROSS DOMESTIC PRODUCT
MAJOR EXPENDITURE COMPONENTS

Component	percentage of GDP		
	year to Sept. 2001	year to June 2002	year to Sept. 2002
Final Consumption Expenditure			
Households	60.3	60.1	60.2
Government	18.0	18.0	18.1
Total	78.3	78.1	78.3
Gross Fixed Capital Expenditure			
Private			
Dwellings	4.9	5.6	5.8
Non-dwelling construction	2.7	3.0	3.2
Machinery and equipment	6.6	6.6	6.7
Intangible fixed assets	1.7	1.6	1.6
Ownership transfer costs	1.4	1.5	1.5
Total private gross fixed capital expenditure	17.5	18.7	19.2
Public (total)	3.9	3.9	3.9
Total gross fixed capital expenditure	21.4	22.6	23.0
Change in inventories	0.1	0.0	0.0
Gross National Expenditure (GNE)	99.8	100.7	101.3
Net Exports (a)	0.2	-0.7	-1.4
Statistical Discrepancy	0.0	0.0	0.1
Gross Farm Product	3.2	3.2	3.2
GROSS DOMESTIC PRODUCT	100	100	100

Source: ABS Cat. No. 5206.0

Notes:

(a) Exports minus imports

All figures are trend estimates

Reference year for chain volume measures is 2001-02

Table 1: Proportions of Real Gross Domestic Product – Major Expenditure Components

Table 1 presents the major expenditure components as a percentage of GDP, for the years ended September 2001, June 2002 and September 2002. The relative size of each of these components has continued to remain stable over this period.

Final Consumption Expenditure has accounted for around 78.3 per cent of total GDP over recent years. The private sector remains responsible for more than three-quarters of total consumption expenditure. Over the year to September 2002, private household consumption contributed 60.2 per cent of total GDP.

The total contribution of private investment expenditure to GDP has grown over recent periods, from 17.5 per cent of GDP over the year to September 2001, to 19.2 per cent of GDP over the year to September 2002 (an increase of 1.7 percentage points).

The increase in the contribution of private investment to GDP has come largely from an increase in dwelling and non-dwelling construction, and to a lesser extent machinery and equipment expenditure.

The contribution of public investment expenditure to GDP has, on the other hand, remained steady at 3.9 per cent of GDP. Total Gross Fixed Capital Expenditure (ie. private and public investment) made up a total of 23.0 per cent of GDP over the year to September 2002.

In total, the private sector contributed 79.4 per cent of total GDP over the year to September 2002, compared with 77.8 per cent over the previous year. The public sector contribution, on the other hand has remained quite steady, increasing only 0.1 percentage point over the last year

Net exports subtracted from GDP over the year to September 2002 (1.4 per cent of GDP), as they have for most of their recent history.

Over the previous year to September 2001, net exports contributed positively to GDP, albeit marginally (0.2 per cent of GDP), for the first time since the March quarter 1996.

The farm sector continued to constitute a steady 3.2 per cent of total GDP over the past two years.

TABLE 2: CHANGES IN REAL GROSS DOMESTIC PRODUCT

	Gross domestic product		Gross farm product (a)		Gross non-farm product	
	percentage change on					
	previous period	year earlier	previous period	year earlier	previous period	year earlier
Year -						
1997-98	4.6		-0.6		4.7	
1998-99	5.3		10.4		5.1	
1999-00	3.9		6.4		3.8	
2000-01	1.8		0.6		1.9	
2001-02	3.9		4.3		3.9	
Six Months -						
1998-99						
Dec	2.9	5.5	7.0	7.9	2.8	5.4
Jun	2.1	5.1	5.6	13.0	2.0	4.9
1999-2000						
Dec	2.0	4.2	2.9	8.7	2.0	4.0
Jun	1.6	3.6	1.2	4.2	1.6	3.6
2000-01						
Dec	0.5	2.1	0.0	1.2	0.5	2.1
Jun	1.1	1.6	0.0	-0.1	1.1	1.6
2001-02						
Dec	2.4	3.5	3.0	2.9	2.4	3.5
Jun	1.8	4.3	2.7	5.7	1.8	4.2
Quarter -						
1999-2000						
Sep	1.0	4.3	1.3	9.7	1.0	4.1
Dec	1.0	4.0	1.6	7.7	1.0	3.9
Mar	0.8	3.8	0.3	4.9	0.9	3.8
Jun	0.5	3.4	0.3	3.5	0.5	3.4
2000-01						
Sep	0.2	2.6	0.1	2.3	0.2	2.6
Dec	0.1	1.6	-0.6	0.1	0.2	1.7
Mar	0.5	1.3	0.1	0.0	0.5	1.3
Jun	1.1	1.9	0.3	-0.1	1.1	2.0
2001-02						
Sep	1.3	3.0	1.1	0.9	1.3	3.1
Dec	1.1	4.0	3.4	5.0	1.0	4.0
Mar	0.9	4.4	1.8	6.8	0.9	4.3
Jun	0.8	4.1	-1.6	4.7	0.9	4.1
2002-03						
Sep	0.7	3.6	-3.5	-0.1	0.9	3.7

Source: ABS Cat. No. 5206.0

Note:

(a) Agriculture, forestry and fishing has been used to proxy for Gross Farm Product

All figures are trend estimates

Reference year for chain volume measures is 2000-01

Table 2: Changes in Real Gross Domestic Product

Growth in the real economy (abstracting from the effects of inflation) is presented in Table 2.

Real GDP has grown at an average annual rate of 3.9 per cent over the past 5 financial years. The figure which most clearly stands out here is the 1.8 per cent growth recorded over the 2000-01 financial year, resulting from the introduction of the government's GST. Since then, the economy has shown remarkable resilience in recovering back to its 5 year average; real GDP growing 3.9 per cent during 2001-02 (year average terms). GDP growth over the year to June 2002 was 4.3 per cent.

The quarterly data shows the most recent developments more clearly. After experiencing very strong growth in excess of 1 per cent per quarter in the June September and December quarters of 2001, GDP growth, while moderating slightly, has continued to show resilience over the past 3 quarters. GDP grew by 0.9 per cent in March 2002, 0.8 per cent in June 2002, and 0.7 per cent in September 2002.

The cyclical volatility of the farm sector can be clearly observed from the large fluctuations in Gross Farm Product (GFP) occurring over the past 5 years. GFP fell by 0.6 per cent in 1997-98, and rose 10.4 per cent in 1998-99, 6.4 per cent in 1999-00, 0.6 per cent in 2000-01, and 4.3 per cent in 2001-02 (year average terms). GFP growth over the year to March 2002 was exceptionally strong, growing 6.8 per cent.

This volatility in farm output is mostly attributed to changes in seasonal factors, as has been evident in recent quarters due to the current drought being experienced in much of Australia's agricultural regions. GFP declined 3.5 per cent in the September quarter 2002, and is presently 0.1 per cent lower than its level a year ago.

Abstracting from this farm sector volatility, Gross Non-Farm Product (GNFP) has grown more steadily over the past 5 years, averaging the same annual growth rate of 3.9 per cent experienced by GDP. GFP in 2002 constituted only 3.2% of total GDP (see Table 1).

TABLE 3: AGGREGATE PRIVATE FINAL DOMESTIC DEMAND

	Private Consumption		Private Fixed Investment		Private Final Domestic Demand	
	percentage change on					
	previous period	year earlier	previous period	year earlier	previous period	year earlier
Year -						
1997-98	4.7		12.0		6.3	
1998-99	4.8		5.7		5.0	
1999-20	4.2		7.5		5.0	
2000-01	2.9		-6.8		0.5	
2001-02	3.5		9.9		5.0	
Six months -						
1998-99						
Dec	2.5	4.7	1.9	6.1	2.4	5.0
Jun	2.4	4.9	3.3	5.3	2.6	5.0
1999-2000						
Dec	2.1	4.5	4.4	7.9	2.6	5.3
Jun	1.6	3.8	2.7	7.2	1.9	4.6
2000-01						
Dec	1.3	3.0	-7.0	-4.5	-0.7	1.2
Jun	1.4	2.7	-2.2	-9.1	0.6	-0.2
2001-02						
Dec	1.7	3.1	6.9	4.5	2.8	3.4
Jun	2.3	4.0	8.1	15.5	3.6	6.6
Quarter						
1999-2000						
Sep	1.1	4.8	1.9	6.9	1.3	5.3
Dec	0.9	4.3	3.0	8.8	1.4	5.4
Mar	0.9	4.0	2.0	9.0	1.1	5.2
Jun	0.7	3.5	-1.5	5.5	0.1	4.0
2000-01						
Sep	0.6	3.1	-4.2	-0.9	-0.6	2.1
Dec	0.7	2.9	-4.4	-8.0	-0.5	0.2
Mar	0.7	2.7	-1.3	-11.0	0.2	-0.7
Jun	0.7	2.8	2.6	-7.2	1.2	0.3
2001-02						
Sep	0.8	2.9	3.5	0.3	1.4	2.3
Dec	1.0	3.3	3.8	8.9	1.6	4.5
Mar	1.2	3.8	4.1	14.9	1.9	6.2
Jun	1.2	4.2	3.7	16.1	1.8	6.9
2002-03						
Sep	1.0	4.4	3.1	15.6	1.5	7.0

Source: ABS Cat No. 5206.0

Notes:

Reference year for chain volume measures is 2000-01

All figures are trend estimates

Table 3: Private Final Domestic Demand

Table 3 presents a breakdown of the composition of growth in private final domestic demand. As can be seen from Table 1, earlier, this is a particularly important part of the Australian economy, with private domestic demand making up over three quarters of total final demand.

Private final domestic demand has continued to grow strongly over the five years to 2001-02, averaging an annual growth rate of 4.4 per cent.

The latest 2001-02 financial year saw private final domestic demand grow by a strong 5.0 per cent after a weaker 2000-01. Breaking private final demand into its two components of consumption and investment it is possible to see that the reason behind the poorer result in 2001-02 was due to a 6.8 per cent contraction in private investment expenditure, offset by a 2.9 per cent growth in consumption (as seen in table 1, private consumption and private investment respectively make up 78 and 22 per cent of total private final domestic demand).

The contraction in investment during 2000-01 can be largely attributed to the impact of the government's GST on the housing sector. In particular, a look at the quarterly data reveals that private fixed investment declined by 4.2 per cent in the September quarter 2000, 4.4 per cent in the December quarter 2000 and a further 1.3 per cent in the March quarter 2001, before it began to recover over 2001.

Private fixed investment expenditure grew by 9.9 per cent during 2001-02, and has been exceptionally strong since March quarter 2001, averaging 3.5 per cent per quarter. The latest ABS data suggests that private investment expenditure grew 15.6 per cent over the year to September 2002.

Private consumption expenditure has continued to grow strongly over recent years, remaining one of the key drivers of the Australian economy. Growth in private consumption grew 3.5 per cent during 2001-02 (year average terms), and 4.4 per cent over the year to September 2002.

The continued strength in both private consumption and investment has ensured that private final domestic demand has also grown exceptionally strongly over the past year, by in excess of 1.5 per cent a quarter, to be 7.0 per cent higher in September 2002 than it was a year earlier.

TABLE 4: TOTAL PUBLIC AND FINAL DEMAND

	Total public final demand		Total final demand	
	percentage change on			
	previous period	year earlier	previous period	year earlier
Year -				
1997-98	3.2		5.6	
1998-99	4.8		5.0	
1999-00	5.1		5.0	
2000-01	0.1		0.4	
2001-02	3.9		4.8	
Six months -				
1998-99				
Dec	3.6	4.5	2.6	4.9
Jun	1.4	5.1	2.4	5.1
1999-2000				
Dec	4.3	5.8	3.0	5.4
Jun	0.2	4.5	1.5	4.6
2000-01				
Dec	-0.2	0.1	-0.6	0.9
Jun	0.3	0.2	0.5	-0.1
2001-02				
Dec	2.8	3.2	2.8	3.4
Jun	1.8	4.7	3.2	6.2
Quarter -				
1999-2000				
Sep	2.8	5.5	1.6	5.3
Dec	1.7	6.0	1.5	5.5
Mar	-0.2	5.5	0.8	5.3
Jun	-0.7	3.5	0.0	3.9
2000-01				
Sep	0.0	0.8	-0.4	1.8
Dec	0.3	-0.6	-0.3	0.0
Mar	0.0	-0.4	0.2	-0.6
Jun	0.3	0.7	1.0	0.4
2001-02				
Sep	1.8	2.4	1.5	2.3
Dec	1.8	3.9	1.7	4.4
Jun	0.8	4.8	1.7	5.9
2002-03				
Sep	0.2	4.6	1.4	6.4
Sep	0.1	2.9	1.2	6.1

Source: ABS Cat No. 5206.0

Notes:

Reference year for chain volume measures is 2000-01

All figures are trend estimates

Table 4: Public and Total Final Demand

Table 4 shows the growth in public and total final demand. As can be seen in Table 1, public final demand makes just under a quarter of total final demand.

Public final demand grew 3.9 per cent during 2001-02 (slightly higher than its 3.4 per cent average annual growth rate over the past 5 financial years). Much of this spending can be seen to have occurred during the September and December quarters 2001, which saw public spending in the economy grow by 1.8 per cent per quarter in the lead up to an election.

Public spending increased 0.1 per cent in the September 2002 quarter, and 2.9 per cent over the past year.

In comparison, total final demand (ie. public and private expenditure on the domestic economy), grew by 1.2 per cent in the September 2001 quarter and 6.1 per cent over the past year. This can largely be attributed to rapid growth in private expenditure, as detailed in Table 3.

TABLE 5: CONTRIBUTIONS TO GROWTH IN GROSS DOMESTIC PRODUCT

Component	2001-02				2002-03	Sept Qtr	Jun Qtr	Sept Qtr
	Sep	Dec	Mar	Jun	Sep	2000 to Sept Qtr 2001	2001 to Jun Qtr 2002	2001 to Sept Qtr 2002
Final Consumption Expenditure								
Government	0.2	0.3	0.2	0.1	0.1	0.3	0.9	0.7
Private	0.5	0.6	0.7	0.7	0.6	1.8	2.5	2.7
Total final consumption expenditure	0.7	0.9	1.0	0.8	0.7	2.1	3.4	3.4
Gross Fixed Capital Expenditure								
Private								
Dwellings	0.4	0.4	0.3	0.3	0.2	-0.3	1.4	1.2
Non-dwelling construction	0.1	0.1	0.2	0.3	0.3	0.0	0.7	0.9
Machinery and equipment	0.1	0.1	0.2	0.1	0.1	0.0	0.5	0.5
Real Estate transfer expenses	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.1
Total private gross fixed capital formation	0.6	0.7	0.8	0.7	0.6	0.1	2.8	2.8
Public								
Total public gross fixed capital formation	0.2	0.1	-0.1	-0.1	0.0	0.2	0.1	-0.1
Total gross fixed capital formation	0.8	0.8	0.7	0.6	0.5	0.3	2.9	2.6
Increase in stocks								
Private non-farm	0.1	0.1	0.0	0.0	0.0	-0.4	0.2	0.1
Farm	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	-0.1
Total changes in inventories	0.1	0.1	0.0	-0.1	-0.1	-0.6	0.1	-0.1
Gross National Expenditure	1.6	1.8	1.6	1.3	1.1	1.8	6.5	5.9
Exports of goods and services	-0.1	-0.1	0.0	0.1	0.1	0.3	-0.2	0.1
less Imports of goods and services	0.1	0.6	0.9	0.8	0.5	-1.1	2.3	2.8
<i>Net Exports</i>	-0.2	-0.7	-0.9	-0.6	-0.5	1.4	-2.5	-2.7
Statistical discrepancy	-0.1	0.0	0.1	0.1	0.1	-0.2	0.1	0.3
Gross Domestic Product	1.3	1.1	0.9	0.8	0.7	3.0	4.1	3.6

Source: ABS Cat. No. 5206.0

Note:

Reference year for chain volume measures is 2000-01

All figures are trend estimates

Table 5: Contributions to Growth in Gross Domestic Product

Table 5 details the contributions that each of the major expenditure components have made to growth in GDP (expressed in percentage points). For example, the bottom row details the total percentage point growth in GDP (0.7 per cent in the September 2002 quarter), and the components which make it up (eg. expenditure on new private dwellings made up 0.2 percentage points of the total 0.7 per cent growth in GDP – or around 29 per cent of GDP growth during the September quarter).

Looking at the contributions to growth over the year to September 2002, it is clear that consumption and investment expenditure made up the bulk of GDP growth over this period (a total of 6 per cent growth). In fact the only detractor from GDP growth over this period was from a small reduction in public sector investment expenditure (which subtracted 0.1 per cent from GDP growth).

In total, Gross National Expenditure grew by a very strong 5.9 per cent over the year to September 2002.

Spending on exports added a further 0.1 percentage points to the economy, however this was not enough to counter a 2.8 percentage point deduction from growth resulting from additional spending on imports. In total, net exports detracted 2.7 per cent from overall growth.

This compares with a 1.4 percentage point addition to GDP over the previous year to September 2001. This sharp turnaround can be in part attributed to a slowing in export growth as a result of a weakened global economy, but is largely a result of increasing spending on imports. This is perhaps not surprising given the strong growth in spending on consumption and investment in Australia in recent times. Overall, the additional growth in consumption and investment over the year to September 2002 more than outweighed the increase in import expenditure, resulting in a 0.6 percentage point higher GDP growth this year.

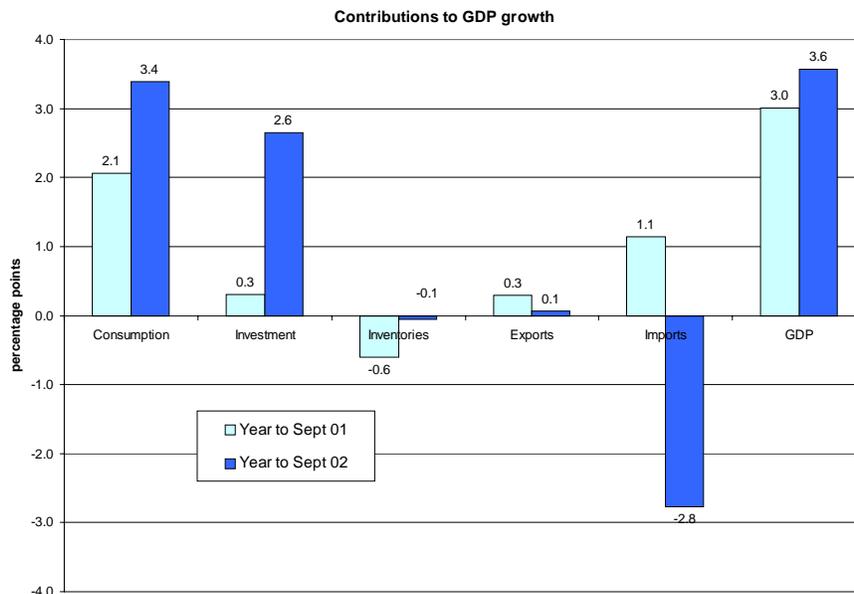


TABLE 6: INDICATORS OF CONSUMPTION EXPENDITURE

	Retail Turnover (value) - trend (a)		New Motor Vehicle Registrations (number)	
	percentage change on			
	previous period	year earlier	previous period	year earlier
Year -				
1997-98	4.0		15.3	
1998-99	5.6		3.7	
1999-00	5.0		-6.4	
2000-01	6.6		4.8	
2001-02	8.0		2.2	
Quarter -				
2000-01				
Sep	3.2	4.2	13.3	5.7
Dec	1.4	4.6	-1.2	4.9
Mar	2.5	7.8	-4.1	3.2
Jun	2.3	9.7	-1.8	5.5
2001-02				
Sep	1.7	8.1	1.7	-5.3
Dec	1.6	8.4	3.6	-0.7
Mar	2.0	7.8	2.9	6.6
Jun	2.2	7.7	0.3	8.9
2002-03				
Sep	1.5	7.5	1.3	8.4
Dec			-2.5	2.0
Month -				
2001-02				
Jul	0.5	7.9	0.6	-5.5
Aug	0.5	8.1	0.6	-5.5
Sep	0.5	8.3	1.0	-4.8
Oct	0.5	8.5	1.4	-3.1
Nov	0.5	8.4	1.4	-0.8
Dec	0.6	8.2	1.3	1.9
Jan	0.7	8.0	1.1	4.7
Feb	0.7	7.8	0.7	6.9
Mar	0.8	7.7	0.2	8.3
Apr	0.8	7.7	-0.1	8.9
May	0.7	7.7	-0.1	8.9
Jun	0.6	7.7	0.5	8.9
2002-03				
Jul	0.5	7.6	0.8	9.0
Aug	0.4	7.5	0.4	8.9
Sep	0.4	7.3	-0.4	7.3
Oct	0.4	7.2	-1.0	4.9
Nov	0.4	7.1	-1.4	2.0
Dec			-1.5	-0.9

Source: ABS Cat. Nos. 8501.0 and 9313.0.55.001

Table 6: Indicators of Consumption Expenditure

Table 6 presents the movements in two of the major indicators of consumption expenditure in the Australian economy – retail turnover and new motor vehicle registrations.

In trend terms, retail turnover continued to post strong results over the past year, increasing 8.0 per cent during 2001-02 following a 6.6 per cent growth over the 2000-01 financial year.

Retail turnover so far during 2002-03 has also continued to remain very solid, growing by around 0.4 per cent per month since July 2002, and 7.1 per cent over the year to November 2002.

The number of registrations of new motor vehicles has exhibited more volatile growth over recent years. Following exceptionally strong growth of 15.3 per cent in 1997-98, growth moderated to 3.7 per cent in 1998-99 before dropping by 6.4 per cent in 1999-2000. Since this time, the number of new motor vehicle registrations grew 4.8 per cent during 2000-01, and a further 2.2 per cent in 2001-02.

The quarterly data shows that there was a large increase in the number of registrations following the introduction of the GST (the September quarter 2000, saw the number increase by 13.3 per cent), as people who were holding off their purchases of new motor vehicles prior to the GST made their purchases under the new tax regime. In the months that followed, the number of registrations fell back, suggesting a return to more normal levels following the GST-spike.

In more recent times, the number of new motor vehicles grew strongly by 8.4 per cent over the year to September 2002. Although it has decreased by 2.5 per cent in the December 2002 quarter, the actual number of registrations remains around record highs.

TABLE 7: MANUFACTURING PRODUCTION

	\$ million	percent change on	
		previous period	year earlier
Year -			
1997-98	69393	3.3	
1998-99	70738	1.9	
1999-00	71426	1.0	
2000-01	73304	2.6	
2001-02	75599	3.1	
Quarter -			
1999-2000			
Sep	17397	-0.4	-1.9
Dec	17632	1.4	-1.1
Mar	18044	2.3	1.9
Jun	18353	1.7	5.0
2000-01			
Sep	18390	0.2	5.7
Dec	18281	-0.6	3.7
Mar	18254	-0.1	1.2
Jun	18379	0.7	0.1
2001-02			
Sep	18623	1.3	1.3
Dec	18874	1.3	3.2
Mar	19019	0.8	4.2
Jun	19083	0.3	3.8
2002-03			
Sep	19059	-0.1	2.3

Source: ABS Cat. No. 5206.0

Notes:

Reference year for chain volume measures is 2000-01

All figures are trend estimates

Table 7: Manufacturing Production

Table 7 shows that manufacturing production grew by 3.1 per cent over the 2001-02 financial year, 0.5 percentage points higher than in the previous year, and 0.7 percentage points higher than the average annual increase during the past 5 years (of 2.4 per cent per annum).

In year-to terms, growth over the year to June 2002 was an even higher 3.8 per cent.

The most recent data, however, shows that there was a slight 0.1 per cent contraction during the September 2002 quarter, leaving growth in manufacturing production 2.3 per cent higher than a year earlier.

Commenting on the manufacturing numbers in the September quarter National Accounts, the *Australian Financial Review* reported that:

“Australian Industry Group deputy chief executive Heather Ridout said this number was not reflective of the strong conditions in the sector.

‘Investment figures are quite strong, we have a fairly supportive consumer, and the construction industry is contributing to growth,’ she said.

‘We would be quite confident that the December quarter will be a fairly strong quarter.’ “

[*Australian Financial Review, Farmers Hurt As Builders Rejoice Sectors*, 5 December 2002, page 9]

TABLE 8: THE HOUSING SECTOR

	Private Dwelling Expenditure (a) \$million	Total New Dwelling Approvals '000	Value of New Dwelling Approvals \$million	Value of Lending for New Dwellings \$million
	percentage change on previous period			
Year -				
1997-98	18.5	14.0	16.9	10.3
1998-99	8.2	1.9	-0.4	-4.6
1999-00	12.1	11.7	11.6	1.5
2000-01	-17.7	-29.1	-12.7	-1.9
2001-02	16.4	37.6	31.5	26.7
Quarter -				
1999-2000				
Sep	2.6	8.7	7.4	1.0
Dec	8.1	5.1	1.1	2.5
Mar	6.6	-1.5	1.0	-1.1
Jun	-2.3	-17.0	-9.6	-8.5
2000-01				
Sep	-10.8	-21.0	-12.4	-11.5
Dec	-12.9	-4.8	3.7	3.7
Mar	-5.1	4.8	4.0	19.3
Jun	6.1	17.8	7.2	18.2
2001-02				
Sep	8.0	19.7	15.7	11.7
Dec	7.2	1.5	5.4	-2.6
Mar	5.6	-3.0	0.6	-9.7
Jun	4.7	5.1	2.7	-6.7
2002-03				
Sep	4.1	4.9	9.4	-2.8
Dec				
Month -				
2001-02				
Jul	(b)	6.9	5.8	4.2
Aug		4.9	4.9	2.6
Sep		2.4	3.4	0.6
Oct		0.1	1.6	-1.0
Nov		-1.5	0.0	-2.6
Dec		-2.0	-0.4	-3.4
Jan		-1.3	0.3	-3.6
Feb		-0.4	0.4	-3.4
Mar		1.2	0.7	-3.0
Apr		1.9	0.7	-2.1
May		2.5	1.0	-1.7
Jun		2.4	2.0	-1.4
2002-03				
Jul		1.7	3.2	-1.0
Aug		0.9	4.1	-0.6
Sep		0.2	4.4	0.1
Oct		-0.5	3.8	0.7
Nov		-0.9	3.3	1.0

Source: ABS Cat. Nos. 5206.0, 5609.0 and 8731.0

Notes:

(a) Reference year for chain volume measures is 2000-01

(b) This data from ABS National Accounts Cat.no. 5206.0, and is only available on a quarterly basis

All figures are trend estimates

Table 8: The Housing Sector

Table 8 shows the contribution of the housing sector to the state of the economy.

The housing sector has experienced very strong fluctuations over recent years, largely surrounding the introduction of the GST, and later the impact of low interest rates and the government's *First Home Owners Scheme* (FHOS).

The housing sector experienced a major 'bring-forward' of building activity into the period immediately before the introduction of the GST – as people attempted to build before incurring the additional tax burden. This resulted in the value of Private Dwelling Expenditure increasing a large 12.1 per cent during 1999-00. This boom was followed by a large gap in expenditure on housing during the subsequent year, both as a result of the increased cost of building (due to the new tax), and also from building scheduled in that period being brought forward into 1999-00. The result was that Private Dwelling Expenditure fell by 17.7 per cent during 2000-01.

Since this time, however, low interest rates, booming house prices and the First Home Owners Scheme have meant that Private Dwelling Expenditure during the last 2001-02 financial year rebounded strongly by 16.4 per cent. The quarterly data continue to confirm that dwelling expenditure has remained solid, increasing by 4.1 per cent during the September 2002 quarter, and is now 23.4 per cent higher than this time last year (not shown in table; source ABS Cat. No. 5206.).

This very strong activity in the construction sector has meant that dwelling investment and other measures of housing activity are now around record highs. It has been expected for some time now by the Treasury, the Reserve Bank of Australia (RBA), and other economic commentators, for building activity to return to more 'normal' levels. It should be noted, however, that this is also exactly that what was being said at this time last year.

To date this has not been reflected in the actual expenditure numbers (the latest of which relate to the September quarter 2002), however some of the approvals data of late may suggest that some easing beginning to occur. It is important to note, however, that the approvals data are showing mixed signals, and are themselves still at near seasonal highs.

The 'number' of new dwelling approvals fell during the past two months of October and November 2002 (0.5 and 0.9 per cent respectively). The 'value' of approvals, on the other hand rose 3.8 and 3.3 per cent during the same months. Over the year to November 2002, the number and value of building approvals rose 5.7 and 26.1 per cent respectively (not shown in table).

TABLE 9: INVESTMENT

	Private Business Fixed Investment			Total public investment	Change in private non-farm stocks \$ million
	Non-dwelling construction	Machinery & equipment	Total (a)		
	percentage change on previous period				
Year -					
1997-98	7.7	11.1	9.9	0.3	-424
1998-99	9.0	0.3	3.4	9.7	5328
1999-2000	-9.6	10.9	3.2	6.6	3047
2000-01	-16.2	0.6	-4.9	-8.6	481
2001-02	13.2	3.5	6.4	5.3	10
Quarter -					
1997-98					
Sep	1.7	4.7	3.6	-1.3	6182
Dec	5.0	2.4	3.3	-2.6	6019
Mar	6.0	-0.5	1.7	-1.2	5948
Jun	4.2	-2.3	0.1	4.0	6188
1998-99					
Sep	1.9	-1.6	-0.3	5.9	6554
Dec	0.0	0.8	0.5	1.4	6645
Mar	-0.1	3.4	2.0	-0.7	6600
Jun	-1.4	4.0	2.0	4.4	6889
1999-2000					
Sep	-2.5	3.2	1.2	8.9	7501
Dec	-3.3	2.1	0.2	0.7	7556
Mar	-5.0	1.5	-0.7	-8.1	6945
Jun	-6.0	0.2	-1.8	-7.3	6440
2000-01					
Sep	-6.4	0.1	-1.9	-0.1	6433
Dec	-4.4	-0.3	-1.5	1.8	6550
Mar	-0.3	-1.0	-0.8	-0.7	6506
Jun	2.3	-0.2	0.5	-0.1	6500
2001-02					
Sep	2.1	1.0	1.3	4.7	6808
Dec	4.1	1.9	2.6	2.5	6979
Mar	8.8	2.7	4.5	-1.5	6877
Jun	9.9	1.9	4.4	-2.6	6696
2002-03					
Sep	8.2	1.0	3.3	-1.2	6617

Source ABS Cat. No. 5206.0

Notes:

(a) Total of non-dwelling construction and machinery & equipment investment

Reference year for chain volume measures is 2000-01

All figures are trend estimates

Table 9: Investment

Table 9 details data regarding the level of private non-dwelling investment (or business investment) and public investment expenditure.

Private business expenditure increased 6.4 per cent during 2001-02, following a 4.9 per cent decline in the previous year. This compares strongly with a 3.6 per cent average annual increase during the past 5 years.

The most recent growth in private business investment can be attributed to both a large rise in spending on non-dwelling construction (up 13.2 per cent during 2001-02) as well as a reasonable increase in machinery and equipment expenditure (up 3.5 per cent during 2001-02).

A look at the quarterly data shows that non-dwelling construction has grown solidly in each of the past 6 quarters, with increases during the past 3 quarters exceeding 8 per cent per quarter. Non-dwelling construction increased a whopping 34.6 per cent over the year to September 2002.

Investment in machinery and equipment has also grown significantly over the past year, with expenditure on this item of investment having increased at a rate in excess of 1.0 per cent per quarter for the last 5 quarters. Machinery and equipment expenditure increased 7.8 per cent over the year to September 2002.

The latest quarterly data also shows that total private business investment (non-dwelling construction plus machinery and equipment) increased 3.3 per cent during the most recent September 2002 quarter, to be 15.7 per cent higher than at the same time a year earlier.

Total Public investment expenditure grew 5.3 per cent during the past 2001-02 financial year, following a 8.6 per cent decline in 2000-01. The most recent quarterly data suggests, however, that public investment expenditure has declined in the past 3 quarters, and in 'year-to' terms actually fell over the year to September 2002 by 2.8 per cent. Much of this may be attributed to public investment expenditure returning to more 'normal' long-term levels following strong growth in the previous year. (for example, public investment grew by 6.5 per cent over the year to December 2001).

TABLE 10: CONSUMER PRICE INDEX

All groups (a)		
	percentage change on previous period	percentage change on year earlier
Year -		
1997-98	0.0	
1998-99	1.2	
1999-00	2.4	
2000-01	6.0	
2001-02	2.9	
Quarter -		
1999-2000		
Sep	0.9	1.7
Dec	0.6	1.8
Mar	0.9	2.8
Jun	0.8	3.2
2000-01		
Sep	3.7	6.1
Dec	0.3	5.8
Mar	1.1	6.0
Jun	0.8	6.0
2001-02		
Sep	0.3	2.5
Dec	0.9	3.1
Mar	0.9	2.9
Jun	0.7	2.8
2002-03		
Sep	0.7	3.2
Dec	0.7	3.0

Source: ABS Cat. No. 6401.0

Notes:

(a) weighted average of eight capital cities

Table 10: Consumer Price Index (CPI)

Table 10 presents recent movements in the Consumer Price Index (CPI).

After increasing markedly in 2000-01 by 6.0 per cent following the introduction of the GST, CPI over the 2001-02 financial year fell back to a more moderate 2.9 per cent.

The quarterly data show clearly that there was a 3.7 per cent spike in September 2000 (the first quarter following the new tax system's introduction), taking the headline rate of inflation over the year to September 2000 to 6.1 per cent.

During the latest few quarters, headline CPI growth has hovered around 0.7 per cent growth per quarter, to be 3.0 per cent higher over the year to December 2002.

TABLE 11: WAGE COST INDEX (a)

	All Sectors		Private Sector		Public Sector	
	percentage change on					
	previous period	year earlier	previous period	year earlier	previous period	year earlier
Year -						
1998-1999	3.2		3.0		3.8	
1999-2000	2.9		2.8		3.0	
2000-2001	3.4		3.5		3.4	
2001-2002	3.3		3.2		3.4	
Quarter -						
1997-98						
Dec	0.8		0.8		0.7	
Mar	0.9		0.9		1.0	
Jun	0.4		0.4		0.5	
1998-99						
Sep	1.2	3.3	1.1	3.2	1.5	3.7
Dec	0.6	3.1	0.6	3.0	0.6	3.6
Mar	0.9	3.0	0.7	2.8	1.5	4.1
Jun	0.6	3.2	0.6	2.9	0.3	3.9
1999-2000						
Sep	0.9	3.0	1.0	2.9	0.9	3.4
Dec	0.6	3.0	0.5	2.8	0.7	3.5
Mar	0.7	2.8	0.7	2.9	0.6	2.5
Jun	0.6	2.8	0.6	2.9	0.6	2.7
2000-01						
Sep	1.2	3.1	1.3	3.1	1.1	2.9
Dec	0.8	3.4	0.8	3.5	0.8	3.1
Mar	1.0	3.7	0.9	3.6	1.3	3.8
Jun	0.6	3.7	0.6	3.7	0.6	3.8
2001-02						
Sep	1.1	3.6	1.2	3.6	1.0	3.7
Dec	0.7	3.4	0.6	3.4	0.6	3.5
Mar	0.7	3.1	0.7	3.1	1.1	3.4
Jun	0.6	3.1	0.6	3.1	0.4	3.2
2002-03						
Sep	1.3	3.3	1.4	3.4	1.1	3.3

Source: ABS Cat. No. 6345.0

Notes:

(a) Total hourly rates of pay, excluding bonuses

Table 11: Wage Cost Index

Table 11 shows the Wage Cost Index (WCI) figures for total hourly rates of pay, excluding bonuses.

The Wage Cost Index has risen at moderate levels since its introduction in the September quarter 1997.

The WCI for All-Sectors of the economy has grown at an average annual rate of 3.2 per cent over the last 4 years. The Public Sector index over this same 4 year period has grown slightly quicker on average (3.4 per cent a year), compared with the Private Sector index (3.1 per cent per year).

During 2001-02, each of the indexes has grow pretty much in line with their 4 year averages; with the All Sectors index increasing 3.3 per cent, Private Sector index up 3.2 per cent, and the Public Sector index increasing 3.4 per cent. Growth in both the Private Sector and All Sectors indexes was down compared with the previous year.

The most recent data for the September 2002 quarter saw the all sectors WCI increase 1.3 per cent for the quarter, to be 3.3 per cent higher than a year earlier. Over the same quarter, the private and public sector measures increased by 1.4 and 1.1 per cent respectively to be 3.4 and 3.3 per cent higher than at the same time a year earlier. It should be noted that the September quarter has been historically higher than other quarters, particularly with regards to the Private Sector.

The ABS is still investigating an experimental 'seasonally adjusted' measure for the WCI, which is expected to be introduced in the near future.

TABLE 12: AVERAGE WEEKLY EARNINGS

	Full-time Adults				All employees	
	Weekly Ordinary Time Earnings (AWOTE)		Weekly Total Earnings (AWE)		Weekly Total Earnings (AWE Total Earnings)	
	percentage change on					
	previous period	year earlier	previous period	year earlier	previous period	year earlier
Year -						
1997-98	4.1		3.8		3.2	
1998-99	3.6		3.4		2.2	
1999-00	3.6		3.1		2.5	
2000-01	5.1		4.6		5.3	
2001-02	5.6		5.4		4.2	
Quarter -						
1999-2000						
Aug	0.8	2.6	0.7	2.2	0.2	1.3
Nov	1.1	2.9	1.0	2.5	0.7	1.5
Feb	1.4	3.8	1.4	3.4	1.6	2.8
May	1.5	4.8	1.4	4.5	1.8	4.5
2000-2001						
Aug	1.2	5.3	1.0	4.9	1.3	5.6
Nov	1.0	5.3	0.8	4.7	1.0	5.8
Feb	1.2	5.0	1.0	4.4	1.0	5.2
May	1.4	4.9	1.3	4.3	1.2	4.5
2001-02						
Aug	1.6	5.4	1.6	4.9	1.2	4.4
Nov	1.4	5.7	1.4	5.4	0.9	4.3
Feb	1.2	5.7	1.3	5.7	0.9	4.2
May	1.2	5.4	1.3	5.6	0.9	3.9
2002-03						
Aug	1.1	5.0	1.3	5.3	0.9	3.6

Source: ABS Cat. Nos. 6302.0

Table 12: Average Weekly Earnings

Table 12 shows changes in average weekly earnings. The data presented details the movements each of the three main measures:

- Average Weekly Earnings (AWE) for full-time adults;
- Average Weekly Ordinary Time Earnings (AWOTE) for full-time adults; and
- Average Weekly Total Earnings (AWE Total Earnings) for all employees.

Annual AWOTE growth over the past five years has averaged around 4.4 per cent, with an average annual growth rate of 4.1 per cent recorded for AWE during the same period. AWE Total Earnings for all employees has grown at a more moderate 3.5 per cent per annum over the past 5 financial years. The slower rate of growth in this measure generally reflects the impact of compositional change in the labour market (namely faster growth in part-time employment).

During 2001-02, the AWOTE and AWE measures for full-time adults grew by 5.6 per cent and 5.4 per cent respectively, up on the previous year. In comparison the AWE Total Earnings measure for all employees moderated to 4.2 per cent over 2001-02, down from 5.3 per cent the previous year.

The quarterly data indicate that AWOTE and AWE growth has moderated slightly in recent quarters, following faster growth during May, August and November 2001. The AWOTE measure grew 1.1 per cent during the August quarter 2002, to be 5.0 per cent higher than at the same time a year earlier. AWE grew 1.3 per cent during the August quarter 2002, and 5.3 per cent over the year to August 2002.

Finally, the AWE Total Earnings measure for all employees, continues to lag behind the other two measures, increasing by 0.9 per cent per quarter over the last year, to be 3.6 per cent higher in August 2002 than at the same time a year earlier.

TABLE 13: COMPANY PROFITS

	Company Profits before tax		Gross Operating Surplus (GOS)		Profit share of total factor incomes (a) per cent
	percentage change on				
	previous period	year earlier	previous period	year earlier	
Year -					
1997-98	2.3		9.3		23.9
1998-99	15.2		3.3		23.2
1999-00	28.8		7.7		23.6
2000-01	-5.7		4.1		23.3
2001-02	5.7		6.3		23.6
Quarter -					
1998-99					
Sep	3.4	10.2	0.7	5.9	23.5
Dec	5.0	12.8	0.4	3.5	23.2
Mar	5.6	17.0	0.2	2.1	23.0
Jun	5.1	20.5	0.7	1.9	22.9
1999-2000					
Sep	7.4	25.2	1.8	3.1	23.0
Dec	8.6	29.5	3.3	6.1	23.4
Mar	7.4	31.7	4.0	10.0	24.0
Jun	2.6	28.5	2.1	11.6	24.1
2000-2001					
Sep	-4.1	14.8	0.0	9.6	23.8
Dec	-6.9	-1.5	-0.7	5.4	23.3
Mar	-6.5	-14.2	-0.1	1.3	23.0
Jun	-2.2	-18.2	1.4	0.6	23.0
2001-02					
Sep	3.8	-11.5	2.2	2.8	23.2
Dec	6.3	1.0	2.1	5.7	23.5
Mar	5.8	14.3	2.2	8.1	23.8
Jun	4.6	22.2	1.8	8.5	23.9
2002-03					
Sep	3.0	21.2	1.2	7.5	23.9

Source: ABS Cat. Nos. 5651.0 and 5206.0

Notes:

(a) From National Accounts - Financial year figures are averages of quarterly data

Reference year for chain volume measures is 2000-01

All figures are trend estimates

Table 13: Company Profits

Table 13 shows recent movements in the two main statistical indicators of company profits in Australia, the 'Company profits before income tax' series from the ABS's *Business Indicators* survey of businesses (ABS Cat No. 5676.0) and the *Gross Operating Surplus* measure from the national accounts (ABS Cat No. 5206.0).

As measured before tax, the *company profits* measure grew extremely strongly during 1998-99 and 1999-2000, by 15.2 and 28.8 per cent respectively, before falling back 5.7 per cent in 2000-01. During 2001-02, profits recovered this from this decline, with a strong 5.7 per cent growth during that financial year.

Analysis of the quarterly data suggests that the period of decline in profits occurred, perhaps unsurprisingly, in the three quarters following the introduction of the GST.

The quarterly data shows considerably strong profit growth over each of the past 5 quarters (increasing at an average rate of 4.7 per cent per quarter). Company profits before income tax grew 3.0 per cent during the September 2002 quarter to be 21.2 per cent higher than at the same time a year earlier.

The Gross Operating Surplus (GOS) measure from the ABS's *National Accounts* publication is also presented in Table 13.

The data shows that over the past five years, GOS increased at an average annual rate of 6.1 per cent. The 2001-01 financial year saw GOS continue to increase by 6.3 per cent, slightly above its five year average.

The quarterly data appear to confirm that the easing off in profits (as recorded in the company profits survey, above) occurred following the introduction of the GST. The GOS measure dropped from a 2.1 per cent growth during the June quarter 2001, to be flat (0%) in September 2001, and falling 0.7 per cent and 0.1 per cent in the following December 2001 and March 2002 quarters respectively.

Since this time, GOS growth has rebounded strongly, increasing at an average quarterly rate of 1.9 per cent over the past 5 quarters. GOS grew 1.2 per cent in the September quarter 2002, to be 7.5 per cent higher than at the same time a year earlier.

The final column in the table shows how the profit share of total factor income has changed over this period. Over the past year, the profit share has increased 0.7 percentage points to be 23.9 per cent in September 2002 – once again hovering around recent record highs.

TABLE 14: EMPLOYMENT

	All persons				Total Male	Total Female
	Full Time	Part Time	Total			
	percentage change on					
year ealier	year ealier	previous period	year ealier	year earlier	year earlier	
Year -						
1997-98	0.9	2.9	1.4		1.3	1.4
1998-99	1.6	3.8	2.2		2.0	2.4
1999-00	2.5	3.5	2.8		2.2	3.4
2000-01	1.5	3.7	2.1		1.4	2.9
2001-02	-0.5	5.7	1.2		1.1	1.3
Quarter -						
2000-01						
Sep	3.1	3.7	0.7	3.3	2.5	4.3
Dec	2.1	3.2	0.0	2.4	2.0	2.9
Mar	1.1	3.1	0.1	1.6	0.9	2.5
Jun	-0.4	4.8	0.3	1.0	0.2	1.9
2001-02						
Sep	-1.4	5.7	0.2	0.5	0.1	1.0
Dec	-0.9	5.9	0.4	0.9	0.7	1.2
Mar	-0.2	6.4	0.7	1.5	1.6	1.5
Jun	0.4	5.0	0.4	1.7	1.9	1.3
2002-03						
Sep	1.1	4.3	0.4	2.0	1.9	2.1
Dec	1.4	4.8	0.8	2.3	1.8	3.0
Month -						
2001-02						
Jul	-1.3	5.7	0.0	0.5	0.1	1.1
Aug	-1.5	5.7	0.0	0.4	0.1	0.9
Sep	-1.4	5.6	0.1	0.5	0.2	0.8
Oct	-1.1	5.6	0.1	0.6	0.4	1.0
Nov	-0.9	5.8	0.2	0.9	0.7	1.2
Dec	-0.6	6.1	0.2	1.2	1.0	1.5
Jan	-0.4	6.5	0.3	1.4	1.3	1.6
Feb	-0.2	6.5	0.2	1.6	1.6	1.5
Mar	0.0	6.2	0.2	1.6	1.8	1.4
Apr	0.2	5.6	0.1	1.7	1.9	1.3
May	0.4	5.0	0.1	1.7	2.0	1.3
Jun	0.6	4.5	0.1	1.7	1.9	1.4
2002-03						
Jul	0.9	4.2	0.1	1.8	1.9	1.7
Aug	1.1	4.2	0.2	2.0	1.8	2.1
Sep	1.2	4.5	0.3	2.1	1.8	2.5
Oct	1.3	4.8	0.3	2.3	1.8	2.8
Nov	1.3	4.9	0.3	2.3	1.8	3.0
Dec	1.4	4.7	0.3	2.3	1.7	3.1

Source: ABS Cat No. 6202.0

Notes:

All figures are Trend estimates

Annual and Quarterly figures are simple averages of monthly data

Table 14: Employment

Table 14 presents growth in employment over the past five years.

Total employment has grown strongly over the past 5 financial year, increasing at an average annual rate of 1.9 per cent. Part-time employment has increased at an even faster rate, with the number of part-time employees growing at an average annual rate of 3.9 per cent over the past five years.

Total employment grew 1.2 per cent over 2001-02, comprising a solid 5.7 per cent rise in the number of part-time employees, and a slight 0.5 per cent contraction in the number of full-timers.

The quarterly and monthly data suggest that the falls recorded in full-time employment largely occurred as a result of the government's GST induced slowdown in economic growth. The more recent figures suggest, however, that the full-time labour market has recovered significantly since this time.

In trend terms total employment grew 0.8 per cent in the December quarter 2002, to be 2.3 per cent over the year to December 2002. Full-time and part-time employment grew 1.4 per cent and 4.7 per cent respectively in trend terms over the year to December 2002.

The latest seasonally adjusted data, (not presented here), further emphasises the current strength in the labour market. In Seasonally Adjusted terms, total employment grew 3.0 per cent over the year to December 2002 – with an additional 276,600 employees now working compared with the same time a year ago (including an additional 144,100 full time jobs).

The number of full-time and part-time jobs grew by 2.2 and 5.2 per cent respectively over the past year to December 2002, in seasonally adjusted terms. The last two months have been especially strong, with 112,500 jobs created in November and December 2002 alone (of which 106,800 were full-time positions),

The Table also suggests that female employment growth has continued to outstrip that of males. Over the year to December 2002, female employment grew 3.1 per cent in trend terms, compared with 1.7 per cent growth amongst males.

TABLE 15: UNEMPLOYMENT

	Looking for Full-Time work				Looking for Part- Time work	Total Unemployed		
	Age 15-19 years	Age 20 & older	Total			'000	rate	rate (seasonally Adjusted)
	rate	rate	'000	rate				
Year -								
1996-97	28.0	8.0	616.0	8.9	6.5	764.2	8.3	8.3
1997-98	27.5	7.7	593.3	8.6	6.2	737.9	8.0	8.0
1998-99	25.1	7.0	544.2	7.8	6.1	691.7	7.4	7.4
1999-00	21.9	6.2	484.5	6.8	6.0	633.4	6.6	6.6
2000-01	22.4	5.9	472.3	6.6	5.9	624.7	6.4	6.4
2001-02	23.9	6.2	498.8	7.0	5.8	657.4	6.7	6.7
Quarter -								
2000-01								
Sep	20.3	5.7	450.2	6.3	5.6	594.0	6.1	6.1
Dec	21.5	5.8	460.0	6.4	5.7	604.9	6.2	6.2
Mar	23.6	5.9	479.5	6.7	6.0	636.1	6.5	6.5
Jun	24.0	6.2	499.5	7.0	6.2	663.8	6.8	6.8
2001-02								
Sep	24.6	6.4	513.6	7.2	6.0	675.0	6.9	6.8
Dec	24.8	6.4	513.2	7.2	6.0	676.1	6.9	6.8
Mar	23.7	6.2	494.5	6.9	5.7	652.3	6.6	6.6
Jun	22.4	6.0	473.8	6.6	5.5	626.2	6.3	6.4
2002-03								
Sep	22.0	5.8	458.5	6.4	5.7	617.7	6.2	6.2
Dec	21.9	5.6	451.0	6.3	5.8	614.8	6.1	6.1
Month -								
2001-02								
Jul	24.3	6.4	511.1	7.2	6.0	673.4	6.8	6.9
Aug	24.7	6.4	514.0	7.2	6.0	675.0	6.9	6.8
Sep	24.9	6.4	515.7	7.2	6.0	676.7	6.9	6.7
Oct	25.0	6.4	515.7	7.2	6.0	678.0	6.9	7.0
Nov	24.9	6.4	514.2	7.2	6.0	677.6	6.9	6.8
Dec	24.6	6.4	509.7	7.1	6.0	672.8	6.8	6.7
Jan	24.2	6.3	502.7	7.0	5.9	663.9	6.8	7.0
Feb	23.7	6.2	494.5	6.9	5.7	652.3	6.6	6.6
Mar	23.2	6.1	486.4	6.8	5.6	640.6	6.5	6.3
Apr	22.8	6.0	479.7	6.7	5.5	631.4	6.4	6.3
May	22.4	6.0	473.8	6.6	5.5	625.6	6.3	6.3
Jun	22.1	5.9	467.9	6.5	5.5	621.6	6.3	6.5
2002-03								
Jul	22.0	5.8	462.8	6.5	5.6	619.6	6.2	6.2
Aug	22.0	5.8	458.4	6.4	5.7	617.8	6.2	6.2
Sep	22.0	5.7	454.3	6.3	5.7	615.6	6.2	6.2
Oct	22.0	5.7	451.8	6.3	5.7	614.4	6.1	6.0
Nov	21.9	5.6	450.9	6.3	5.8	614.7	6.1	6.1
Dec	21.7	5.6	450.4	6.3	5.8	615.3	6.1	6.2

Source: ABS Cat No. 6202.0

Notes:

All figures are Trend estimates (except final column which presents the seasonally adjusted unemployment rate)
Annual and Quarterly figures are simple averages of monthly data

Table 15: Unemployment

The unemployed section of the labour market is summarised in Table 15

As can be seen from Table 15, there were an average 657,400 unemployed persons in 2001-02, compared with 764,200 1996-97. This represents a decrease in the unemployment rate from an average of 8.3 per cent in 1996-97 to 6.7 per cent in 2000-01. Over the same period, the unemployment rate amongst 15-19 year olds decreased from 28.0 per cent to 23.9 per cent.

Consideration of the monthly and quarterly data shows that, in trend terms, the unemployment rate decreased to a low of 6.1 per cent in the September quarter 2000, before edging upwards following the introduction of the GST to around 6.9 per cent during late 2001. Since this time, the unemployment rate has continued its pre-GST downward trend, and on the latest December 2002 data is hovering around its pre-GST lows of 6.1 per cent.

The seasonally adjusted unemployment rate has increased slightly over the past two months of November and December 2002, to be 6.2 per cent, broadly in line with the trend figure. This can be largely attributed to a large increase in the participation rate, which is now at an all time high.

A look at the data in Table 14 confirms this story. The small rises in the seasonally adjusted unemployment rate over the past two months have been accompanied by very strong employment growth – the increase in the unemployment rate has been because more people who were not previously looking for work, now believe they have a chance of finding a job given the stronger labour market conditions.

TABLE 16: BALANCE OF PAYMENTS

Year -	Goods			Net Services	Net Income	Net Current Transfers	Balance on Current Account	Current Account Deficit % of GDP
	Credits	Debits	Net balance					
	\$ million							
1997-98	87 712	-92 230	-4 518	-1 217	-18 320	19	-24 036	4.0
1998-99	85 981	-98 565	-12 584	-1 861	-18 229	- 740	-33 414	5.3
1999-00	96 941	-110 545	-13 604	-1 059	-18 014	227	-32 450	4.9
2000-01	119 941	-119 803	138	- 555	-19 178	14	-19 581	2.9
2001-02	121 542	-122 399	- 857	- 472	-20 341	- 25	-21 695	3.1
Quarter -								
1998-99								
Sep	22 421	-24 699	-2 278	- 513	-4 497	- 256	-7 544	4.9
Dec	21 849	-24 605	-2 756	- 539	-4 597	- 194	-8 086	5.1
Mar	20 965	-24 477	-3 512	- 449	-4 625	- 152	-8 738	5.5
Jun	20 746	-24 784	-4 038	- 360	-4 510	- 138	-9 046	5.6
1999-2000								
Sep	21 558	-25 729	-4 171	- 343	-4 433	132	-8 815	5.4
Dec	23 273	-27 008	-3 735	- 340	-4 429	80	-8 424	5.1
Mar	25 158	-28 152	-2 994	- 254	-4 519	31	-7 736	4.7
Jun	26 952	-29 656	-2 704	- 122	-4 633	- 16	-7 475	4.5
2000-01								
Sep	28 410	-29 989	-1 579	- 84	-4 679	- 27	-6 369	3.8
Dec	29 633	-30 050	- 417	- 143	-4 733	- 5	-5 298	3.2
Mar	30 700	-29 940	760	- 201	-4 836	22	-4 255	2.5
Jun	31 198	-29 824	1 374	- 127	-4 930	24	-3 659	2.2
2001-02								
Sep	31 045	-29 856	1 189	- 16	-5 004	1	-3 830	2.2
Dec	30 515	-30 191	324	- 12	-5 056	- 16	-4 760	2.7
Mar	29 962	-30 811	- 849	- 144	-5 105	- 8	-6 106	3.5
Jun	30 020	-31 541	-1 521	- 300	-5 176	- 2	-6 999	4.0
2002-03								
Sep	30 002	-32 122	-2 120	- 452	-5 244	- 1	-7 817	4.4

Source: ABS Cat. Nos. 5302.0, 5206.0

Notes:

All figures are trend estimates

This series uses the BPM 5 format

Table 16: Balance of Payments

Australia's Balance of Payments position is presented in Table 16.

The annual data shows that Australia's Current Account Deficit, expressed as a percentage of GDP, grew slightly during 2001-02 to 3.2 per cent, as a result of strong growth in imports outstripping growth in exports.

Exports of goods during 2001-02 were \$1.6 billion more than in the previous financial year. Imports of goods grew by \$2.6 billion over the same period. The net income item on the current account also subtracted a further \$1.2 billion from the current account.

The most recent quarterly data suggest that this trend has continued in recent quarters, largely as a result of strong import growth. The current account deficit, as measured as a proportion of GDP rose to 4.4 per cent in the September quarter 2002 – just short of its five year average.

TAG 2

Mid-Year Economic and Fiscal Outlook 2002-2003 (Extract)

**MID-YEAR ECONOMIC AND
FISCAL OUTLOOK
2002-03**

STATEMENT BY
THE HONOURABLE PETER COSTELLO, M.P.
TREASURER OF THE COMMONWEALTH OF AUSTRALIA, AND
SENATOR THE HONOURABLE NICK MINCHIN
MINISTER FOR FINANCE AND ADMINISTRATION

November 2002

Part II: Economic outlook

The Australian economy is forecast to grow by around 3 per cent in 2002-03, down from $3\frac{3}{4}$ per cent forecast at Budget. The downward revision to the forecast is largely due to the anticipated impact of the drought, which is now affecting large parts of Australia. Non-farm GDP growth is forecast to grow by $3\frac{3}{4}$ per cent in 2002-03, unchanged from Budget. Employment growth is expected to be moderate, with the unemployment rate gradually declining through the year.

The solid growth prospects for the Australian economy contrast sharply with the weak and uncertain outlook for the global economy. Although Australia's economy is likely to grow a little more slowly this year, the main domestic risks to Australia's economic outlook – the drought and the prospect of a downturn in the housing cycle – by themselves are unlikely to significantly derail the broader economy. The global economy remains fragile, however, and could weaken further. The possibility of a deterioration in global conditions, which would undermine Australia's exports and investment, together with a realisation of some of the domestic risks, while not the most likely outcome, provides a sobering backdrop to the domestic economic outlook.

Global economic conditions have remained subdued since Budget with continued economic weakness in the United States, Europe and Japan. The global economy is still expanding slowly, but the recovery has struggled to gather momentum, despite expansionary monetary and fiscal policies in most of the major economies. While the global recovery has not stalled, uncertainties around the outlook have heightened and risks are predominantly on the downside. Despite these uncertainties, the most likely outcome is that supportive policy settings will underpin a gradual, albeit weaker than previously expected, strengthening of global economic conditions over the next year. World growth is forecast to be $2\frac{3}{4}$ per cent in 2002, in line with the Budget forecast, while the world growth forecast for 2003 has been revised down to $3\frac{1}{2}$ per cent, from 4 per cent at Budget.

Domestically, the major development since Budget has been the drought. The Budget outlook assumed average seasonal conditions in 2002-03, with farm production forecast to grow by $3\frac{3}{4}$ per cent in year-average terms. The drought is now expected to see total farm production decline by around 17 per cent in 2002-03, with much greater declines in grain production. Other parts of the economy are likely to be affected indirectly. Overall, the drought is expected to reduce GDP growth in 2002-03 by around $\frac{3}{4}$ of a percentage point, although a larger subtraction is possible if the dry conditions persist longer than currently assumed. The current account deficit is also likely to widen because of the drought and weak external demand, and the expected pick-up in business investment.

Despite the subdued global backdrop and the drought, the non-farm part of the economy is continuing to grow solidly, in line with the Budget outlook. Private business investment is picking up strongly and is expected to drive economic growth in 2002-03. The outlook for private consumption is unchanged from the Budget

Part II: Economic outlook

forecasts. The forecast for dwelling construction has been revised up since Budget, reflecting sustained high levels of activity, which have continued into the first half of 2002-03. Dwelling investment is now expected to grow by 9 per cent in 2002-03, compared with the 3 per cent decline forecast at Budget. Exports are expected to remain weak in line with the subdued global environment and the drought.

Inflation is expected to be moderate over the forecast period, underpinned by steady wage increases and solid productivity growth. Although the economy is expected to grow at a solid pace, wage and price pressures should remain contained. Subdued global conditions are likely to contain import price increases, moderating aggregate inflation. The Consumer Price Index (CPI) is expected to increase by around 2¾ per cent in 2002-03 in year-average terms, in line with Budget forecasts.

The labour market forecasts are unchanged from Budget, with employment growth forecast to be 1¾ per cent for 2002-03 and the unemployment rate around 6 per cent in the June quarter 2003. This is consistent with the outlook for solid non-farm GDP growth and moderate wages growth. There are some risks to the employment outlook, however, with rural employment already weak because of the drought and the possibility of a substantial downturn in residential construction activity over the coming year.

The initial forecast for 2003-04 is for GDP growth to increase to around 4 per cent, with the expected rebound largely due to the effects on growth of an assumed return to average seasonal conditions in the rural sector. Non-farm GDP growth is expected to be a little slower than in 2002-03. Strong business investment and solid household consumer spending underpin the outlook, although this should be partly offset by an expected slowdown in housing construction. The unemployment rate is expected to continue to trend downward, to a little below 6 per cent by the June quarter 2004.

Risks to the outlook

Since Budget, uncertainties surrounding the international and domestic outlook have increased. Global economic conditions are subdued and uneven and, while the central forecast for world growth has been lowered only a little since Budget, the downside risks are large and dominate the global picture. In particular, global equity markets have fallen sharply, further reducing wealth and confidence, while oil prices have risen and remain at high levels despite recent falls. Global and regional geo-political tensions have heightened. Feedback of these uncertainties into real activity has to date been relatively limited but recent partial data, particularly in the United States, are a cause for concern.

While the Australian economy has so far been able to shrug off much of the global weakness, a further global deterioration could eventually see domestic growth falter. Strong investment spending underpins the Australian growth outlook, but this is likely to be sensitive to global economic conditions and the level of uncertainty surrounding the outlook. Accordingly, the possibility of a weaker world environment is a substantial downside risk to the domestic outlook.

In addition to the global risks there are a number of domestic risks to the outlook, particularly uncertainties surrounding the drought and the housing sector. The drought is expected to subtract around $\frac{3}{4}$ of a percentage point from GDP growth in 2002-03, but a larger subtraction is possible if the dry conditions are worse than now assumed or if the indirect effects on other parts of the economy are larger than expected. It is also possible that the dry conditions could persist into 2003-04, possibly reducing forecast growth in that year.

There is also a possibility that housing activity may fall by more than forecast in 2003-04. Dwelling investment has held up for longer than expected at Budget, but substantial falls are in prospect over the forecast period as some of the bring-forward of construction is unwound. A related risk is that prices in some segments of the housing market, such as medium density dwellings, which are at historically high levels, could fall, with attendant wealth and confidence effects on spending.

A possible confluence of a further deterioration in global conditions, the drought and the expected downturn in housing activity would create difficult conditions for the economy. Unlike 1997-98, when the US was growing strongly, or 2001, when domestic activity was supported by a pick-up in housing activity and strong consumption, the Australian economy would find it difficult to maintain momentum in the face of any further significant global deterioration.

On the upside, the economy has proved to be very resilient, underpinned by solid fundamentals and supportive policy settings. Consumption has remained firm and investment intentions have held up well, despite the heightened global uncertainty. A near-term stabilisation in the external environment, particularly in international financial markets and in the level of geo-political tensions, could see the economy grow more strongly than currently forecast.

INTERNATIONAL ECONOMIC OUTLOOK

As anticipated at Budget, the world economy recovered in the first half of 2002 with most countries recording significantly improved growth. However, since Budget, risks to the international outlook have heightened and the recovery appears to have lost some momentum. While the world remains on track to achieve growth in 2002 consistent with the Budget forecasts, the outcome for 2003 will depend on how the risks unfold.

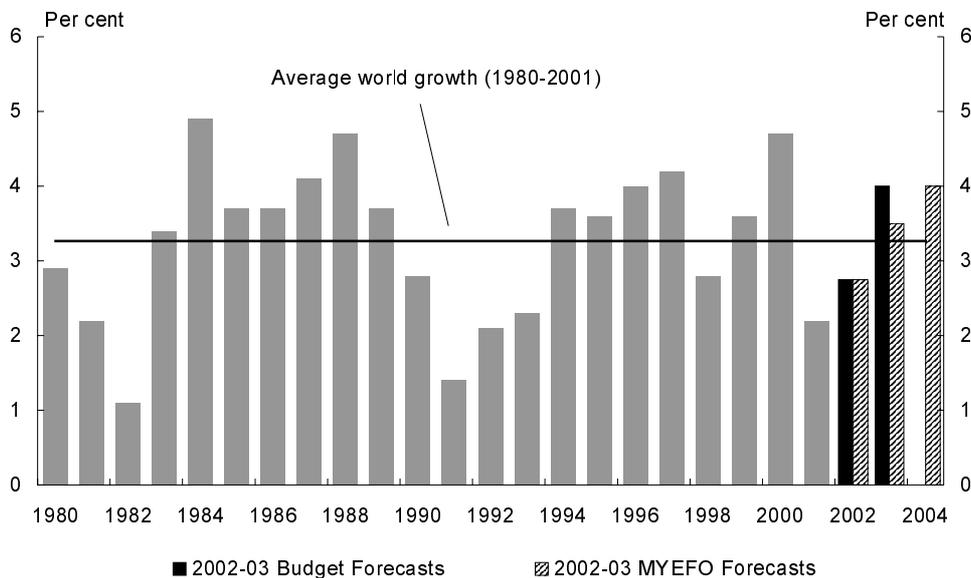
While the central case is for a slow recovery there is a preponderance of downside risks to the outlook. The possibility of sharply lower global equity prices, which would further reduce wealth and dampen consumer confidence, and push up the cost of capital for firms, represents a substantial risk to the outlook. Weaker investor confidence could also undermine investment. The United States (US) has had a large current account deficit in recent years and any loss of confidence in US assets could see a rapid and disorderly adjustment, with adverse consequences for global financial markets. Heightened international political tensions, and high oil prices, if sustained,

Part II: Economic outlook

are other major risks to the international outlook, as is possible contagion from the fragile situation in Latin America. Furthermore, shocks that have already occurred are still having an effect and their full impact may not yet be apparent.

World GDP growth is expected to be essentially unchanged from the Budget forecast of $2\frac{3}{4}$ per cent in 2002, although the composition of growth has changed, with weaker prospects for the US and Europe being offset by stronger than expected growth among East Asian economies. The world growth forecast in 2003 has been revised down by $\frac{1}{2}$ of a percentage point from Budget to $3\frac{1}{2}$ per cent, which is around trend growth (see Chart 2). Growth among Australia's major trading partners is expected to be $2\frac{3}{4}$ per cent in 2002, up $\frac{1}{2}$ of a percentage point from Budget, and $3\frac{1}{4}$ per cent in 2003, down $\frac{1}{2}$ of a percentage point from Budget (Table 2).

Chart 2: World GDP growth^(a)



(a) World GDP growth rates are calculated using GDP weights based on purchasing power parity. Source: National statistical publications, International Monetary Fund (IMF) and Treasury.

Table 2: International GDP growth forecasts^{(a)(b)}

	2001	2002	2003
	Actual	Forecasts	Forecasts
World	2.2	2 3/4	3 1/2
Total OECD(c)	0.7	1 1/2	2 1/4
United States	0.3	2 1/4	2 1/2
Japan	-0.3	- 1/4	1
European Union	1.6	1	2
Major Trading Partners	1.3	2 3/4	3 1/4
Non-Japan East Asia(d)	2.0	4 1/2	5

(a) Percentage change on previous year.

(b) Growth rates for the World and European Union are calculated using GDP weights based on purchasing power parity, while growth rates for Major Trading Partners and Non-Japan East Asia are calculated using export trade weights.

(c) Total OECD comprises the United States, Japan, Germany, France, Italy, the United Kingdom, Canada, Australia, Austria, Belgium, the Czech Republic, Denmark, Finland, Greece, Hungary, Iceland, Ireland, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, and Turkey.

(d) Non-Japan East Asia comprises Korea, Singapore, Taiwan, Hong Kong, China, Indonesia, Malaysia, Thailand, and the Philippines.

Source: National statistical publications, IMF and Treasury.

Despite stronger than expected global growth in early 2002, a sustained rebound in economic activity is proving elusive for many economies. The recovery lost momentum from mid-2002, as domestic demand did not pick-up as expected in the Euro area, making the region increasingly reliant on external demand. In Japan, private consumption showed some improvement but investment remained weak. While domestic demand has been stronger in non-Japan East Asia, this region is also heavily reliant on exports. Consequently, with limited progress on medium-term reforms in Europe and Japan, the global recovery remains highly dependent on future developments in the US.

The outlook for the US depends crucially on developments in the components of domestic demand. Household consumption has been very resilient, supported by low interest rates and wealth effects from rising house prices alleviating the negative wealth effects of lower equity prices. Nevertheless, consumption growth may slow and a pick-up in business investment is likely to be required to sustain the recovery. However, ongoing excess capacity in parts of US industry may constrain the scope for an investment rebound. As a result, the outlook for the US is for moderate but uneven growth, with a weaker recovery than previously expected. Growth is expected to remain below potential well into 2003.

Part II: Economic outlook

In **Japan**, while GDP growth is expected to gradually improve, the outlook remains weak. After export growth picked up strongly in the first half of the year, it began to slow in line with a softening in the world economy and a higher yen. Falling employment, low levels of consumer confidence and ongoing deflation limit prospects for a sustained recovery in consumption, while financial and corporate sector balance sheet problems and weak profitability hinder a recovery in investment. Coming on the back of three recessions in the last 10 years, and with ongoing deflation, the level of nominal GDP in Japan in 2003 is expected to be essentially unchanged from that in 1995.

Non-Japan East Asia recovered strongly in the first half of 2002 as growth was supported by a strong pick-up in exports, a recovery in domestic demand and accommodative macroeconomic policies. While China and India have strong internally-generated growth, the outlook for the region more generally remains vulnerable to external developments, particularly slower growth in the US and in the demand for information and communications technology (ICT) equipment.

In the **European Union**, the pace of growth is likely to be weaker than previously expected and is likely to continue to lag that of other regions. Domestic demand remains sluggish under the weight of declining investment and subdued private consumption, leaving near-term prospects reliant on the strength of external demand.

The combination of poor short-term growth prospects in the US, Japan and the European Union underscores the fragility of the global economic environment.

Global inflation is expected to remain low for the remainder of 2002 and into 2003, allowing policies to remain accommodative, although high oil prices may raise inflationary pressures. Most advanced economies are experiencing low inflation, while deflation persists in a number of East Asian economies.

Downside risks to the international outlook have increased since Budget.

Global equity markets have fallen by over 40 per cent in many countries from their peak in early 2000, making this a very deep and protracted bear market. The bursting of the IT bubble, the unwinding of very high price-earnings ratios, weaker corporate profitability in the US, corporate accounting scandals, geo-political tensions and higher oil prices have driven the fall in equity prices. While equity market declines have reduced both business and consumer confidence, this has not yet translated into large-scale declines in consumption and business investment expenditure. If low equity prices are sustained, or were to fall further, this could result in a considerable weakening of consumption and investment expenditure and increase pressures on some parts of the financial sector.

Rapid rises in housing prices and increasing household debt in some developed countries pose another emerging threat to the outlook. The wealth effects of substantially weaker house prices could depress consumption even more severely than the fall in equity prices.

Oil prices have risen over the course of 2002 and remain at high levels despite recent falls, posing a significant risk to the global recovery. Tension in the Middle East and concerns about a potential conflict involving Iraq have heightened oil price risks. Significantly higher oil prices, if maintained for a considerable period of time, would reduce economic growth and increase inflation pressures.

Current account imbalances among the major economies appear to be unsustainable. The US current account deficit reached a record high in mid 2002. A loss of confidence leading to a sudden withdrawal of investment funds from the US could lead to a disorderly adjustment in financial markets. Should this occur, it would significantly affect global growth prospects.

Japan's chronic bad loans problem continues to worsen and the banking system is under severe strain from declining equity prices. Any major shock to the financial system in Japan would have wide global repercussions.

While the risks to the global outlook appear to be predominantly on the downside, and interconnected, this needs to be set against monetary and fiscal policies that have been eased substantially around the globe – this support for the global economy is reflected in the recovery in activity seen in recent quarters. A quick resolution or abatement of some of the major uncertainties currently facing the world could see the recovery quickly gather momentum.

DOMESTIC FORECASTS

The forecasts for the domestic economy are underpinned by several key technical assumptions. The exchange rate is assumed to remain around the average level of recent months (a trade weighted index (TWI) of around 50 and a \$US exchange rate of around 54c). Interest rates are assumed to remain around current levels. World oil prices are assumed to average around \$US26 per barrel over the remainder of 2002, before falling to around \$US24 per barrel, broadly in line with market expectations.¹ The farm sector forecasts are based on an assumption of a return to average seasonal conditions in 2003-04.

Domestic economy – 2002-03

The key domestic macroeconomic forecasts for 2002-03 are summarised in Table 3. Economic growth in 2002-03 is expected to be around 3 per cent, revised down from 3¾ per cent at Budget. Non-farm GDP is forecast to grow by 3¾ per cent, unchanged from Budget.

1 World oil prices are measured by the world trade-weighted oil price, which is the average contract price of different types of oil, weighted by their share of world oil trade.

Part II: Economic outlook

Private consumption is forecast to increase by around 4 per cent in 2002-03, consistent with the 2002-03 Budget and similar to the pace of growth in 2001-02. Moderate household disposable income growth, low interest rates and continued, albeit moderating growth in household wealth, are expected to support consumer spending.

There are a number of risks to the consumption outlook. The possibility of house prices plateauing, and more subdued wealth increases than in recent years, may slow consumption. The expected downturn in dwelling investment in the latter part of 2002-03 and lower farm incomes due to the drought are also likely to moderate consumer spending. Petrol prices have risen in 2002 and could act also as a drag on household spending.

Table 3: Domestic economy forecasts^(a)

	Outcomes(b)	2002-03 Budget	2002-03 MYEFO
	2001-02 Year average	Forecasts Year average	Forecasts Year average
Panel A - Demand and output(c)			
Household consumption	3.8	4	4
Private investment			
Dwellings	19.5	-3	9
Total business investment(d)	4.3	12	11
Other buildings and structures(d)	10.4	14	18
Machinery and equipment(d)	2.6	12	11
Intangible fixed assets	0.9	9	6
Private final demand(d)	5.3	4 3/4	5 1/4
Public final demand(d)	4.1	3 1/4	3 1/4
Total final demand	5.0	4 1/2	4 3/4
Change in inventories(e)			
Private non-farm	-0.1	1/4	1/4
Farm and public authorities(f)	0.1	0	- 1/4
Gross national expenditure	5.0	4 3/4	4 3/4
Exports of goods and services	-1.9	6	2
Imports of goods and services	2.3	11	10
Net exports(e)	-0.8	-1	-1 3/4
Gross domestic product	3.9	3 3/4	3
Non-farm product(g)	3.6	3 3/4	3 3/4
Farm product(g)	9.5	3 3/4	-17
Panel B - Other selected economic measures			
External accounts			
Terms of trade	2.6	2 3/4	2 1/4
Current account balance			
\$billion	-22.2	-29	-33
Percentage of GDP	-3.2	-4	-4 1/2
Labour market			
Employment (labour force survey basis)	1.1	1 3/4	1 3/4
Unemployment rate (per cent)(h)	6.3	6	6
Participation rate (per cent)	63.7	63 3/4	63 3/4
Prices and wages			
Consumer Price Index	2.9	2 3/4	2 3/4
Gross non-farm product deflator	2.5	2	2 1/4
Average earnings(g)(i)	3.8	4 1/4	4 1/4

- (a) Percentage change on preceding year unless otherwise indicated.
(b) Calculated using original data. Outcomes have been calculated using 2001-02 Annual National Accounts, where possible.
(c) Chain volume measure.
(d) Excludes second-hand asset sales from the public sector to the private sector.
(e) Percentage point contribution to growth in GDP.
(f) For presentational purposes, for the last column, forecast changes in inventories held by privatised marketing authorities are included with the inventories of the farm sector and public marketing authorities.
(g) Outcomes for 2001-02 are based on June quarter National Accounts data.
(h) The level in the June quarter of each year, seasonally adjusted.
(i) Average earnings (national accounts basis).

Part II: Economic outlook

Dwelling investment is now expected to grow by 9 per cent in 2002-03, compared with a 3 per cent decline forecast at Budget. The revision reflects stronger than expected growth in new dwelling investment in 2001-02 and partial indicators pointing to still-firm levels of activity in the sector. House prices have continued to rise, and with the global backdrop still uncertain, the prospect of a longer period of historically low mortgage interest rates may have extended the current cycle a little longer than previously expected. However, recent high levels of activity appear to be unsustainable and dwelling investment is likely to weaken substantially over the next year. House prices are also unlikely to sustain the pace of growth of the past couple of years, and downward price pressures may emerge in some segments of the market — particularly medium density dwellings — where rising vacancy rates and falling yields already point to an oversupply. Continued growth in expenditure on alterations and additions should moderate the overall expected decline in dwelling activity.

Despite the uncertainties surrounding the global economic outlook, **private business investment** is expected to remain strong, underpinned by low interest rates, a competitive exchange rate and solid corporate profitability. Business sentiment remains firm and investment intentions data continue to point to strong private business investment growth in 2002-03. Private new business investment is forecast to rise by around 11 per cent in 2002-03, with investment in both machinery and equipment and buildings and structures expected to grow strongly. The forecast is marginally lower than at Budget, largely reflecting the weaker global outlook and the weaker outlook for agricultural investment, which is expected to fall sharply in 2002-03 as drought-affected farmers defer investment plans following the surge in spending during 2001-02.

New investment in machinery equipment is expected to increase by 11 per cent in 2002-03, although there is a risk that if global conditions deteriorate further, some of this investment may be put on hold. To date, however, investment intentions for 2002-03 have been very strong. Total investment should also continue to be supported by investment in buildings and structures, which is likely to be more resilient to adverse global conditions. Investment in buildings and structures is expected to grow by 18 per cent in 2002-03, driven by very strong growth in engineering construction. The commencement of work on several large-scale engineering construction projects has almost tripled the amount of engineering construction work-yet-to-be-done since the June quarter of 2001, to over \$6 billion in the June quarter of 2002.

Higher investment in private non-farm **inventories** (excluding private marketing authorities) is expected to contribute around $\frac{1}{4}$ of a percentage point to GDP growth in 2002-03, as firms rebuild their inventory levels after the rundown in 2001-02. However, an expected rundown in farm and private marketing authority inventories, as existing stocks are used to augment drought-affected supplies, is forecast to subtract around $\frac{1}{4}$ of a percentage point from growth in 2002-03.

Public final demand is expected to grow by around $3\frac{1}{4}$ per cent in year-average terms, around the longer-term trend and in line with Budget estimates. The expected growth in public final demand partly reflects additional defence spending, airport security,

and border protection and, at the state level, additional expenditure on education, health, and various infrastructure projects.

The outlook for **net exports** is weaker than at Budget reflecting continued international weakness and the expected reduction in rural exports due to the drought. Net exports are forecast to subtract around $1\frac{3}{4}$ percentage points from GDP growth in 2002-03 compared with a subtraction of around 1 percentage point expected at Budget.

Export growth is expected to be around 2 per cent in 2002-03, down from 6 per cent growth forecast at Budget. Rural exports are expected to subtract about 2 percentage points from total export growth in 2002-03. The outlook for imports is broadly unchanged from Budget with imports expected to increase by around 10 per cent in 2002-03, in line with expected strong domestic demand, particularly import-intensive private business investment.

The terms of trade is expected to increase by around $2\frac{1}{4}$ per cent in 2002-03, a little lower than forecast at Budget, with the downward revision largely due to the ongoing global weakness. Export prices are expected to be flat, while import prices are expected to fall by around 2 per cent, partly reflecting the ongoing decline in the price of ICT goods.

With the weaker near-term export outlook, and slightly weaker terms of trade than at Budget, the current account deficit is expected to widen and average around $4\frac{1}{2}$ per cent of GDP in 2002-03. A further deterioration in global economic conditions or a worsening of the drought would place additional pressure on the current account.

The outlook for the **labour market** remains broadly unchanged from Budget. Employment growth of $1\frac{3}{4}$ per cent is forecast for 2002-03, reflecting the solid outlook for non-farm GDP growth and expected moderate wages growth. As foreshadowed at Budget, the unemployment rate is expected to gradually decline through the year to around 6 per cent in the June quarter 2003. The participation rate is expected to be broadly unchanged. Some moderation in employment is likely in the construction sector as new dwelling construction slows. Farm employment has already fallen as a result of the drought and is likely to remain weak for some time.

With employment growth projected to be moderate, and labour market capacity constraints unlikely to be breached over the next year, **wages** growth is expected to be steady. Some pressures may be experienced in sectors where demand is starting to push up against supply constraints – such as in the construction industry – but overall wages growth should remain moderate. Wages are forecast to increase by around $4\frac{1}{4}$ per cent through the year to June 2003, which includes the recent rise in the Superannuation Guarantee Contribution.

Expected moderate wages growth and productivity growth of $1\frac{3}{4}$ per cent per year should see nominal unit labour costs grow by around $2\frac{1}{2}$ per cent and $2\frac{1}{4}$ per cent in 2002-03 and 2003-04 respectively. Other cost pressures appear muted and there has been little evidence of margin building by firms. Consequently, moderate **inflation** of $2\frac{1}{2}$ per cent is forecast through the year to June 2003. There are likely to be temporary

Part II: Economic outlook

pressures from higher petrol prices and the impact of the drought on food prices. However, with international conditions remaining subdued and structural and technological changes in some trading partner countries also underpinning low inflation for traded goods, import price inflation should remain low, moderating any increase in overall inflation in 2002-03.

Domestic economy — 2003-04

The outlook for 2003-04 is underpinned by an expected gradual pick-up in world growth, and an assumption that seasonal conditions will return to normal, ending the drought. Against this backdrop, GDP growth is forecast to rebound to around 4 per cent in 2003-04. However, non-farm GDP growth is expected to be a little weaker than in 2002-03, largely due to an expected fall in dwelling construction.

Despite these solid growth prospects, there are substantial risks to the outlook, particularly if global economic conditions do not slowly improve as expected, or if the drought does not break in 2003-04. Offsetting these risks are some upside risks, particularly for investment spending, which appears to be gathering momentum.

Consumption is forecast to grow solidly in 2003-04, a little below forecast income growth, with the slowdown from 2002-03 reflecting a moderation in some of the wealth-induced spending of the previous couple of years. The anticipated slowdown in dwelling investment in 2003 is expected to dampen consumption.

Dwelling investment is forecast to decline in 2003-04, as the bring-forward of new dwelling investment due to the First Home Owners Scheme is unwound further. Alterations and additions are expected to continue to grow solidly.

Private business investment is forecast to rise strongly in 2003-04, underpinned by solid domestic conditions and the prospect of firming international conditions. Investment in both machinery and equipment and buildings and structures is expected to grow strongly.

Net exports are forecast to continue to subtract from GDP growth in 2003-04, although the subtraction is likely to be substantially below that in 2002-03. Export growth is expected to pick-up in line with the expected global recovery and the ending of the drought, while imports are forecast to grow solidly. The terms of trade should increase moderately, largely reflecting continued subdued import price increases. The current account deficit is forecast to narrow.

Employment growth of around 1¾ per cent is expected in 2003-04, consistent with the solid growth outlook for the domestic economy. This rate of employment growth should see the unemployment rate decline slowly, to below 6 per cent by the end of 2003-04.

Wages are expected to grow moderately in 2003-04, reflecting the steady pace of employment growth. Inflation is forecast to be 2½ per cent through the year to

June 2004. There are, however, some upside risks to this outlook, particularly if global conditions improve substantially or if domestic demand were to grow more strongly than currently anticipated.

Medium-term projections

Table 4 sets out the major economic parameters used in preparing the revised Budget estimates. The parameters are the revised forecasts for 2002-03 and 2003-04 and medium-term projections for the following two financial years.

Consistent with the usual convention the projections reflect expected medium-term average growth rates. The projections have been revised since Budget to bring them more closely into line with recent experience and likely medium-term outcomes. Real GDP growth is still projected to be around 3½ per cent per year, although the assumed composition of growth is different. Employment growth is projected to be 1½ per cent per year (compared with 2 per cent per year previously) in line with projected changes in working age population growth and participation rates. Productivity growth is projected to be 2 per cent per year (compared with 1½ per cent per year previously), in line with productivity outcomes during the 1990s. While 1990s-type productivity growth rates should be able to be sustained over coming years, productivity is expected to ease back towards its long-term growth rate of around 1¾ per cent in the latter part of the decade.

Wages growth is projected to be 3¾ per cent (compared with 3½ per cent previously) broadly in line with wages growth during the 1990s. The CPI is projected to increase by 2½ per cent per year. The GDP deflator, a broader price measure that historically grows more slowly than the CPI, is projected to grow by 2 per cent per year (compared with 2½ per cent previously).

Table 4: Major economic parameters^(a)

	Forecasts		Projections	
	2002-03	2003-04	2004-05	2005-06
Real GDP	3	4	3 1/2	3 1/2
Employment(b)	1 3/4	1 3/4	1 1/2	1 1/2
Wages(c)	4 1/4	4	3 3/4	3 3/4
CPI	2 3/4	2 1/2	2 1/2	2 1/2

(a) Percentage change on preceding year.

(b) Labour force survey basis.

(c) Average earnings (national accounts basis).

TAG 3
EEH Survey

TAG 4
ACTU Costing

Costing a flat \$24.60 increase in all award rates (Award Only Employees)

Weighted increase for Award Only Employees

	Adults				Juniors	Total
	Full-time		Part-time			
	Permanent	Non-Permanent	Permanent	Non-Permanent		
Percentage of Award Only Employees	31.3	6.1	15.3	30.9	16.4	100.0
Weighting	1.0	1.2	0.5	0.6	0.4	
Weighted Increase	24.60	29.52	12.30	14.76	9.84	17.56

Calculating the Addition to Total Ordinary Time Earnings

Percentage of Total Workforce	Weighted Increase	Total AWOTE	Maximum Addition to Total Ordinary Time Earnings (%)	Estimated Increase in Ordinary Time Earnings (%)
21.0	17.56	696.50	0.53	0.42

The impact of the 2002 Living Wage Increase

Weighted increase for Award Only Employees

	Adults				Juniors	Total
	Full-time		Part-time			
	Permanent	Non-Permanent	Permanent	Non-Permanent		
Percentage of Award Only Employees	31.3	6.1	15.3	30.9	16.4	100.0
Weighting	1.0	1.2	0.5	0.6	0.4	
Weighted Increase	18	21.6	9.00	10.8	7.20	12.85

Calculating the Addition to Total Ordinary Time Earnings

Percentage of Total Workforce	Weighted Increase	Total AWOTE	Maximum Addition to Total Ordinary Time Earnings (%)	Estimated Increase in Ordinary Time Earnings (%)
21.0	12.85	672.30	0.40	0.32

**THE ECONOMIC IMPACT OF A \$24.60 INCREASE
(Award Only Employees)**

Addition to Total Ordinary Time Earnings (%)	Impact of 2001 Living Wage Case (%)	Net Impact on Total Ordinary Time Earnings (%)	CPI Effect (%)
0.42	0.32	0.10	0.05

Impact of Various Award Rate Increases on Economy Wide Earnings
(Award Only Employees)

Wage Increase	Estimated Addition to Economy Wide Earnings	Maximum Addition to Economy Wide Earnings	Estimated Net Impact	Maximum Net Impact
10	0.17	0.22	-0.15	-0.19
11	0.19	0.24	-0.13	-0.16
12	0.20	0.26	-0.11	-0.14
13	0.22	0.28	-0.10	-0.12
14	0.24	0.30	-0.08	-0.10
15	0.25	0.32	-0.06	-0.08
16	0.27	0.34	-0.04	-0.06
17	0.29	0.37	-0.03	-0.04
18	0.30	0.39	-0.01	-0.01
18.65	0.32	0.40	0.00	0.00
19	0.32	0.41	0.01	0.01
20	0.34	0.43	0.02	0.03
21	0.36	0.45	0.04	0.05
22	0.37	0.47	0.06	0.07
23	0.39	0.49	0.07	0.09
24	0.41	0.52	0.09	0.12
24.6	0.42	0.53	0.10	0.13

Costing a flat \$24.60 increase in all award rates (Private Sector Award Only Employees)

Weighted increase for Private Sector Award Only Employees

	Adults				Juniors	Total
	Full-time		Part-time			
	Permanent	Non-Permanent	Permanent	Non-Permanent		
Percentage of Private Sector Award Only Employees	30.4	6.1	15.1	31.3	17.1	100.0
Weighting	1.0	1.2	0.5	0.6	0.4	
Weighted Increase	24.60	29.52	12.30	14.76	9.84	17.44

Calculating the Addition to Total Ordinary Time Earnings

Percentage of Total Workforce	Weighted Increase	Total AWOTE	Maximum Addition to Total Ordinary Time Earnings (%)	Estimated Increase in Ordinary Time Earnings (%)
20.0	17.44	696.50	0.50	0.41

The impact of the 2002 Living Wage Increase

Weighted increase for Private Sector Award Only Employees

	Adults				Juniors	Total
	Full-time		Part-time			
	Permanent	Non-Permanent	Permanent	Non-Permanent		
Percentage of Private Sector Award Only Employees	30.4	6.1	15.1	31.3	17.1	100.0
Weighting	1.0	1.2	0.5	0.6	0.4	
Weighted Increase	18	21.6	9.00	10.8	7.20	12.76

Calculating the Addition to Total Ordinary Time Earnings

Percentage of Total Workforce	Weighted Increase	Total AWOTE	Maximum Addition to Total Ordinary Time Earnings (%)	Estimated Increase in Ordinary Time Earnings (%)
20.0	12.76	672.30	0.38	0.31

**THE ECONOMIC IMPACT OF A \$24.60 INCREASE
(Private Sector Award Only Employees)**

Addition to Total Ordinary Time Earnings (%)	Impact of 2001 Living Wage Case (%)	Net Impact on Total Ordinary Time Earnings (%)	CPI Effect (%)
0.41	0.31	0.10	0.05

Impact of Various Award Rate Increases on Economy Wide Earnings

(Private Sector Award Only Employees)

Wage Increase	Estimated Addition to Economy Wide Earnings	Maximum Addition to Economy Wide Earnings	Estimated Net Impact	Maximum Net Impact
10	0.17	0.20	-0.15	-0.18
11	0.18	0.22	-0.13	-0.16
12	0.20	0.24	-0.11	-0.14
13	0.22	0.26	-0.09	-0.11
14	0.24	0.28	-0.08	-0.09
15	0.25	0.31	-0.06	-0.07
16	0.27	0.33	-0.04	-0.05
17	0.29	0.35	-0.03	-0.03
18	0.30	0.37	-0.01	-0.01
18.65	0.31	0.38	0.00	0.00
19	0.32	0.39	0.01	0.01
20	0.34	0.41	0.02	0.03
21	0.35	0.43	0.04	0.05
22	0.37	0.45	0.06	0.07
23	0.39	0.47	0.07	0.09
24	0.40	0.49	0.09	0.11
24.60	0.41	0.50	0.10	0.12

Costing Methodology

1. We cost a \$24.60 increase in all award rates using unpublished data from ABS Cat. 6305.0 *Survey of Employee Earnings and Hours May 2002*, ("May 2002 EEH").
2. The first step is to weight the flat dollar increase (\$24.60) for full-time, part-time, permanent, casual, adult and junior status. This is done on the following assumptions:
 - a full-time permanent adult receives the full increase;
 - a full-time casual adult receives a 20% loading (ie a 1.2 weighting);
 - a part-time permanent adult works on average 18.8 ordinary hours per week (ABS Cat 6305.0 p.16) (ie a 0.5 weighting);
 - a part-time casual adult receives a 20% loading and works on average 18.8 hours per week (ie a weighting of 0.6);
 - juniors receive 0.65% of adult earnings on average with casual juniors weighted in the same way as adults. Part-time juniors work an average of 12.5 hours per week (ABS Cat. 6305.0 p.16), thus for juniors the relevant part-time rating is 0.33. This gives an overall weighting for juniors of 0.4.
3. The weighted dollar increase is then multiplied by the proportion of employees who are award dependent and divided by estimated AWOTE for May 2003 to give a maximum addition to ordinary time earnings. The mathematical basis for this is as follows:

Our aim is to measure the total increase in ordinary time earnings for all employees attributable to the proposed increase in award rates.

We define the following key terms:

$W =$ total weekly ordinary time earnings for all employees

$\Delta W =$ change in weekly ordinary time earnings for all employees as a result of the proposed increase

$N =$ total no. of all employees

$N_A =$ total no. of award only employee or private sector award only employees (as the case may be)

AWOTE = average weekly ordinary time earnings for all employees

$\alpha =$ proportion increase in total ordinary time earnings as a result of the proposed increase.

For each cohort of award only employees we define:

$W_i =$ total weekly ordinary time earnings for all employees in the cohort

$\Delta W_i =$ change in weekly ordinary time earnings for all employees in the cohort as a result of the proposed increase

$N_i =$ total no. of employees in the cohort

$w_i =$ flat increase in ordinary time earnings for each cohort

From the above we note the following relationships:

$N_A/N =$ the number of award only employees or private sector award only employees (as the case may be) as a proportion of all employees

$N_i/N_A =$ the number employees in a particular cohort as a proportion of all award only employees or private sector award only employees (as the case may be)

$$AWOTE = W/N \Rightarrow N \times AWOTE = W$$

$$\Delta W_i = w_i \times N_i$$

$$\Delta W = \sum \Delta W_i$$

We calculate the proportionate increase in ordinary time earnings using the following formula:

$$\sum [w_i \times (N_i/N_A)] \times N_A / N \times 1/AWOTE$$

$$= \sum [(w_i \times N_i) / (N \times AWOTE)]$$

$$= \sum [\Delta W_i / W]$$

$$= \Delta W / W$$

$$= \alpha$$

4. AWOTE for May 2003 is estimated by taking AWOTE for all employees from the May 2002 survey (\$672.30) and assuming conservatively 3.7% per annum growth. NB most recent ABS figures establish growth in all employees total earnings of 3.7% in the year to August 2002 – see *Average Weekly Earnings*, August 2002, ABS Cat 6301.0. Note in this regard that the MYEFO forecast for the increase in average earnings on a national accounts basis for 2002-03 is 4.25%
5. We adjust the maximum addition to ordinary time earnings to take account of the fact that survey evidence suggests that not all award only employees receive safety net adjustments. The Award and Agreement Coverage survey relied on by the Commonwealth in the 2000 Living Wage case provides figures regarding the flow of safety net adjustments. It is possible final release data from EEH May 2002 will provide a more up to date figure although the form of question asked regarding this issue may not end up providing useful data. Table 5.8 in the JCG 1999-2000 submission shows 16% of the total workforce having received safety net increases. This figure includes non-award only employees. To provide an indicative figure for safety net flow we assume all persons who received a safety net adjustment were private sector award only and adjust for the fact that AACS found 22% of employees award dependent and for the declining proportion of public sector award dependents. This latter adjustment means we assume a greater proportion of safety net flow than in last year's costing.
6. Using the same methodology we cost the impact of the May 2002 Living Wage Case increase.
7. The net CPI impact is calculated by adjusting the net addition to AWOTE by the wage share of total factor income 53.8% - see ABS Cat No 5206.0 September 2002.

TAG 5

Average Increases Award Workers 2000-2003

AVERAGE INCREASE AWARD WORKERS 2000-2003

2003	Award Only	Award Only Private Sector	Award Only Full-time	Award only Private Sector Full-time
Aged AHOTE/AWOTE	\$16.02	\$15.72	\$596.27	\$587.57
Weighted increase	0.71	0.71	\$25.37	\$25.39
% increase	4.4	4.5	4.3	4.3
real increase	1.9	2.0	1.7	1.8

2002	Award Only	Award Only Private Sector	Award Only Full-time	Award only Private Sector Full-time
Aged AHOTE/AWOTE	\$15.50	\$15.20	\$577.70	\$569.00
Weighted increase	0.52	0.52	\$18.57	\$18.57
% increase	3.3	3.4	3.2	3.3
real increase	0.5	0.6	0.4	0.4

2001	Award Only	Award Only Private Sector	Award Only Full-time	Award only Private Sector Full-time
Aged AHOTE/AWOTE	\$15.13	\$14.53	\$574.32	\$538.73
Weighted increase	0.43	0.43	15.28	15.29
% increase	2.8	2.9	2.7	2.8
real increase	-0.2	-0.1	-0.4	-0.2

2000	Award Only	Award Only Private Sector	Award Only Full-time	Award only Private Sector Full-time
AHOTE/AWOTE	\$14.70	\$14.10	\$558.90	\$523.30
Weighted increase	0.43	0.43	\$15.42	\$15.43
% increase	2.9	3.1	2.8	2.9
real increase	-0.2	-0.1	-0.4	-0.2

Average Annual Increase 2000-2002

average increase	3.0	3.1	2.9	3.0
average real increase	0.0	0.1	-0.1	0.0

Average Annual Increase 2000-2003

average increase	3.4	3.5	3.2	3.3
average real increase	0.5	0.6	0.3	0.4

Notes

1. For the years 2000 and 2002 the AHOTE/AWOTE figures are derived from unpublished data obtained from Employee Earnings and Hours ABS Cat. No. 6306.0. AHOTE figures for non-managerial employees only. For the years 2001 and 2003 the AHOTE/AWOTE figure is the previous year's figure aged by the weighted increase attributable to the previous year's Living Wage Case.
2. The weighted increase as a result of each year's Living wage case is calculated by adjusting the relevant hourly or weekly increase by the proportion of casual employees in the relevant cohort. The table below sets out the relevant data from ABS 6306.0 regarding proportion of permanent and casual employees for each cohort. For these purposes temporary or fixed term employees have been treated as casuals.

2002	Award Only	Award Only Private Sector	Award Only Full-time	Award only Private Sector Full-time
% Permanent	52.9	52.2	36.4	35.8
% Casual	47.1	47.8	6.8	6.8
Total	100.0	100.0	43.2	42.6

2000	Award Only	Award Only Private Sector	Award Only Full-time	Award only Private Sector Full-time
% Permanent	53.9	51.7	38.2	36.1
% Casual	46.1	48.3	6.3	6.0
Total	100.0	100.0	44.4	42.1

3. We convert the amounts awarded in the 2001 case to flat dollar amounts using unpublished AHOTE data from the Employee Earnings and Hours May 2000 ABS Cat. No. 6306.0. For award only employees the 2001 decision converts to a flat \$14.84 increase, for private sector award only \$14.68. (See ACTU costing calculations 2002 case exhibit ACTU 3 at 53).

4. Real increases are calculated by deflating using all groups CPI year to June (see table below). In 2001 we "extract" 3% for GST effect and in 2003 we assume 2.5% (as per MYEFO).

	2003	2002	2001	2000	1999	1998
CPI index	141.0	137.6	133.8	126.2	122.3	121.0
CPI year to June	2.5	2.8	6.0	3.2	1.1	

5. A comparison of ABS AHOTE and AWOTE figures between the years 2000 and 2002 yields different results to those we have calculated. In the case of award only figures this comparison yields percentage increases less than those obtained by our methodology and in the case of private sector award only results this comparison yields percentage increases greater than our methodology.

The ABS advises that comparisons between the 2000 and 2002 surveys should be made with caution as the surveys have not been designed to provide movement estimates. Whilst precise standard errors have not been calculated for the percentage change between the relevant AHOTE and AWOTE figures the ABS advises that the ACTU's calculated percentages are likely to fall within the 95% confidence interval (ie within two standard errors) of the movement estimates.

As a result there is a discontinuity between our 2001 calculations and our 2002 calculations. However this does not significantly impact on our calculations. For example taking figures at either end of the 95% confidence interval for full-time private sector award only AWOTE in 2002 generates percentage increase resulting from the 2002 decision in the range 3.1% to 3.4%.

TAG 6

Increases in Metal Industry Rates 1997-2003

Metal Industry Award Nominal Wage Increases 1997-2003

	1997	1998	1999	2000	2001	2002	2003	Average Annual Increase 1997-2002	Average Annual Increase 2000-2002	Average Annual Increase 1997-2003
C14	2.9	3.9	3.2	3.9	3.2	4.4	5.7	3.6	3.8	3.9
C13	2.7	3.7	3.1	3.7	3.1	4.2	5.5	3.4	3.7	3.4
C12	2.6	3.5	2.9	3.5	3.0	4.0	5.2	3.2	3.5	3.2
C11	2.4	3.3	2.8	3.4	2.8	3.8	5.0	3.1	3.3	3.1
C10	2.3	3.1	2.6	3.1	3.0	3.5	4.7	2.9	3.2	2.9
C9	2.2	3.0	2.5	3.0	2.9	3.4	4.5	2.8	3.1	2.8
C8	2.1	2.8	2.4	2.9	2.8	3.3	4.3	2.7	3.0	2.7
C7	2.0	2.7	1.9	2.8	2.7	3.2	4.2	2.5	2.9	2.5
C6	1.8	2.2	1.8	2.6	2.9	3.0	3.9	2.4	2.8	2.4
C5	1.8	2.1	1.7	2.5	2.8	2.9	3.8	2.3	2.7	2.3
C4	1.7	2.0	1.6	2.4	2.7	2.8	3.7	2.2	2.6	2.2
C3	1.6	1.9	1.5	2.3	2.5	2.6	3.5	2.1	2.5	2.1
C2a	1.5	1.8	1.5	2.2	2.4	2.5	3.4	2.0	2.4	2.0
C2b	1.4	1.4	1.4	2.1	2.3	2.4	3.2	1.8	2.3	1.8
C1a	1.3	1.3	1.3	1.9	2.1	2.2	2.9	1.7	2.0	1.7
C1b	1.1	1.1	1.1	1.6	1.8	1.9	2.5	1.4	1.8	1.4

Metal Industry Award Real Wage Increases 1997-2003

	1997	1998	1999	2000	2001	2002	2003	Average Annual Real Increase 1997-1999	Average Annual Real Increase 2000-2002	Average Annual Real Increase 2000-2003
C14	2.5	3.2	2.1	0.7	0.2	1.5	3.2	2.6	0.7	1.3
C13	2.4	3.0	2.0	0.5	0.1	1.3	2.9	2.5	0.6	1.2
C12	2.2	2.8	1.8	0.3	-0.1	1.1	2.7	2.3	0.4	1.0
C11	2.1	2.7	1.7	0.2	-0.2	0.9	2.5	2.1	0.2	0.8
C10	1.9	2.4	1.5	0.0	0.0	0.7	2.2	1.9	0.2	0.6
C9	1.8	2.3	1.4	-0.2	-0.1	0.6	2.0	1.8	0.0	0.5
C8	1.7	2.2	1.3	-0.3	-0.2	0.4	1.8	1.7	-0.1	0.4
C7	1.6	2.0	0.8	-0.4	-0.3	0.3	1.7	1.5	-0.2	0.3
C6	1.5	1.5	0.7	-0.6	-0.1	0.1	1.4	1.2	-0.3	0.1
C5	1.4	1.4	0.6	-0.7	-0.2	0.0	1.3	1.2	-0.4	0.0
C4	1.4	1.3	0.6	-0.7	-0.3	-0.1	1.2	1.1	-0.4	-0.1
C3	1.3	1.2	0.5	-0.9	-0.5	-0.2	1.0	1.0	-0.6	-0.2
C2a	1.2	1.1	0.4	-1.0	-0.6	-0.3	0.9	0.9	-0.7	-0.3
C2b	1.1	0.8	0.3	-1.1	-0.7	-0.4	0.7	0.7	-0.8	-0.4
C1a	1.0	0.6	0.2	-1.3	-0.9	-0.7	0.4	0.6	-1.0	-0.7
C1b	0.8	0.4	0.0	-1.5	-1.2	-0.9	0.0	0.4	-1.3	-1.0

Metal Industry Award Wage Rates 1996-2003

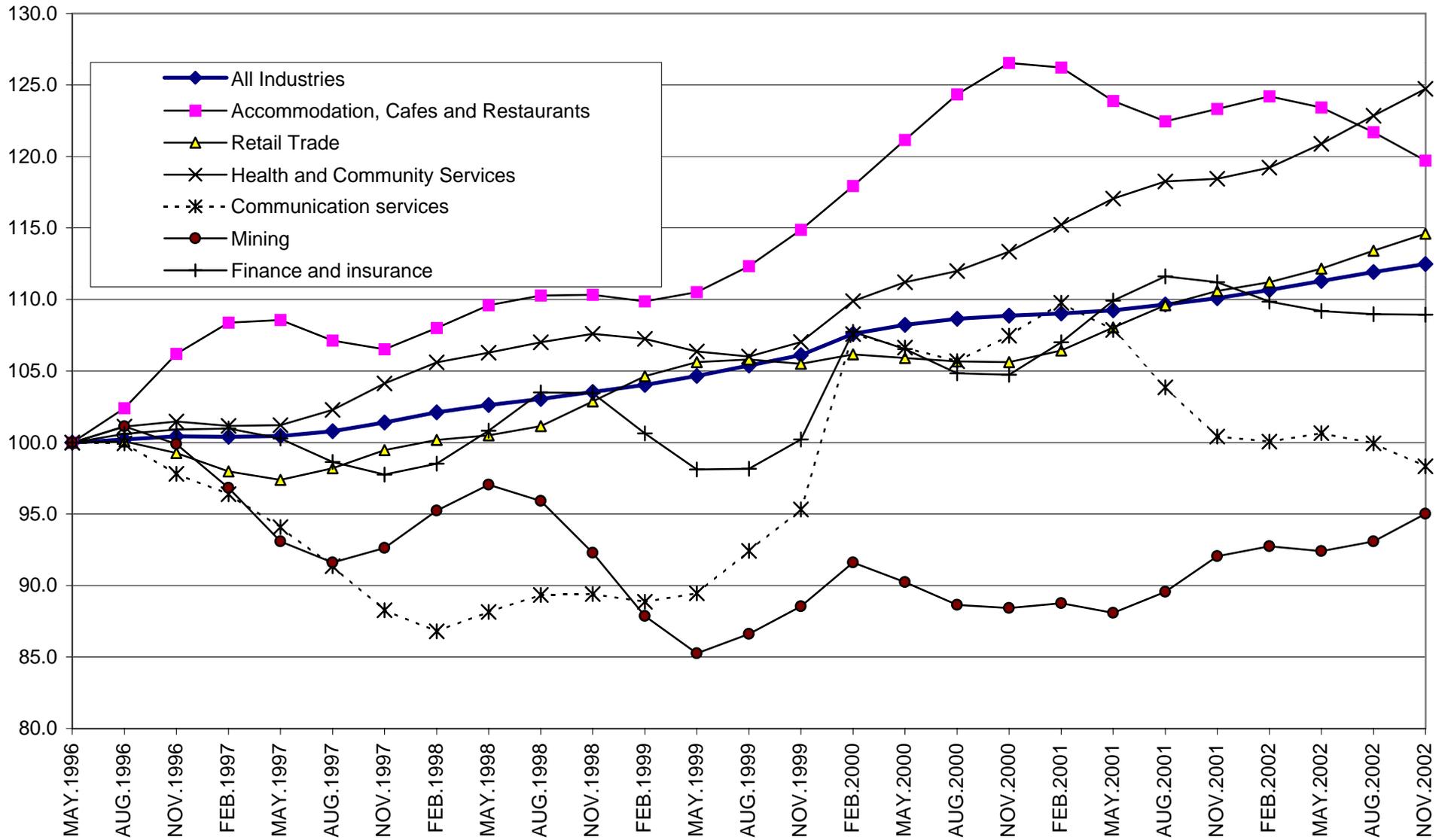
	1996	1997	1998	1999	2000	2001	2002	2003
C14	349.40	359.40	373.40	385.40	400.40	413.40	431.40	456.00
C13	366.10	376.10	390.10	402.10	417.10	430.10	448.10	472.70
C12	388.60	398.60	412.60	424.60	439.60	452.60	470.60	495.20
C11	409.50	419.50	433.50	445.50	460.50	473.50	491.50	516.10
C10	441.20	451.20	465.20	477.20	492.20	507.20	525.20	549.80
C9	462.10	472.10	486.10	498.10	513.10	528.10	546.10	570.70
C8	482.90	492.90	506.90	518.90	533.90	548.90	566.90	591.50
C7	503.80	513.80	527.80	537.80	552.80	567.80	585.80	610.40
C6	545.50	555.50	567.50	577.50	592.50	609.50	627.50	652.10
C5	566.40	576.40	588.40	598.40	613.40	630.40	648.40	673.00
C4	587.20	597.20	609.20	619.20	634.20	651.20	669.20	693.80
C3	628.90	638.90	650.90	660.90	675.90	692.90	710.90	735.50
C2a	649.80	659.80	671.80	681.80	696.80	713.80	731.80	756.40
C2b	691.50	701.50	711.50	721.50	736.50	753.50	771.50	796.10
C1a	775.00	785.00	795.00	805.00	820.00	837.00	855.00	879.60
C1b	900.10	910.10	920.10	930.10	945.10	962.10	980.10	1004.70

	1996	1997	1998	1999	2000	2001	2002	2003
CPI index	119.8	120.2	121.0	122.3	126.2	133.8	137.6	141.0
CPI % increase		0.3	0.7	1.1	3.2	3.0	2.8	2.5

TAG 7

Employment Growth Chart

Figure 6.1: Employment growth - industry comparisons - 1996 to 2002



TAG 8

**Dowrick, S., and Quiggin, J.,
“A Survey of the Literature on Minimum Wages”
February 2003**

A SURVEY OF THE LITERATURE ON MINIMUM WAGES

Steve Dowrick and John Quiggin*

Australian National University and University of Queensland

February 2003

* We acknowledge the valuable research assistance provided by Creina Day.

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Executive Summary

- The inequality of wages, and market incomes more generally, has increased in Australia over the past decade. The real value of the wage in low-pay occupations has not risen since the mid 1980s despite the high rate of growth in average labour productivity.
- A failure to increase minimum wages would contribute to further growth in inequality. To be justified, a decision to accept such growth in inequality would require convincing evidence that minimum-wage workers would benefit from substantial employment growth. No such evidence exists.
- Econometric studies on the impact of changes in minimum wages have yielded ambiguous results. The work of Card and Krueger, and subsequent studies using similar methods suggests that, in some cases, increases in minimum wages may have no effect, or even a positive effect, on unemployment.
- Where a negative relationship between minimum wages and labour demand has been found, estimated elasticities of demand have been well below 1, implying that minimum-wage workers as a group would lose from lower minimum wages. To the extent that any demand response to lower minimum wages takes the form of an increase in hours per worker, rather than an increase in employment, all minimum wage workers would be worse off, working longer hours for less total pay.
- We present evidence confirming previous findings that countries with regulated labour markets have been able to resist the global trend towards rising inequality without suffering either higher unemployment or lower employment than countries with deregulated labour markets.
- It follows that there is little reason to expect strong employment benefits from freezing minimum wages in nominal terms, that is, reducing minimum wages in real terms.
- Furthermore, in order to avoid further widening of inequality, and to avoid the exacerbation of poverty traps, minimum wages need to be indexed not to the Consumer Price Index but to the average or median wage – allowing workers in low-pay occupations to share in the benefits of rising productivity.

1. Background

Real wages in Australia have risen significantly over the past decade. Most measures of labour productivity have also risen significantly¹. By contrast, minimum award wages have remained broadly stable in real terms.

The result has been an increase in the dispersion of earnings. Since workers receiving minimum wages are unlikely to receive significant wage increases through enterprise bargaining, a failure to increase minimum wages in the Living Wage Case would reduce real minimum wages. An increase in line with inflation would hold real minimum wages stationary, but would imply a continued increase in the dispersion of earnings if median wages grow in line with productivity and the observed increase in salaries for senior executives persists.

The policy issue arising in the Living Wage Case is therefore to assess whether the further increase in dispersion of earnings that would arise from a reduction in real minimum award wages, in absolute terms or relative to the general wage level, is desirable. To assess this question it is necessary to consider the demand and supply of labour, the labour market outcomes arising from the interaction of labour supply and labour demand and the implications of those outcomes for the distribution of income.

¹ There is some controversy over the extent to which this increase in productivity reflects increases in the pace and intensity of work rather than improvements in technical efficiency, but this issue is irrelevant in the present context

2. Labour demand

2.1 A brief outline of theory

From the viewpoint of employers, labour is an input to production, and the cost of labour must be balanced against the value of additional output and the cost of substitute inputs. Hence, particularly in relation to demand for casual and unskilled labour, where long-term contracts are rare, the demand for labour may be analysed, to a large extent, in terms of the standard economic model of production by a profit-maximising firm.

The standard model is described by Hamermesh (1986). To capture the issues associated with minimum wages, it is useful to distinguish three types of labour, high-wage, low-wage and minimum-wage and to aggregate all other inputs together as 'capital'. The term 'unskilled' is applied to workers whose wages are determined by the minimum wage, while the term 'semi-skilled' is applied to workers with broadly similar characteristics, but with wages above the legal minimum.

The input of a given type of labour demanded by a firm is the product of the number of workers sought and the average hours of work offered by the firm. In general, responses to changes in wages and output prices will affect hours and employment in the same way. That is, in response to an increase in demand for their products, allowing higher prices to be charged, firms will seek to hire more workers and to increase average hours of work. Similarly, other things being equal, a reduction in hourly wages will result in an increase in both the firm's desired employment level and in the average hours of work.

In qualitative terms, the evidence suggests that capital and skilled labour are complements but that capital is a substitute for low-wage and minimum-wage labour. This means that, other things being equal, a reduction in the wages of low-wage and minimum-wage labour will tend to result in reduced investment in capital.

In most applications of the standard model, it is assumed that employers have no bargaining power in the labour market, and therefore take wages as being determined exogenously. In this case, the response of employers to a change in wages can be described in terms of an elasticity of demand, which will normally be negative.

In some cases, however, employers have significant bargaining power. For such employers, it is necessary to describe a demand curve for labour and to consider how it will change in response to exogenous shocks such as a change in minimum wages. In most cases, the existence of employer bargaining power will reduce the sensitivity of labour demand to wages. (Card 1992b, Dickens et al. 1995, Dickens et al. 1999)

A final question relates to the impact of changes in wages on aggregate output. Two main effects have been discussed in the literature.

Keynesian macroeconomists have argued that an increase in wages will stimulate aggregate demand, and therefore aggregate output, because workers have a higher marginal propensity to consume than recipients of capital income. A refinement of the argument takes into account the relatively higher propensity of recipients of capital income to consume imported, rather than domestically produced, goods and services.

A counter-argument, commonly referred to as the 'real wage overhang' became popular in Australia in the late 1970s. The core of the argument was that the reduction in the share of national income going to profits following the large wage increases of the early 1970s caused widespread business failures and thereby reduced aggregate output.

In current circumstances, it seems unlikely that either of these effects is large. The reliance on monetary policy to maintain stable levels of inflation means that changes in aggregate demand are likely to be offset by changes in interest rates. The real wage overhang, as measured by real unit labour costs, was eliminated in the 1980s and has not re-emerged. Since the effects are small and work in opposite directions, they can be disregarded in evaluating the impacts of changes in wages.

3. Labour supply

Labour demand can be analysed fairly satisfactorily in terms of the logic of cost minimisation and profit maximisation. By contrast, decisions about labour supply are central to the lives of potential workers and raise considerably more complex questions.

3.1 Determinants of labour supply

In the long run, the effective supply of labour is determined both by labour force decisions and decisions to invest in human capital. In terms of labour force participation, a rise in real wages can have opposing effects: an increased incentive to participate (the substitution effect) and an increase in demand for leisure (the income effect). In the case of a rise in the real value of the minimum wage, we expect the former effect to dominate, i.e. participation to rise, for reasons discussed below in the context of poverty traps.

Provided the rate of return is sufficient to justify the investment, decisions to invest in human capital by undertaking education will raise the long-term supply of effective labour by an amount which more than offsets the short-term effects of withdrawal from the labour force. Cubbitt and Heap (1999) argue that higher minimum wages are likely to encourage investment in human capital and therefore the creation of a 'high skill, high wage' labour force.

3.2 Poverty traps and minimum wages

In the discussion of social welfare policy in Australia, considerable attention has been paid to 'poverty traps' and 'effective marginal tax rates'. Poverty traps arise when, because of the interaction between the tax and social security system, the net income received by an individual or a household is little more than (or in extreme cases less than) the value of the social security payments that are foregone. The effective marginal tax rate is the proportion of any additional income that is either paid in tax or 'clawed back' through means-testing of social security benefits. Although the distinction is not always clear-cut, poverty traps affect decisions about whether to seek employment, while effective marginal tax rates affect decisions about the number of hours worked.

The current government has paid particular attention to this issue. For example, in introducing proposals for *A New Tax System*, Prime Minister John Howard commenced his remarks with the claim that the welfare reforms associated with the system 'remove many of the poverty traps that now exist in the social security system and will provide incentives for work and thereby continue the policies of the Government whereby we have sought to rebalance the incentives within the Australian community towards work and away from welfare dependency' (Howard 1998). Treasurer Peter Costello made similar arguments in a radio interview (Costello 1999).

Although attention has been focused on the role of the social security system in creating poverty traps, the other side of the equation is equally important. The lower are the wages and long-term prospects associated with available jobs, the more severe will be the resulting poverty traps.

One possible solution is to reduce welfare benefits, as has been done in the United States. Except in a booming economy, this approach will lead to a steady increase in poverty. If the value of welfare benefits is maintained in real terms, or increased in line with average earnings, a failure to make corresponding adjustments in minimum wages will lead to the exacerbation of poverty traps. Although the beneficial effects of social security benefits in offsetting the rise in the inequality of market incomes has been noted in previous decisions on Living Wage Claims, the associated outcome of increasingly severe poverty traps has not been noted.

4. Labour market outcomes

The simplest model of labour market outcomes, and one commonly used in discussion of minimum wages is a simple partial equilibrium model of supply and demand. In this model, an unregulated labour market will reach equilibrium at a wage where labour supply is exactly equal to labour demand. In equilibrium, there are no job vacancies and no involuntarily unemployed workers. In this simple model, the imposition of a minimum wage will have no effect if the minimum is below the market-clearing level. If the minimum wage is above the market-clearing level, labour supply will exceed labour demand.

4.1 Unemployment and vacancies

In more realistic models, unemployment and vacancies co-exist. The relationship between unemployment and vacancies is often represented graphically by the 'Beveridge curve'. The curve slopes downward, implying that, other things being equal, the number of unfilled vacancies declines as the rate of unemployment rises. Other things are not always equal however. As Layard, Nickell and Jackman (1991) observe, the increase in unemployment throughout the developed world in the 1970s and 1980s was associated with an outward shift in the Beveridge curve, implying that the rate of unemployment associated with a given level of vacancies rose during this period.

Broadly speaking, a shift in the Beveridge curve may arise for one of two main reasons. First, there may be a change in the structural rate of unemployment, determined by the mismatch between the skill levels and locations where labour is demanded and the corresponding characteristics of unemployed workers. Second, there may be a change in the efficiency of the process by which unemployed workers are matched to vacancies, for example because of a change in the job search strategies adopted by unemployed workers.

The co-existence of unemployment and vacancies has a number of implications. First, since some involuntary unemployment will always exist, the fact of involuntary unemployment does not imply that wages are 'too high', relative to some theoretical optimum. Second, the implications of changes in minimum wages are ambiguous.

Manning (1995) shows that, under some circumstances, increases in minimum wages can raise employment. A similar model is presented by Shepherd (2000).

In terms of the Beveridge curve, an exogenous reduction in real wages might be expected to increase the number of vacancies, leading to a shift along the curve in the direction of lower unemployment. However, it is also necessary to take account of possible induced shifts in the Beveridge curve. For example, a reduction in real wages may reduce search effort, leading to an outward shift in the Beveridge curve and offsetting any initial reduction in unemployment.

4.2 Welfare effects

Other things being equal, a 10 per cent wage reduction combined with a uniform increase in hours of less than 5 per cent would leave all workers worse off, since earnings would decline while hours increased. This is a reflection of the more general proposition that suppliers of any commodity will benefit from a small increase in prices, starting near the market-clearing level.

The main reason for suggesting that a reduction in minimum wages might benefit low-income workers is that changes in labour demand do not take the form of a uniform change in hours per worker. Rather, at least some of any increase in labour demand takes the form of an increase in the desired number of employees.

Assuming that an increase in demand translates into an increase in employment, the result will be an improvement in welfare for those workers newly employed. It is necessary to consider whether these benefits offset the reduction in welfare for low-wage workers in general.

More complex issues arise in models allowing for search and the coexistence of vacancies and unemployment. The general tendency of these more complex and more realistic models is to reinforce the presumption derived from the standard model, that a reduction in minimum wages will reduce the welfare of low-income workers, and may reduce the welfare of society as a whole. For example, Swinnerton (1996) gives conditions under which an increase in the minimum wage will increase welfare, regardless of the sign of its impact on employment.

4.3 Empirical evidence from country studies

Although the qualitative characterisation of labour demand set out above is widely accepted, most issues of interest turn on empirical estimates of parameters such as demand and supply elasticities. The question that has been studied most intensively is that of the aggregate demand for labour.

Hamermesh (1986) reports estimates of the elasticity of aggregate demand for labour hours, for given output levels, ranging from zero to -0.5. That is, a 10 per cent reduction in real wages for all workers would result in an increase in labour hours demanded of between 0 and 5 per cent. Hamermesh says elasticities of demand for unskilled labour hours are generally estimated towards the upper end of this range.

It is worth noting that even if the elasticity of demand for unskilled labour hours is at the upper end of the Hamermesh range, the total wage income accruing to unskilled workers will still rise in response to increases in minimum wages.

However, as has been argued above, in a model where labour markets do not clear, and where employers exert market power, supply effects will also be relevant. Studies estimating the impact of changes in minimum wages on employment generally yield estimates less negative than those cited by Hamermesh (1986). Moreover, Wellington (1991) found that the elasticity of employment demand with respect to minimum wages had declined over time in the United States.

Nevertheless, until the early 1990s, most studies found that changes in minimum wages had a negative impact on employment, typically with elasticities between -0.1 and -0.3. Estimates within this range included those of Neumark and Wascher (1992), who reported an elasticity of teenage employment with respect to the minimum wage of roughly -0.1. The results of Currie and Fallick (1996) imply an employment elasticity of around -0.3.

This apparent consensus was shaken by the work of Card and Krueger (1994, 1995a,b, 2000). Card and Krueger examined the impact of changes in the minimum wage on the employment of workers in the fast food industry. A major problem in studies of this kind is the need to distinguish the impact of changes in minimum wages from a variety of confounding factors. In particular, decisions about how to change minimum wages are usually made in the light of labour market conditions.

Card and Krueger (1994) overcame these problems by comparing the impact of changes in the Federal minimum wage in New Jersey with changes in the neighbouring state of Pennsylvania where state minimum wages were already above the Federal minimum and remained unchanged. Thus Pennsylvania played the role of a 'control' in a natural experiment. Card and Krueger found evidence that, on balance, the increase in the minimum wage raised employment.

The results of Card and Krueger were, not surprisingly, controversial. and strenuous efforts were made to reproduce or refute them. Critics have included Burkhauser, Couch and Wittenburg (2000), Neumark (2001), Neumark and Wascher (1995, 2000), Partridge and Partridge (1999a,b) and Williams and Mills (2001). Most of these critics endorse the view of Ehrenberg (1995) that, in the context of the simple partial equilibrium model above, 'the finding of a positive employment response to increases in minimum wages amounts to a denial of the "law of demand"'. This need not be the case, however, when we consider models incorporating mismatch between workers and vacancies, and / or employers' monopsony power (Card 1995) and / or human capital investment (Cubitt and Heap 1999).

Card and Krueger are supported by Dickens et al (1999), Lang and Kahn (1998) and Machin and Manning (1996, 1997). Dickens et al (1999) conclude:

Using this theoretical framework and empirically implementing the approaches that we favor to examine the effect of minimum wages in Great Britain, we find strong evidence that they have compressed the distribution of earnings and no evidence that they have reduced employment, the latter being a result that would be regarded as anomalous in a competitive model, but one that can easily be explained in our framework.

The details of estimation techniques are crucial in this debate. Mills et al (1999) illustrate the dependence of estimates of wage impacts on the technical details of estimation techniques. Although their own preferred estimates yield employment elasticities in the range -0.2 to -0.4, they also replicate many of the results of Card and Krueger (1994) using more recent data.

Indirect support for the Card–Krueger view comes from Blanchflower and Oswald (1994). Their work on the wage curve, showing that higher levels of unemployment tend to be associated with lower levels of wages for workers with given characteristics, appears to be inconsistent with the predictions of the simple labour

demand model preferred by most critics of Card and Krueger.

Further support for the Card-Krueger view comes from the OECD (1996) study which reports no significant correlation between the incidence of low pay and the unemployment rate of the low-skilled. They summarise the evidence as follows:

.. there is little solid evidence to suggest that countries where low-paid work is less prevalent have achieved this at the cost of higher unemployment rates and lower employment rates for the more vulnerable groups in the labour market, such as youth and women. (p.76)

Most of this evidence relates to developed countries. However, Raman (2001) examined the consequences of large changes in the Indonesian minimum wage, which was tripled in nominal terms, and doubled in real terms, in the early 1990s. He found that the changes 'had a modest impact on Indonesian labour market outcomes, increasing average wages by 5–15% and decreasing urban wage employment by 0–5%. To the extent that competition with low-tax, low-wage Asian economies is seen as relevant in Australian policy decisions, this evidence tends to undermine the case for a reduction in the real or relative value of minimum wages.

4.4 Minimum wages and poverty

The impact of changes in minimum wages on poverty depends not only on the impact on earnings for low-wage workers but also on the distribution of workers across households. As Richardson and Harding (1998a,b) have observed in the Australian context, many minimum wage workers are members of households with total incomes well above the poverty level; for example, teenage children of high-income parents. The same phenomenon has been observed in the United States, and has motivated a number of studies exploring the relationship between minimum wages and poverty.

Two main approaches have been used. Micro-simulation approaches seek to incorporate changes in wages, and assumed behavioural responses (often derived from econometric studies of labour supply and demand) into models representing the distribution of income across households. Reduced-form models such as those of Addison and Blackburn (1999) and Card and Krueger (1995a,b) estimate a statistical relationship between minimum wages and poverty, commonly using panel data for US states.

Both approaches have, in general, found that increases in minimum wages reduce

poverty. However, the strength of the findings has varied between studies. For example, Card and Krueger (1995) report negative, but not statistically significant relationships between minimum wages and poverty, while Addison and Blackburn report estimates that are both negative (higher minimum wages reduce poverty) and statistically significant.

4.5 Australian studies

There is a limited amount of evidence regarding elasticities of demand for labour in Australia. Freebairn (1998, pp124–5) notes

For Australia, there have been two sets of natural experiments which also suggest a low elasticity of demand for particular types of labour. The 20 per cent increase in relative wages for females in the early 1970s had no discernible effect on the gender composition of employment and unemployment (Gregory and Duncan 1981). Even though structural and trend effects also were at play, these effects were also in play in the 1960s before, and in the late 1970s after, the policy induced push for wage equality across the sexes. A second set of experiments concerns the large wage subsidies (up to 60 per cent) for the long-term unemployed as part of the 1994 *Working Nation* policies. Certainly many long term unemployed did enter these programs, and there was some reduction in employment of others (Chapman 1997). The temporary nature of these subsidies and their targeting to the more disadvantaged employees, real or perceived, as well as usual concerns about *ceteris paribus* makes it difficult to draw implications about the magnitudes of elasticities. Overall, there is a dearth of convincing estimates of the own- and cross-price elasticities of demand for Australian labour disaggregated by gender, age, skill level and occupation.

Addressing the unemployment problem more generally, Debelle and Vickery (1998) and Dungey and Pitchford (1998) estimate the elasticity of aggregate demand for hours with respect to the aggregate real wage at around 0.4. This is broadly consistent with the international evidence discussed above, but lower than a number of previous Australian estimates. Debelle and Vickery (1998) argue that this discrepancy arises in part because the elasticity of demand for labour in Australia has declined over time and in part because of specification problems in earlier studies.

A recently published study by Lewis and MacDonald (2002) suggests that the elasticity of labour demand with respect to the real wage is around 0.8. The Australian Chamber of Commerce and Industry used an earlier version of this paper

in its submission to the hearing of the 2002 Living Wage Claim (AIRC 2002, para.107). There are, however, errors in the paper which invalidate its conclusion.

Although the Lewis and MacDonald single-equation model is able to identify the elasticity of substitution between aggregate labour and capital for a given level of output, the authors are mistaken in their identification of the elasticity of demand for output; hence their study tells us nothing about the unconditional elasticity of demand for aggregate labour. Moreover, their expression for the elasticity of conditional labour demand is incorrectly stated to be with respect to the real wage. The only clear conclusion to be drawn from their study is that the output-constant elasticity of aggregate demand for labour, with respect to the nominal wage, is around -0.2 . These points are clarified in the Appendix.

A deficiency common to all of these Australian studies is that whilst they estimate the effects of wage movements on aggregate employment, they fail to distinguish between the impacts on different groups within the labour-force – particularly between the group of workers whose wages (or potential wages) are directly affected by safety net increases and those workers whose pay is above the minimum. These points are noted in AIRC (2002, para. 119-122). Nevertheless, in assessing the overall economic welfare of the community it is the impact on aggregate employment that is of prime concern.

4.6 Cross-country comparisons

During the 1980s and 1990s, a number of English-speaking countries undertook fairly radical changes in the regulation of labour markets. In the United Kingdom and New Zealand, these changes involved dismantling systems of collective bargaining in which unions had played a central role. The New Zealand reforms involved the creation of a system of individual employment contracts. Simple neoclassical models, in which unemployment is generated by wage rigidity, suggest that such policy changes should lead to substantial reductions in unemployment. Actual outcomes have been far less impressive. Although strongly supporting labour market reform, Wooden and Sloan (1998, p198) concede

Despite the differences between the UK (slow-track, but now relatively deregulated), New Zealand (faster track, also relatively deregulated) and Australia (slow track, partially deregulated), any differences in the labour market outcomes of the three

countries defy definite conclusions... While the labour market outcomes in Australia have been inferior to those in the UK and New Zealand in recent years, the overall differences between the three countries have not been dramatic.

In the United States, where unions and governments had always played a smaller role in labour markets than in other developed countries, formal changes were less important. The most significant developments were a freeze in minimum wages and the breakdown of implicit social understandings under which, for example, employers would refrain from large-scale retrenchments of staff except in emergency circumstances where the survival of the firm was at stake.

Particularly in the United States, these changes were widely seen as having permitted the development of a more flexible labour market, largely immune to the kinds of shocks associated with fluctuations in the business cycle. By 2000, the rate of unemployment in the United States had fallen to 3.9 per cent, the lowest rate observed in the United States since the 1960s and well below the average for the OECD as a whole.

Reductions in unemployment in the United Kingdom, though less dramatic, were also seen as evidence in favour of flexible labour markets and low minimum wages. The impression of the UK as a strong performer was enhanced by the Thatcher governments practice of reporting counts of claimants for unemployment benefits, rather than standardised ILO measures, as the preferred measure of unemployment rates. Since claimant counts arise from administrative data, they are subject to official manipulation, and the Thatcher government made numerous definitional changes, all of which had the effect of reducing the reported rate of unemployment. Although the Labour government elected in 1997 has stated its belief that ILO measures are superior, much discussion of British Labour market performance has focused on claimant counts.

Developments in the last few years have cast doubt on the claimed benefits of more flexible labour markets. The strong performance of the US economy in the late 1990s is now recognised as, at least in part, the outcome of an unsustainable 'bubble economy' rather than the result of flexible labour and product markets. The unemployment rate in the United States has risen to 5.7 per cent of the workforce.

Evidence on other developed countries also fails to support the hypothesis that

reductions in real minimum wages would enhance employment. Machin and Manning (1997), who examine data from France, the Netherlands, Spain and the United Kingdom, conclude that ‘we find little evidence that minimum wages have a bad effect on jobs and some evidence that they have an equalising impact on the distribution of income among families with someone in work.

5. Further Evidence on Low Pay, Wage Inequality and Employment in Australia and Comparator Countries

An increase in earnings inequality in the 1980s and 1990s was observed in some but not all OECD economies, and was particularly evident in English-speaking countries. Explanations ranged from the increase in trade with low-wage economies to a bias in technological change in favour of high-skilled workers. Freeman (1995) and other contributors to the *Journal of Economic Perspectives* provide an assessment of the competing explanations.

Here we add to the evidence by conducting our own analysis of recently released data.

5.1 International comparisons of real wage levels

We investigate whether Australian workers in low-wage occupations are paid more or less than their counterparts in comparable economies. There are two motives for such investigation, each requiring a different method of international comparison. We may be interested in international differences in labour costs. This requires comparison of nominal wages (and on-costs) at currency market exchange rates. Such comparisons may be relevant to the investment decisions of multi-national corporations. Second, there is concern for economic welfare. This requires that nominal wages be compared using purchasing power parities (PPP). The purchasing power of wages is a major component of economic welfare – even though other factors such as home production, access to public services and environmental amenity are also important.

Freeman and Oostendorp (2000) have compiled internationally comparable time-series data on occupational wages, covering over 150 countries and up to 161 occupations from 1983 to 1999. They report a ‘normalized’ average monthly wage in local currency for full-time male workers in each occupation, adjusting the underlying data on wages for part-time workers and for females.

We use this data selectively, comparing wages in Australian low-wage occupations with wages in the same occupations in countries that are not too dissimilar to Australia in terms of average real incomes, but where there is variation in the wage-setting system. The comparator countries can be roughly grouped according to the wage-setting systems (particularly in relation to low pay) that were in place over most

of the period 1983-99:

High regulation: Sweden, the Netherlands, Germany.

Low Regulation: USA, UK and New Zealand.

Wage-setting regimes have of course changed over time, with New Zealand moving to lower regulation and the UK moving more recently to more effective regulation over low pay. We have also included Japan as a comparator country, given its extensive trade links with Australia, although it is not clear how to rank Japan in terms of low-pay regulation.

We have chosen a group of occupations which are low-paid in Australia: Meat Packer, Sewing Machine Operator, Sawmill Sawyer, Cash Desk Cashier, Waiter and Chambermaid (Room Attendant). We refer to the workers in these occupations as ‘unskilled labour’, although various degrees of skill are of course required for each occupation. Our selection criteria are that these occupations have been in the lowest decile of earnings in Australia over most of the 1980s and 1990s, that they cover both the industrial and service sectors, and that comparable earnings data is available for most of the period in most of our comparator countries.²

The first comparison we make, concerning costs of employment, is illustrated in Figure 1. We have averaged real monthly earnings across all six low-pay occupations, converting nominal earnings into US\$ at the current exchange rate and deflating by the US consumer price index to obtain constant price comparisons of international wage costs.

We observe that unskilled labour is comparatively cheap in the less-regulated labour markets of the USA and New Zealand, and comparatively expensive in the more-regulated markets of Germany, the Netherlands and Sweden.

In Australia the average cost of unskilled labour was higher in the 1983-87 period than in any of the other countries, but subsequent wage-cost increases (due to wage rises and / or currency appreciation) were less than those experienced in the more-regulated economies. By the second half of the 1990s, the wage-cost of Australian unskilled labour was significantly below that of Japan, Germany and Sweden; about

² Missing data account for the missing observations in Figures 1-4.

the same as the UK and still significantly higher than in the USA.

Turning to real income comparisons, using PPP rates of exchange, we find that Australians working in low-pay occupations are better off than their counterparts in most of the comparator countries. Figure 2 displays both the exchange rate (labelled 'XR') and the PPP comparisons for a single occupation – Waiter – for 1990-92 and for 1995-98. Foreign wages are expressed as a ratio with respect to Australian wages. Only for the Netherlands, 1990-92, do we observe higher real income than that obtained in Australia. Moreover, Australia was more successful than most of the other countries in maintaining the purchasing power of its lowest paid workers over the course of the 1990s – the PPP income ratio falls for every country except the UK and Japan.

5.2 Trends in Australian real wage levels, productivity and inequality

We turn to a closer look at the purchasing power of wages in Australia's low-pay occupations. Figures 3 and 4 show for all six occupations the real value of wages, deflated by the CPI. The pattern is very similar for low-pay workers in both the services sector and the manufacturing sector: A decline in the real value of the wage between 1983 and 1988 (the period of centralised wage restraint under the Prices and Incomes Accord) was followed by fluctuations around a constant level.³ The average real monthly wage in the 1990s was A\$ 2000 at 1995 prices. At the price level of 2002, this translates into monthly earnings of \$2370, or \$547 per week.

Whilst Australians in low-pay jobs were able, on average, to maintain the real purchasing power of their earnings over the 1990s, they were not able to share in the growing prosperity of the decade.

The close relationship between average real wages and labour productivity is analysed by Ball & Moffitt (2001). We expect real wages to grow on average at the same rate as productivity, since any excess of productivity over wage growth results in a declining share of wages in national income (or vice versa), which is not sustainable

³ Of course, a constant average can disguise gains and losses amongst sub-groups of the low-paid. The OECD Employment Outlook (1996, Chart 3.3) shows that over the period 1985-95, low-paid Australian men (the lowest decile of male earners) experienced falling real wages, whilst low-paid Australian women experienced rising real wages.

in the long run. This relationship can be explained as follows. The rate of growth of real national income is equal to the sum of the rate of growth of the workforce and the rate of growth of labour productivity (real output per worker). The rate of growth of aggregate real wages is equal to the sum of the rate of growth of the workforce and the rate of growth of average real wages. The wage share will be constant if and only if aggregate real wages grow at the same rate as real national income and this will be true if and only if average real wages grow at the same rate as labour productivity.

In Figure 5 we plot the annual growth rates of labour productivity and of average real earnings (for all workers, not just those in low-pay occupations) over three decades. Productivity growth averaged close to three percent per year in the 1990s. Average real earnings (deflated here by the price of output) also grew strongly over the 1990s. Figure 6 charts the share of wages in GDP at factor cost for the past thirty years. After rising strongly in the 1970s and declining in the 1980s, the wage-share has indeed been fairly constant for more than a decade. The average wage-share over the 1990s was 54% - its lowest level since 1970.

Given that average real wages were rising strongly over the 1990s, whilst workers in low-pay occupations were unable to gain any real wage increase, we are not surprised to observe an increase in the inequality of earnings - as illustrated in Figure 7. We use data from two sources: the measures reported in the OECD Employment Outlook are derived from the Australian Bureau of Statistics August Household Survey; the second series come from the ABS May Employee Survey. The household survey data suggest that the rise in earnings inequality occurred amongst higher income earners alone, with no change in the ratio between the lowest decile and the median. On the other hand, the employee survey data suggest that inequality was rising in both the upper and lower halves of the earnings distribution.

5.3 Inequality trends in comparator countries

An increase in earnings inequality in the 1980s and 1990s was observed in many OECD economies, with explanations ranging from the increase in trade with low-wage economies to a bias in technological change in favour of high-skilled workers. We investigate whether these global trends have been mediated by countries' choice of wage-regulation.

Panel A of Figure 8 shows inequality in the upper half of the earnings distribution as

measured by the ratio of the top decile to the median. Our data extend from 1979 to 1985. We see that not only is upper-income inequality lower in the high-regulation economies of Sweden, Germany and the Netherlands, but also these economies show little evidence of a rising trend. On the other hand, inequality was both high and increasing in the USA and the UK. Japanese inequality has been relatively stable since the mid 1980s, whilst upper-income inequality rose significantly in both Australia and New Zealand.

Lower-income inequality is measured by the ratio of the bottom decile to median earnings, displayed in Panel B of Figure 8. Amongst the high regulation economies, inequality has been low and fairly stable in Sweden and the Netherlands and falling in Germany. By way of contrast, lower-income inequality has been both high and increasing in New Zealand, the UK and the USA.

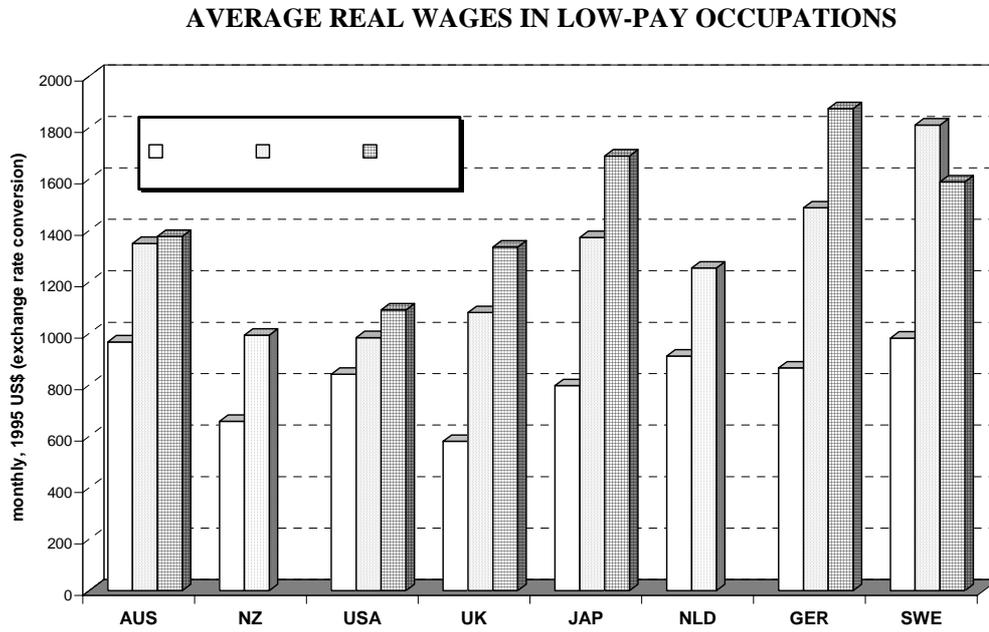
5.4 Minimum wages, inequality and employment

Countries with regulated labour markets have been largely successful in resisting the fall in real wages amongst low-pay occupations that has been experienced in the USA. They have also been successful in avoiding the rise in earnings inequality that has occurred in the UK, New Zealand and the USA. Australia joined Sweden, Germany and the Netherlands in resisting the tendency towards low-wage cuts and rising lower-income inequality.

Critics of minimum-wage legislation argue that it causes involuntary unemployment. There are well-known variations across countries in the measurement of unemployment, particularly in relation to people who are classified as out of the labour force (hence not classed as unemployed) due to illness, disability, retirement or inability to find work. Accordingly, we use the OECD standardised rate of unemployment and compare this with the ratio of median to lowest decile earnings in our comparator countries. We find that there is no significant correlation, as illustrated in Figure 9. We also examine the overall rate of employment, measured as a proportion of the total population, and find that this is uncorrelated with earnings inequality, as illustrated in Figure 10.

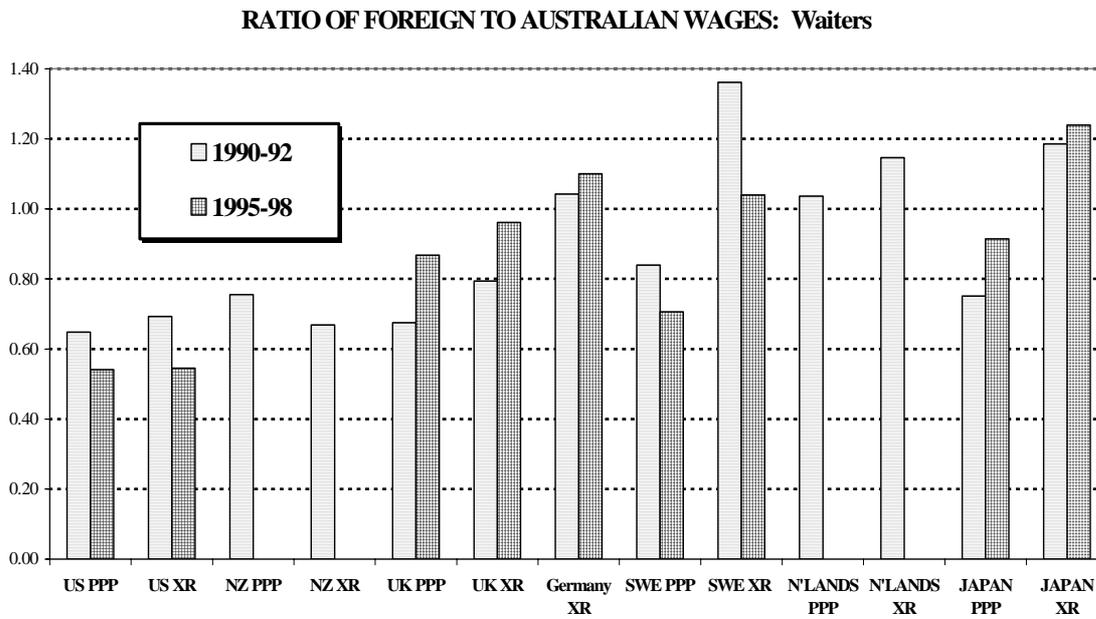
6. FIGURES

FIGURE 1



Source: Freeman and Oosterdorp Database

FIGURE 2



Source: Freeman and Oosterdorp Database

FIGURE 3

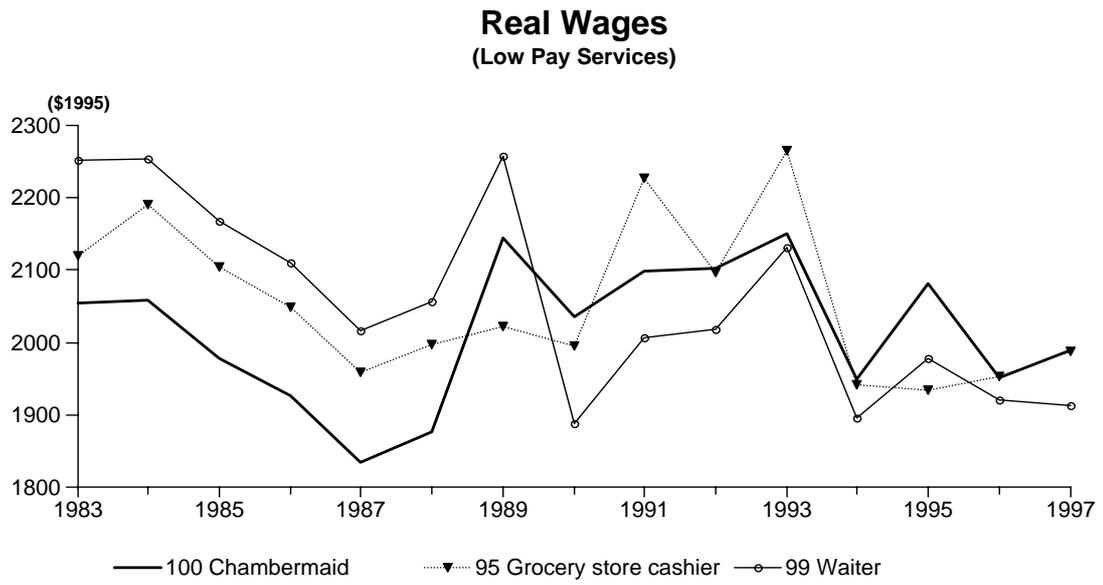


FIGURE 4

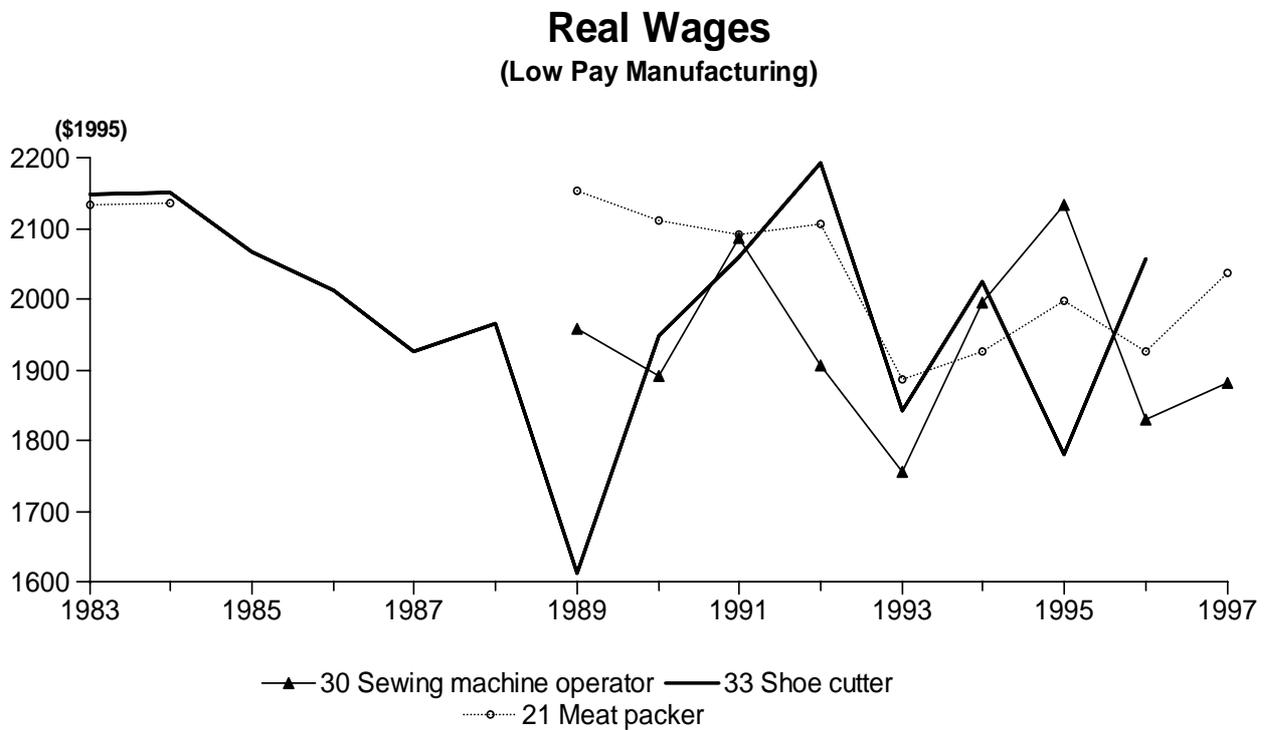
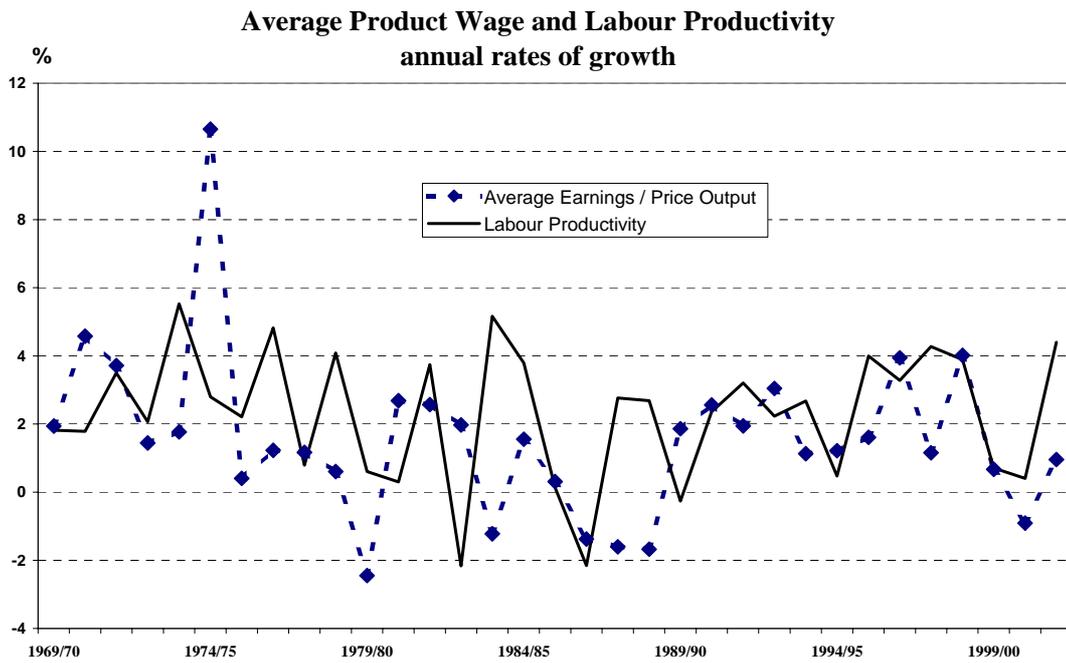


FIGURE 5



Source: TRYM Database and ABS National Accounts

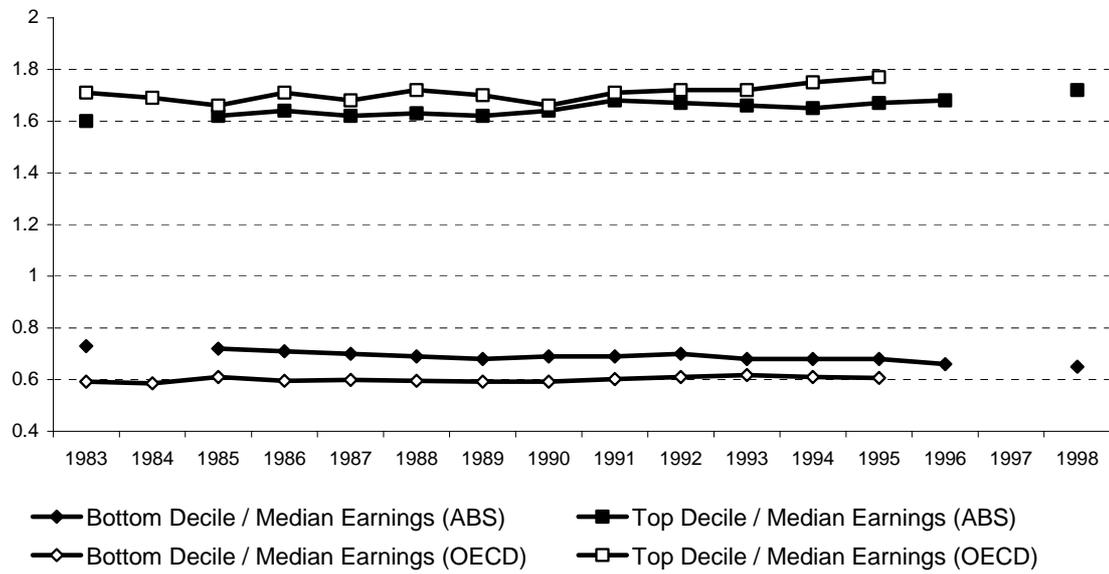
FIGURE 6



Source: TRYM Database

FIGURE 7

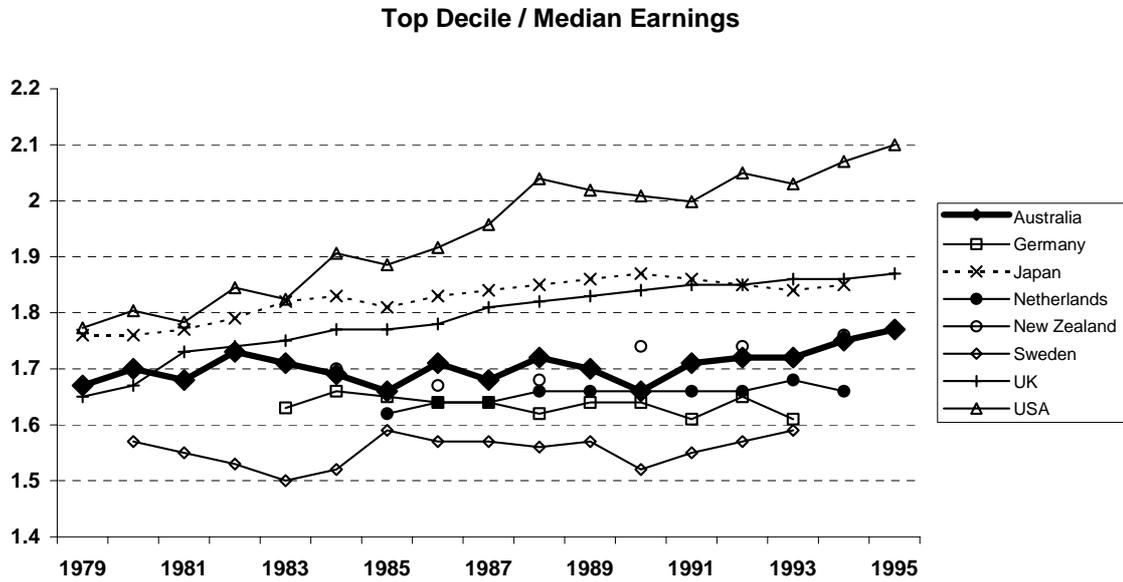
Earnings Inequality (Australia)



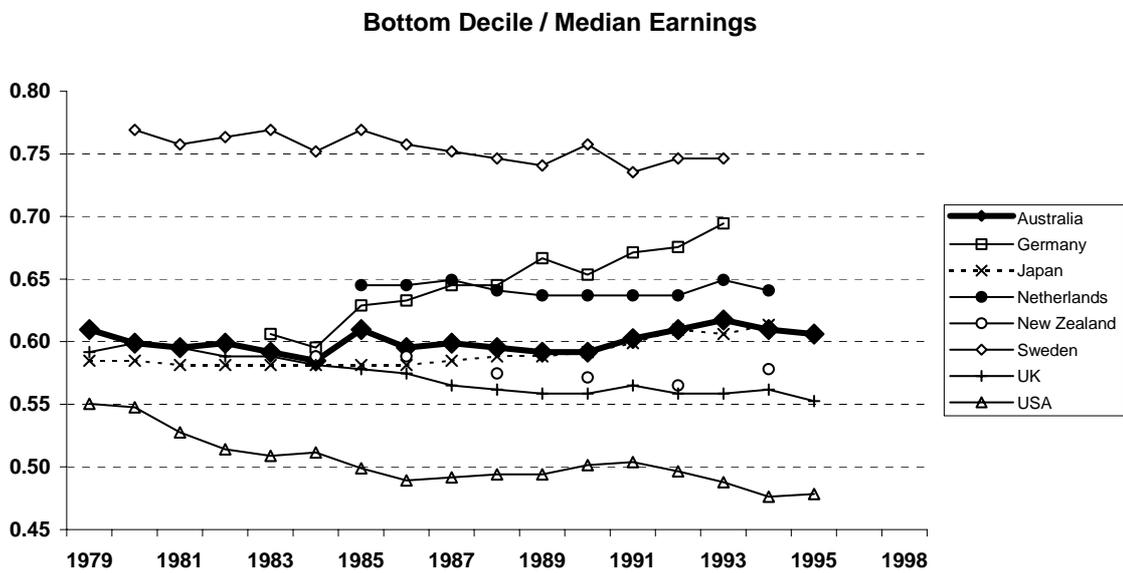
Source: ABS August Household Survey and OECD Employment Outlook (1996)

FIGURE 8: EARNINGS INEQUALITY IN EIGHT OECD COUNTRIES

8A



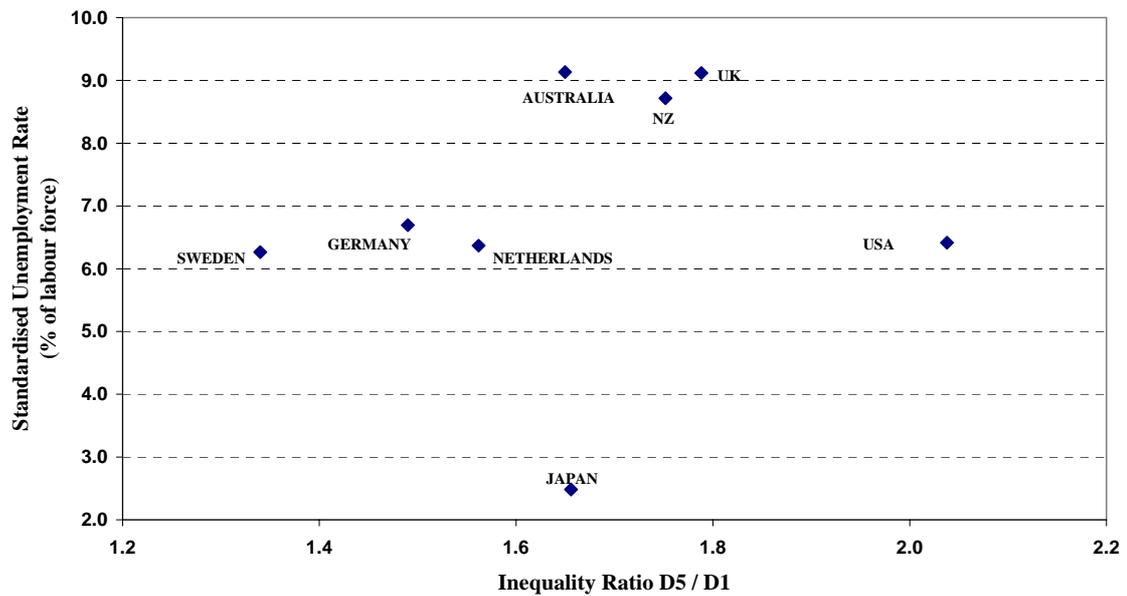
8B



Source: OECD Employment Outlook (1996)

FIGURE 9

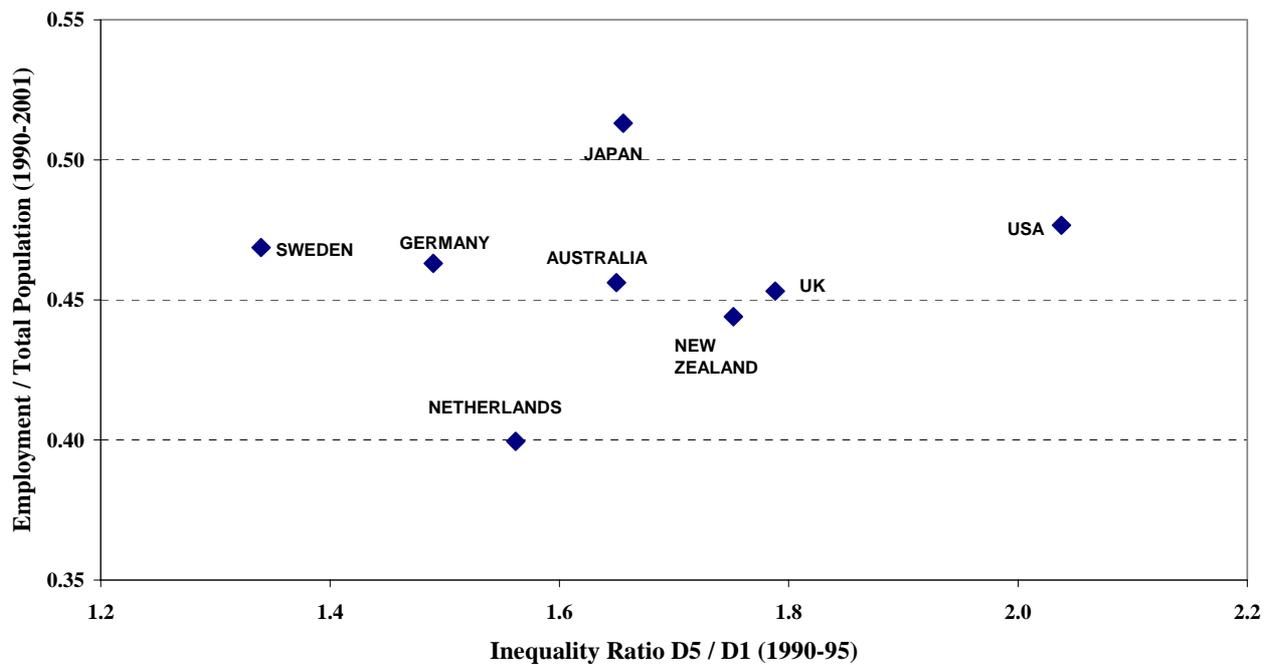
Low-Pay Inequality and Unemployment 1990-95



Source: OECD Economic Outlook 2001 and 1996

FIGURE 10

LOW-PAY INEQUALITY AND EMPLOYMENT



Source: OECD Economic Outlook Database (December 2002) and Economic Outlook 1996

7. Appendix

Modelling the elasticity of aggregate demand for labour from a CES production function with technical progress: a critique of the Lewis and MacDonald approach

7.1 Derivation of the conditional labour demand function

We start with a more general treatment than that provided by Lewis and MacDonald in the derivation of aggregate labour demand, allowing for parametric returns to scale and explicitly modelling Hicks-neutral technical change. Aggregate output, Q_t , at time t is given by:

$$Q_t = A_t \left[bL_t^\rho + (1-b)K_t^\rho \right]^{h/\rho} ; \quad \rho < 1; \quad h > 0; \quad (1)$$
$$\sigma \equiv 1/(1 - \rho)$$

A represents the level of technology. The elasticity of substitution between capital, K , and labour, L , is σ which is defined to be strictly positive. The production function is homogeneous of degree h with respect to L and K . For some of our analysis we follow Lewis and MacDonald in assuming constant returns to scale, $h=1$.

Derivation of labour demand depends on the specification of price setting for the nominal wage, W , the rental price of capital, R , and the output price P . We distinguish between the micro-level of decision-making by the representative firm and the macro-economic relationships that we are trying to estimate. If the representative firm is (vanishingly) small relative to the total market, factor prices and output prices are unaffected by its marginal decisions. There is a problem in the case of constant returns to scale technology where the profit-maximising output of a price-taking firm is infinite if the output price exceeds unit cost and indeterminate when price equals unit cost. Nevertheless, in order to replicate the Lewis and MacDonald results as closely as we can, we assume price-taking behaviour by the representative firm. At the micro level the labour demand of the firm is conditional on the (arbitrary) level of output.

Lewis and MacDonald equate the marginal product of labour to the real wage - implying that they are analysing a representative firm which behaves as a profit-maximiser and a price-taker in both factor and output markets.

Omitting time subscripts, the marginal product of labour is:

$$\frac{\partial Q}{\partial L} = \frac{bh}{L^{1-\rho}} A \left[bL^\rho + (1-b)K^\rho \right]^{\frac{h-\rho}{\rho}} = \frac{bh}{L^{1-\rho}} A^{\frac{\rho}{h}} \left[Q \right]^{\frac{h-\rho}{h}} \quad (2)$$

Setting the marginal product to equal the real wage and taking logarithms gives the following conditional labour demand equation – conditioning on the level of output.

$$\ln L[W, P, Q, A] = \frac{1}{1-\rho} \ln(hb) - \frac{1}{1-\rho} \ln\left(\frac{W}{P}\right) + \frac{h-\rho}{h(1-\rho)} \ln Q + \frac{\rho}{h(1-\rho)} \ln A \quad (3)$$

For consistency with Lewis and MacDonald we consider the case where the technology exhibits constant returns to scale, $h=1$. In this case, substituting $\sigma=1/(1-\rho)$, equation (3) reduces to the same expression as Lewis and MacDonald's equation (5), with the addition of the technology term.

$$\ln L[W, P, Q, A] = \sigma \ln b - \sigma \ln W/P + \ln Q - (1-\sigma) \ln A \quad (4)$$

We proceed to derive the elasticity of demand for aggregate labour. In the macroeconomic context we must clarify assumptions about the pricing of output and about aggregate demand for output. Given constant returns to scale, marginal cost equals average cost which is a function of factor input prices and technology, independent of scale. Formally, we define the total cost function as $C(Q, \mathbf{W}, A)$ and the unit cost function as $c(\mathbf{W}, A)$, where the vector of factor prices is $\mathbf{W}=(W,R)$. Competition and free entry imply that the price of output equals unit cost. These assumptions on technology and pricing allow us to derive the following relationships:

$$P(Q, \mathbf{W}, A) = \frac{C(Q, \mathbf{W}, A)}{Q} = c(\mathbf{W}, A) \quad (5)$$

$$\frac{\partial \ln P(Q, \mathbf{W}, A)}{\partial \ln W} = \frac{\partial C(Q, \mathbf{W}, A)}{\partial W} \frac{W}{C} = \frac{LW}{C} \equiv s \quad (6)$$

The latter result, making use of Shephard's Lemma, tells us that the partial elasticity of price with respect to the nominal wage is equal to the share of labour in costs.

Substituting equation (5) into (4), we can rewrite the conditional macro labour demand function as:

$$\ln L[W, Q, A] = \sigma \ln b - \sigma [\ln W - \ln P(W, A)] + \ln Q [P(W, A)] - (1-\sigma) \ln A \quad (7)$$

where we have suppressed the price of capital.

We assume that output in macro-equilibrium is determined by a well-defined downward-sloping aggregate demand function, $Q(P)$, with elasticity $-\eta$:

$$\frac{d \ln Q(P)}{d \ln P} \equiv \frac{dQ}{dP} \frac{P}{Q} = -\eta \quad (8)$$

We have said nothing so far about wage determination. It might, for example, be determined by supply and demand in a competitive labour market; or it might be determined by a legislated minimum wage. Following Lewis and MacDonald we treat it as an exogenous variable. Total differentiation of (7) with respect to $\ln W$, allowing the aggregate price level to vary, gives the total elasticity of aggregate labour demand with respect to the nominal wage:

$$\begin{aligned} \frac{d \ln L[W, Q, A]}{d \ln W} &= -\sigma \left[1 - \frac{\partial \ln P(W, A)}{\partial \ln W_t} \right] + \frac{d \ln Q}{d \ln P} \frac{d \ln P(W, A)}{d \ln W} \\ &= -\sigma(1-s) - \eta s \end{aligned} \quad (9)$$

Lewis and MacDonald claim that “the output constant elasticity of demand with respect to real wages” (p.21, emphasis added) is given by the expression:

$$\text{L \& M: } e = -(1-s)\sigma \quad (10)$$

But this expression is in fact the partial elasticity of aggregate labour demand with respect to the nominal wage – as given by the first term in (9) – holding output constant.

We find a similar error in Lewis and MacDonald’s result on the total elasticity of labour demand. They state that “the elasticity of demand with respect to real wages” (p.21, emphasis added) is given by the expression:

$$\text{L \& M: } e' = -(1-s)\sigma - s\eta \quad (11)$$

We see from (9) that this is in fact the unconditional elasticity of aggregate demand for labour with respect to the nominal wage.

7.2 Interpreting coefficients from a conditional labour demand regression

Lewis and MacDonald propose a generic regression equation of the form:

$$\ln L_t = \alpha_0 + \alpha_1 \ln \left(\frac{W}{P} \right)_t + \alpha_2 \ln Q_t + \alpha_3 t + u_t \quad (12)$$

(equation 6 in their paper) which they estimate using quarterly data on aggregate employment⁴, average real wages and aggregate output. However, we disagree with their interpretation of the regression coefficient α_2 .

Comparing equations (3) and (12) we see that α_2 is a technological parameter, combining the effects of returns to scale (h) and factor substitution (ρ):

$$\begin{aligned}\alpha_2 &= \frac{h - \rho}{h(1 - \rho)} \\ &= 1 \quad \text{if } h = 1\end{aligned}\tag{13}$$

However, Lewis and MacDonald confuse this term with the elasticity of aggregate demand:

“ η is the scale effect arising from output expanding as costs of production fall. η thus represents the elasticity of demand for aggregate output, α_2 .” (p.21, para. 3)

This statement confounds two quite separate economic concepts: i) the effect of a given change in output on input demand, α_2 , which is a feature of the supply technology; and ii) the elasticity of demand for aggregate output, η , which is a feature of the demand side of the economy. This confusion is repeated in their conclusion where they claim that:

“ η is the scale effect arising from output expanding as costs of production fall, and for the CES case η is equal to one.” (p. 28, para. 2)

In the case of constant returns to scale CES technology, $h=1$, it is evident that the coefficient α_2 in equations (12) and (13) equals unity. this implies that labour demand expands in direct proportion to output, holding the wage constant. Lewis and MacDonald report that the hypothesis that $\alpha_2=1$ cannot be rejected at conventional levels of significance – but this confirms constant returns to scale in production rather than unit elasticity of the aggregate demand curve. Their estimate of the total elasticity of demand for labour (as -0.8) relies on the mistaken identification of α_2 as η .

⁴ They also estimate their model using data on aggregate hours of work, but they report that the coefficient on output is ‘unacceptably large’ and that the model fails tests for stability.

What we can learn from the Lewis and MacDonald estimation is the output-constant elasticity of labour demand. They report a value of $\alpha_1 = -0.45$ which they correctly identify as an estimate of the elasticity of substitution, σ . Correctly interpreting (10), and assuming a labour share of 0.6, yields an estimate of -0.18 for the output-constant elasticity of aggregate demand for labour with respect to the nominal wage.

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TAG 9

Newspaper Articles:

**“Fast and Fastidious” – Sydney Morning Herald, Tuesday 7
January 2003, p.14.**

**“Yuk! And May all your Trouble be Wee Ones” – The Age,
Tuesday 14 January 2003, p.8.**

**“Fertility Crisis: Why you can’t Blame the Blokes” – The Age,
17 January 2003, Opinion page.**

A TIME AND A PLACE 5.30PM - FOUR SEASONS HOTEL

Fast and fastidious

When it comes to tidying up, it's all over in two minutes. By **Anthony Dennis**.

White is might in the rarefied milieu of the international five-star hotel. White towels. White sheets. White bathrobes. Even white goose and grey duck down stuffed pillows, for heaven's sake. In short, fluffy rules, scratchy sucks.

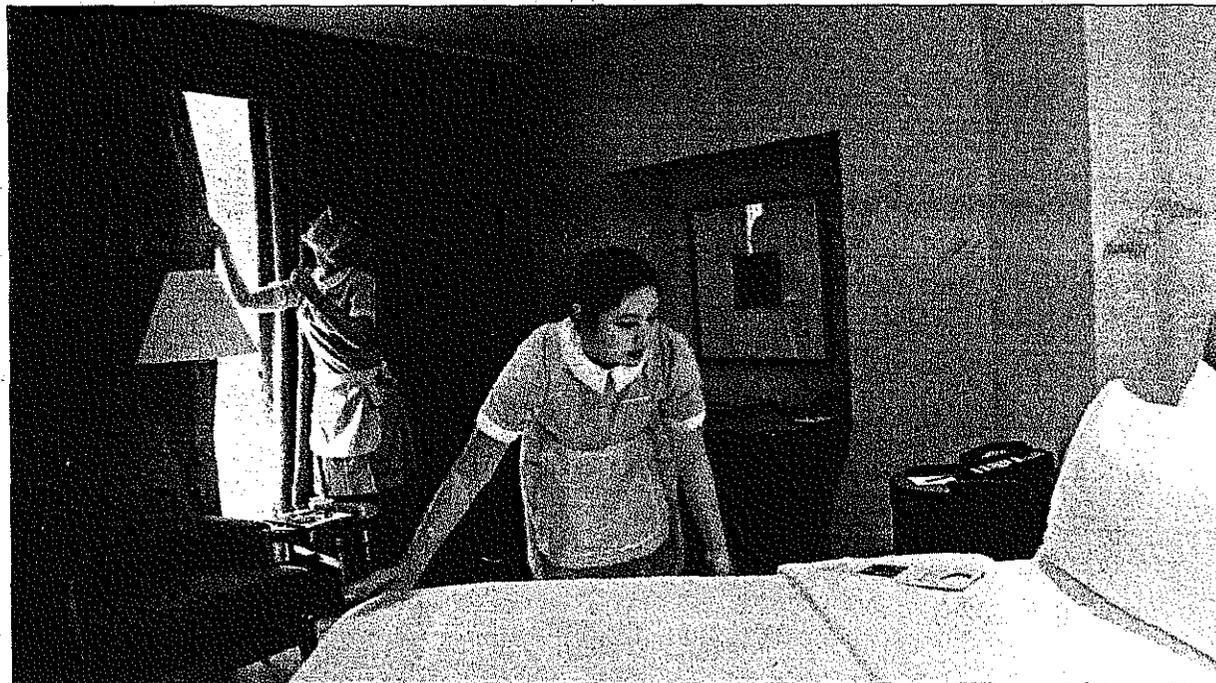
At the prestigious Four Seasons Hotel Sydney (formerly The Regent of Sydney) in The Rocks, "back of house" is the antithesis of the elegant public face. It's a little like strolling between sets on *Upstairs Downstairs*. Here lies the engine of the hotel.

Getting the basics right – or should that be white? – is one of the ways that a luxury hotel keeps its stars intact. A sign in the housekeeping department reads: "PM Standard: Towels and robes will be in excellent condition, fluffy, absorbent and colour-consistent."

The hotel is in transition. As day becomes night, a new set of demands and guidelines comes into operation; in the past few hours, the evening shift has started replacing the day staff.

Tonight there are 510 guests in-house: 31 per cent of them from Asia, 27.66 from the US, 21.66 from Australia, 7 per cent from Europe hotel and 2 per cent Kiwi. Early- to mid-summer in Sydney can be a quieter time; peak seasons at the Four Seasons are February-April and September-November.

At this time of the day, the hotel's "turndown" service begins in earnest. Pairs of female housekeepers in immaculate grey and white pinafores begin to circulate through the establishment, floor-by-floor, plumping pillows, checking towels and bathrobes for the crucial fluffiness factor, replenishing supplies of ice, removing bedspreads and placing them in special duffel-like bags.



Plump it up ... housekeepers observe 19 "core standards" during each evening's turndown at the Four Seasons.

Photo: Narelle Autio

Such is the precise nature of hotel practice that there are 19 "core standards" for housekeepers to follow for turndown, procedures replicated in the Four Season chain's hotels around the world. No tacky chocolates on pillows.

This is a strictly no-nonsense, fastidious approach. One of the rules is that the last turndown should be completed no later than 9.30pm, when jet-lagged guests are starting to turn in for the night.

Six pairs of housekeepers take four

hours to attend to 80 rooms per team. Five-thirty is as good a time as any to prepare the room for evening, with many guests still out and about, sightseeing or on business.

When you're paying a princely sum for a room, the royal touches matter, such as returning at the end of the day to a room that's tidier than when you left it.

Two housekeepers demonstrate the approved Four Seasons method of entering a guest room. First, ring the bell.

Wait 60 seconds and announce "housekeeping". If the door's not answered, wait another 60 seconds, then enter.

Once inside, the housekeepers usually spend just two to two-and-a-half minutes sprucing up the room. They even ensure that the clock-radio is in the right spot on the bedside table: turned towards the guest so he or she can see it. Then, before you can say "fluffy, absorbent and colour-consistent", they're off to the next room: 79 to go.

Yuk! And may all your troubles be wee ones

So you think creche work must be child's play. **Danny Katz** had a crack at it, and came to the conclusion that it was definitely not his cup of tea.

Creches are places where parents leave their kids for the day because they have to go to work, or do their study, or they just want a rest from parenting for a few hours.

The word "creche" originally comes from French, meaning "Please take my kid, please give me a break, **JUST TAKE THE LITTLE BUGGER OFF MY HANDS BECAUSE I CAN'T HANDLE IT ANY MORE.** I'll be back at five. Bye".

In the second part of my series on unusual jobs, I decided to look at workers in a creche: I thought this might be a good job for me because I have always had a natural affinity with children. I think it started in my childhood. So this week I spent a day working in a creche, and it was really quite a shock. I always thought child-care workers had it easy, just lounging around all day drinking cups of tea, having a laugh, and getting up every now and then to stop a baby from crawling into the electrical circuit station-box.

But it wasn't like that at all.

As soon as I walked into the place, the first thing that hit me was the smell — one part Vegemite, two parts socks, and 476 parts nappy bin. Then I had to face the children. There were kids running around everywhere, all of them with big bubbles of fluorescent green snot peeking in and out of their noses with every breath.

A woman named Trish showed me around the place. She worked in the creche with eight other women, all of them dressed in the traditional costume of the creche worker — comfortable jeans, sensible shoes, and disposable T-shirt.

Trish explained that there was no time for sitting around, or relaxing, or sipping tea. "Very few people understand how demanding creche work is," she said. "We have to deal every day with more than 40 kids. We have to do unpaid work at home to prepare for the next day. There's difficult parents to deal with, there's 7.30 starts to the morning, and we're always coming down with illnesses and have to take time off."

Apparently, creches are like



NINE LIVES

mini-CSIRO laboratories, where all the world's worst bacteria are bred on the bodies of children, then passed around in a sweet caring, sharing kind of way.

Trish got me working immediately. I had to learn to feed the children, and I had to learn to clean the children, and even worse than all that, I **HAD TO LEARN TO PLAY WITH THE CHILDREN.**

She taught me how to get down on my hands and knees and play kiddie games, and paint kiddie pictures, and sing kiddie songs — really weird songs about riding cock-horses to Banbury Cross.

The work was back-breaking and mind-numbing and megatédious. At one stage a little girl named Millie came up to me and said "You like Plato?" and I thought to myself: "Hooray! Finally someone wants to have an intelligent discussion about

Plato and his Theory of Dualism."

But it turns out, she didn't want Greek philosophy at all, but we did roll a couple of really good snakes.

We worked hard until noon and then the kids had their nap, so we were able to sit down for half an hour and catch our breaths — while we filled out a daily report for each kid, including a medical status check-list, a social development assessment, and a cognitive motor-skill evaluation according to the theories of Jean Piaget.

But I still managed to chat to Trish while we wrote. I asked her why there were hardly any men working in this business, and she said: "It's probably because the pay is so bad. The average wage for a child-care worker is \$18,000 a year, and that's after two years of training in psychology, nutrition and social science."

She told me about the long hours, the high responsibility, the lack of union support. "There's no one out there helping us," she said. "So if we want something, we have to get it ourselves."

I started sensing a lot of frustration here. These creche workers were not wishy-washy soft-spoken motherly types at all. They were tough political activists, constantly having to

fight the government for better pay and working conditions.

Trish told me they wanted a nausea allowance, like garbage-men and nurses, to cover the discomfort of working with poo and pee and vomit. I told her they should get a nausea allowance just having to listen to that Patsy Biscoe cassette every day.

The creche closed at 6.30 at night, and I said goodbye to Trish, then went home exhausted, drained, and with a mild rash on my arm that was either mumps or chicken pox or Asian bovine disease.

Trish told me they wanted a nausea allowance to cover the discomfort of working with poo and pee and vomit.

This job was NOT for me. These poorly paid women were doing work that most of us couldn't do for 15 minutes — not without gagging.

Then I showered, shampooed, and sterilised all my clothes in hospital-grade disinfectant. And I spent the rest of the night scraping kiddie snot off my shoes. You can only get that stuff off with lighter fluid.

NEXT: Trevor, the late-night radio announcer

Fertility crisis: why you can't blame the blokes

BOB BIRRELL

The key drop in fertility is among low-income people. That's not a commitment issue.

Children barely appear in the lives of young men today. Slightly fewer than one in three men aged 30-34 have had a child by the age of 30. For their fathers' generation it was the reverse: two-thirds had had a child by 30.

When the journal *People and Place* published these findings last week, some people welcomed them for drawing attention to the role of men in explaining Australia's below-replacement fertility rate. But part of the reaction was censorious. Media and talkback commentary on the issue included accusations that men no longer wanted to take on fatherhood. One typical (off-camera) comment from a young female TV interviewer was that her newsroom was full of ambitious, tertiary-educated women who could not find men interested in serious relationships. Young men were said to prefer their increased sexual opportunities over long-term commitment — with important consequences for Australia's fertility rates.

Much of this kind of comment comes from the ranks of tertiary-educated women, and it is no surprise that they link the fertility downturn to a lack of willing men. Nearly one in four women aged 25-29 holds a bachelor degree or a higher qualification, as do 21 per cent of women aged 30-34. The equivalent male share is far lower. About 20 per cent more women aged in their late 20s and early 30s have degrees than men in the same age group.

Since tertiary-educated women are much more likely to delay entering marriage than other women, there are large numbers of older, educated women in the partnering marketplace. Because they tend to look for men who match their qualifications, the competition is tough.

Perhaps some middle-class men do exploit their bargaining power. But this is not why Australia's fertility rate is reducing. The decline in fertility is most significant among men and women who are *not* tertiary-educated. Whereas this latter group was once very fertile, its rate of partnering is now converging towards that of tertiary educated men and women.

In 2001, nearly 40 per cent of men aged 30-34 and 60 per cent of men aged 25-29 were not married or in a de facto partnership. Since partnership usually precedes parenthood, this convergence towards ever-lower partnering rates is the key to understanding the decline in Australia's fertility rate.

It could be argued that this decline reflects the unwillingness of low-income men to take on family responsibilities. But it is doubtful whether most of them chose to do so because they were enjoying their manly freedom. Rather, the explanation has more to do with the economic circumstances young men face.

The advantages of being in a secure, loving relationship are compelling, and especially so for those of modest circumstances. By sharing a household, a couple on moderate incomes can obtain much higher-quality housing. Buying a house and maintaining a mortgage usually requires two

incomes. Sharing also brings companionship and status.

What then explains the reluctance to partner? It partly reflects female attitudes. Women across the social spectrum can afford to be choosier these days. Most have their own income and so are not under the same pressure to partner as in the past. Men on low or insecure incomes do not rate highly. This is one reason why such men are much less likely to be partnered than those with higher incomes.

Equally, men on low or insecure incomes are likely to be wary of taking on the responsibility of marriage and parenthood.

Many men are poor — in 2001, 42 per cent of men aged 25-44 earned less than \$32,000 a year. Only two-thirds of men in this age group were in full-time work. Young men considering marriage could hardly be unaware of the risks of marital breakdown or the long-term costs, especially when children

are involved. They may also be dimly aware that marital breakdown is more likely among lower than higher income couples.

Quite properly, the Australian Government requires men to pay maintenance to their former partners and children. The Child Support Agency enforces, where necessary, payments until the child reaches 18. This is done to a strict formula involving a payment of 18 per cent of the payer's taxable income for the first child, less various allowances. By mid-2001, 612,332 payers were on the agency's book, almost all of whom were men. The number has grown by 30,000-40,000 a year over the past decade.

In these circumstances, single males might be casualties, not beneficiaries, of the marriage marketplace.

Sadly, the prospects of partnership do not improve with age. For men in their 30s nearly half the single women of the same age are single parents. This situation naturally complicates the partnering process.

Change will not be easy. Low partnering levels are no longer the sole province of educated men and women.

A few thousand dollars in baby bonuses or greater subsidies for child minding will not do the trick. Much more dramatic change is required to achieve an upturn in Australia's fertility rate.

Bob Birrell is director of the Centre for Population and Urban Research at Monash University, which publishes *People and Place*.



Change will not be easy. Low partnering levels are no longer the sole province of educated men and women.

TAG 10

“Low Wage Jobs & Pathways to Better Outcomes”, Sue Richardson assisted by Lauren Miller-Lewis, National Institute of Labour Studies Monograph Series Number 7



**National Institute of Labour Studies
Monograph Series Number 7**



**Low Wage Jobs & Pathways
to Better Outcomes**

**Sue Richardson
assisted by Lauren Miller-Lewis**

ISSN 1325-0809
ISBN 0-7258-0860-8

© National Institute of Labour Studies Inc
Flinders University of SA
GPO Box 2100
Adelaide SA 5001

Typeset at the National Institute of Labour Studies

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ACKNOWLEDGEMENT

This work was funded by the New Zealand Treasury. Ben Safari made a considerable contribution to an earlier draft of this monograph.

The New Zealand Treasury had this work reviewed by two referees, and themselves made many valuable comments. We appreciate the many constructive suggestions made by the referees (Professors Jeff Borland and Julie Lane). The final paper is much improved as a result of their contributions.

INTRODUCTION

This paper reviews the current state knowledge on the role played by low wage jobs in providing access to and progression in employment for low skill workers. In particular, it addresses a number of questions:

- the extent to which low pay jobs provide the first step on the ladder to reasonably paid and reasonably secure jobs for low skill workers;
- conversely, the extent to which low skill workers become stuck in low paid and insecure work;
- what are the characteristics of people who are employed in low wage jobs;
- which types of low paid jobs provide the best/worst chances of upward mobility;
- whether a low paid, insecure job is better than no job;
- whether low skill/low pay jobs can coexist with high skill/high pay jobs for similar work;
- the extent to which the costs of geographical mobility and broken employment histories inhibit wage mobility and why;
- whether the supply of low skilled/high skilled workers affects the demand for low skilled/high skilled workers;
- Whether different causes of low skill (low education, poor schooling or parenting, history on welfare, crime, drug dependence etc) affect future labour market outcomes.

Most attention has been paid to research based on the US, the UK and other parts of the English-speaking world. However, conclusions from the experience of continental Europe are also referred to, particularly because they differ in some respects from the Anglo experience.

Are low wage jobs a problem?

In the English-speaking world, the general growth in prosperity that has occurred over the last two decades has benefited some groups much more than others. Indeed for some, the decades did not look prosperous at all. Two groups that have not done well are youth and low wage workers.

At the beginning of the 21st Century, it is a daunting task for many young people to negotiate the essential step for the transition to adult independence, namely to find adequately paid and adequately secure employment. Recent decades have seen a collapse in the number of full-time jobs available for teenagers and even those in their early 20s. Unemployment remains particularly high for this age group. Young people are expected to have levels of formal education that are much higher than the historical norm, and it is clear that for some the formal education system does not work very well. For those not in full-time education or employment,

the norm is bits and pieces of part-time work, paid at low wages, unemployment or non-employment. It is an important social issue to know whether young people who start their adult work lives in this way have good prospects of subsequently moving on to full-time and reasonably paid and secure employment. Or are they likely to be trapped in a future marred by low earnings, unemployment and periodic reliance on the welfare system?

The role played by low wage jobs in the pathway to work for low education youth has particular social significance. But low wage jobs are also taken by other people in the labour force. The two main such groups are women re-entering paid employment after an absence to care for children, and higher wage workers who lose their jobs. There is much more written about the first of these than about the second two, but we will report what we can find on the latter groups.

English-speaking countries more broadly have seen a substantial growth in the proportion of jobs that are some combination of low paid, casual and part-time. There is understandable interest in whether this growth should be a cause of concern for policy-makers and the community. The growth of such jobs will be of most concern if they are dead-end, such that the people who occupy them stay in the same sorts of jobs for lengthy periods of time, and leave them largely because they leave the workforce rather than because they find substantially better jobs. If this is the norm, then there is a real risk that the growth of such jobs will generate an underclass of people and families who have to deal for long periods, possibly a lifetime, with poverty and insecurity.

The growth of low paid, and in other ways unrewarding, jobs is of less concern if they provide the first foot on the employment ladder for people who come to the labour force with few employable skills. In this scenario, low skill new entrants work for some period in low paid jobs and in doing so learn specific job skills and the general attributes of productive workers. The low pay is in effect compensated for by on-the-job learning, and after a period the workers move on to better paid and more secure employment. In another version of this story, people who take low paid and insecure jobs are doing so to earn an income while they study full-time. At the end of their study, they go on to satisfactory employment in better jobs. In either case, we can view the employment as providing a combination of current wage and skills development that will lead to enhanced future wages.

There is clearly immense social and policy interest in which of these two scenarios is closest to the truth. In reality, both experiences occur and the main empirical task is to identify the relative size of each and who is in each group. A second important task is to understand the scope for policy to improve the outcomes for low wage workers. The outcomes at issue could be the current level of wages and security, or it could be the amount and type of employment skills learned, or some combination.

If all low wage jobs were simply an episode in people's lives, from which they moved to better jobs, would such jobs still be a public policy concern? There are two reasons for thinking that the answer to this question is yes.

The first is that even in the short run, people need an income that is sufficient to meet basic needs. Just what constitutes basic needs is controversial, but this does not mean that the concept is empty. As articulated in *Rerum Novarum*, the papal encyclical of 1891:

. . .there is a dictate of Nature more imperious and ancient than any bargain between man and man, that the remuneration must be enough to support the wage-earner in reasonable and frugal comfort. If through necessity or fear of a worse evil, the workman accepts harder conditions because an employer or contractor will give him no better, he is the victim of force and injustice.

The concept (and language) of "frugal comfort" was adopted as the foundation of the first basic wage in Australia, in 1907. In adopting "frugal comfort" as its test of a just wage, *Rerum*

Novarum most probably had in mind that it was earned by an adult male, with little prospect of significant upward mobility. But even in the short term people must be paid enough to enable them to meet the essential bills. Just what are the essential bills will depend on their circumstances, and it is here that information on who are the low wage workers is relevant. The necessary minimum will be lower for young people living at home than for an adult who is supporting dependent children, for example.

The second basis for worrying about the level of low wages is also made clear in *Rerum Novarum*, and is equally relevant today. If a worker is paid less than is necessary to provide for a level of frugal comfort, then she or he is the victim of force and injustice. Modern nations have a notion of what is a fair wage and this notion is related to the levels of living of the time and place in which the worker lives.

Policy issues

As Amartya Sen observed, market outcomes can be both perfectly efficient and perfectly disgusting. In an acknowledgement of the risks that labour market outcomes may be disgusting, all developed economies regulate their labour markets, to a greater or lesser degree. These regulations are mostly directed toward providing some limits to the harshness of the terms on which people may be employed. They include minimum wages, prescribed ordinary hours of work, unfair dismissal rules and other forms of job protection, prohibition of discrimination on the basis of sex, race and regulation of the terms of industrial conflict. Here, we present a set of policy questions in order to provide a context and focus for the literature review that is to come.

Low wages and current material well-being

If people are paid low wages, their capacity to support themselves and any dependents is low. The policy issues are a) is the standard of living of low wage workers acceptable? And b) is the level of the wage in low wage jobs fair?

Clearly, if people are employed in low wage jobs for only a small proportion of their working lives, then the terms of that employment will have only a minor impact on their lifetime material well-being. This does not make those terms irrelevant. But it does reduce their social significance. In judging whether wages are too low to provide a decent standard of living, the household circumstances of low wage workers are relevant. Many workers live with other people, and share income and responsibilities. It is important to know the extent to which low wage workers a) rely solely on their own earnings, b) support dependents from their own earnings, and c) share in the housing and income provided by other family members.

If low wages are judged to be inadequate to support a decent standard of living, several policy responses are possible. These include:

- legislate or arbitrate higher minimum wages
- use the tax/transfer system to increase the disposable incomes of low wage workers in low income families
- provide in-kind support for low income (or for all) low wage workers (eg, subsidised childcare, healthcare, transport)
- force up the market wage, by reducing the supply of low wage labour, eg, by providing an alternative welfare income or by increasing the school leaving age, or by restricting immigration of low skill workers, or by supporting the education of low skill workers, or by mandating forms and quantities of training to be provided by employers

- force up the market wage, by increasing the demand for low wage labour, eg, by directly employing low wage workers in the supply of publicly provided goods and services, or by subsidising the employment of low wage workers by the private sector, or by reducing the non-wage costs of employing low wage labour (such as payroll taxes and workers' compensation premiums).

In the English-speaking world, there is strong evidence that unemployed people are much more likely to be poor than are low wage workers (eg, Harding and Richardson, 1999). It is important for policy makers to know the terms of the trade-off between low wages and jobs for low skilled workers. How elastic is the demand for low wage labour? Does the gain in reducing poverty that would be made by increasing low wages exceed the cost that would be incurred from any increase in unemployment? In thinking about this trade-off, it is essential to know whether low wage employment is a transitory state or likely to be endured over many years. It is this last issue that is the focus of this review. If steps can be taken to increase mobility out of low wage jobs, then the pressure to protect the standard of living of low wage workers, through regulating the wages and conditions of their employment, is reduced.

Low wages and lifetime material well-being

Low wages are clearly much more damaging if people spend a large period of their working lives in such jobs. This is especially true for workers who rely primarily on their own earnings for their standard of living (ie, are not the secondary earner in the household).

The policy issues that surround long term low wage employment are centred on two questions. The first is an empirical one: what proportion of low wage workers stay in such jobs for extended periods of time (and who are they?). Second, what steps can governments take to increase mobility from low wage jobs to higher paid jobs? The first of these we will report on in some detail. The steps available to policy can be grouped as a) skills development and b) job matching.

Theory and evidence both suggest that a common pathway from low to higher wages is through the acquisition of improved workforce skills. These may be acquired in formal educational settings, or on the job. Governments can influence the acquisition of additional skills through:

- the infrastructure of formal education (school, vocational, higher), with an emphasis on the requirements and outcomes of the least skilled
- the encouragement of comprehensive structured training that integrates off-the-job and on-the-job learning
- the provision of tailored assistance for the transition from school to work for those at risk of long term labour market disadvantage
- the provision of second chance education and skills development, for older workers, with attention given to different learning styles and to the needs of people who have found formal education a bad experience
- active encouragement of a culture of training among firms, perhaps supported by tax incentives
- ensuring that there is a reasonable payoff to the acquisition of skills, in terms of the probability of getting a job and the rewards for doing so.

Theory and evidence also suggest that a second important source of upward wage mobility is through workers finding a job that provides a better match for the abilities that they have to offer. It is costly to both firm and worker to search for the best match of job requirements and worker abilities. Governments can take active steps to assist the matching process. The provision of information to both sides of the market is key. Information on housing as well as job prospects will assist geographical mobility, while more active assistance is likely to be valuable for some low wage workers.

Outline of what is to follow

In the rest of this review, we commence with a brief summary of the major developments in the international economy that have been affecting low wage jobs and workers. We then define low wages, and describe who occupies low wage jobs and where they work. In order to understand this pattern of low wage employment, we examine first why firms would want to pay low wages, and second, why people would accept employment in low wage jobs. This includes the question of whether a low wage job is better than no job, for low skilled workers. We then turn to the big question: What is the extent, nature and change in wage mobility, and who are the mobile/immobile? This is followed by a discussion of strategies by which to exit low wage jobs into higher paid jobs. We provide a brief discussion of the important topic of whether the supply of low skilled people has an identifiable impact on the demand for low wage workers. We conclude with an overview of the evidence and a discussion of its implications for policy in the New Zealand context.

THE CONTEXT OF LOW WAGE WORK

The economic environment

There have been major social and economic changes over recent decades, a number of which have had adverse effects on the economic prospects of low wage workers and of youth. These changes include technological innovation, that evidence now strongly suggests has enhanced the productivity of high skill workers substantially more than the productivity of low skill workers. They include also greater integration of world financial and product markets. This has favoured internationally mobile factors of production, including highly skilled workers and capital, at the expense of immobile factors of production, including low skill workers. It has also, in effect, increased the supply of low skilled labour for the production of traded goods and services, thus depressing the relative price of such labour in the developed countries. Government policies to deregulate labour markets, to reduce the role of government in the economy and to increase the role of market-based competition in the delivery of services have amplified the effects of technological change and globalisation on the changes in the labour market. Acemoglu (2002) provides a comprehensive examination of the relative contributions of technological change, international trade and institutional change in causing the rise in wage inequality in the US. He (and many others) gives the greatest weight to skill-biased technological change.

In a parallel movement, both demand and supply forces have combined to reduce the size of the manufacturing sector and expand the size of the services sector in the developed economies. Different skills and attributes are in general required to produce services compared with manufactured goods, and this has changed the composition of demand for skills. The demand for technical and manual skills has fallen while the demand for interactive, cognitive and customer skills has risen.

Each of the developments described above has made it harder for low skill people to find and keep decent jobs. The combined impact of these developments has amplified the effects of each one taken on its own. Two of the hardest hit groups are low skill people generally (especially men) and workers who are outside the “prime age” band—both young and older.

Developments in the wage structure and low wage work

English-speaking countries have had similar developments in their wage structures over the past 25 years. While the trends have been the same, the degree of change has been different. The changes have generally been most marked in the United States, followed by the UK. They have been more muted in Canada, and particularly in Australia. The European OECD countries have had a more varied experience. For ease of exposition (and because they have been the most extensively examined), we here summarise the main developments in the US.

- Wage inequality has risen substantially since the early 1970s for both men and women full-time employees, with particularly fast growth in wages occurring at the very top.
- Real wages for men *fell* over the two decade period to the mid-1990s, with the lowest wage earners losing the most (up to 30 per cent of the value of the real wage).

- Increased cross-section wage inequality has not been offset by a rise in wage mobility over time or a compression in non-wage benefits, so that longer term inequalities have also risen.
- Wage differentials by education, occupation and age have all increased, but the gender differential has decreased. At the same time, wage inequality within age, education, sex and occupation groups has risen.
- Since the mid-1990s, real wages have increased their rate of growth and all points on the wage distribution have benefited.

The rise in inequality in the wage structure in the US has been dramatic and has translated into a substantial rise in the inequality of household incomes and in consumption. For lower skill men, there has also been a fall in employment and in the value of the real wage. This has occurred while the overall levels of education have risen considerably. Bernstein and Hartman (1999), for example, report that men who had not completed secondary school had real hourly wages that were on average 30 per cent lower in 1997 than in 1973. The comparable figure for women was 3 per cent lower. Both men and women who had completed secondary school but not done post school education had falls in their real hourly wage of 16 per cent. Over the 32 year period ending in 1995, the real weekly wage for men in the bottom 30 per cent of the wage distribution fell up to 5 per cent. The higher the wage, the faster the wage growth. The ratio of the wages of fully employed men at the 90th percentile to that of men at the 10th percentile of the wage distribution rose from 3.3 in 1963 to 4.7 in 1995. (Katz and Autor, 1999:1468,1471,1475).

Table 1 shows the considerable difference in the course of male wage inequality across the OECD. The big increases for the US and UK stand out (followed by the increase for New Zealand). Austria, France, Norway, Sweden, Finland, Germany and the Netherlands by contrast have had only small rises in inequality, or even a fall in the case of Norway and Germany.

These patterns are suggestive of an important role of differences and changes in labor market institutions and regulations in explaining the cross-country divergence of wage structure changes in 1980s and 1990s – And the existence of either a decline in the relative wages of the less skilled, a sharp rise in the unemployment of the less skilled, or both in almost all OECD countries over the past two decades despite expanding relative supplies of highly educated workers is strongly suggestive of a common shift in labor demand against the less skilled.

Katz and Autor, 1999:1503-4

There is widespread agreement among labour economists that one aspect of “labor market institutions and regulations” that has an impact on wage inequality is the level and enforcement of a minimum wage. There is clear evidence for the US, UK, Australia, New Zealand and several European countries that changes in the level of minimum wages are directly inversely correlated with the level of wage inequality. Where the real value of minimum wages has been allowed to fall, overall wage inequality has risen: the more minimum wages have fallen, the more inequality has risen. (Blau and Kahn, 1999:1434; Keese, Puymoyen and Swain, 1998:235).

As Figure 1 shows, the upper earnings limit (expressed in PPP \$US) of full-time workers in the 10th and 20th percentiles of the wage distribution do not vary a great deal across a range of OECD countries. Low wage workers are paid particularly well in Switzerland, Germany and the Netherlands, but there are only small differences among the remaining countries. New Zealand low wage workers have the lowest wages of those reported.

There is much greater variety in the extent of low wage employment among the OECD countries than in the level of wages of low paid workers. Figure 2 shows the proportion of full-time workers in a range of OECD countries who were, in the mid-1990s, receiving less than two-thirds of

median earnings. The proportion varies from a high of 25 per cent for the US to a low of 5 per cent for Sweden. It is notable that it is English-speaking countries (and Japan) that have a high incidence of low pay. This includes New Zealand, with 16 per cent of its full time workers earning less than two thirds of median earnings

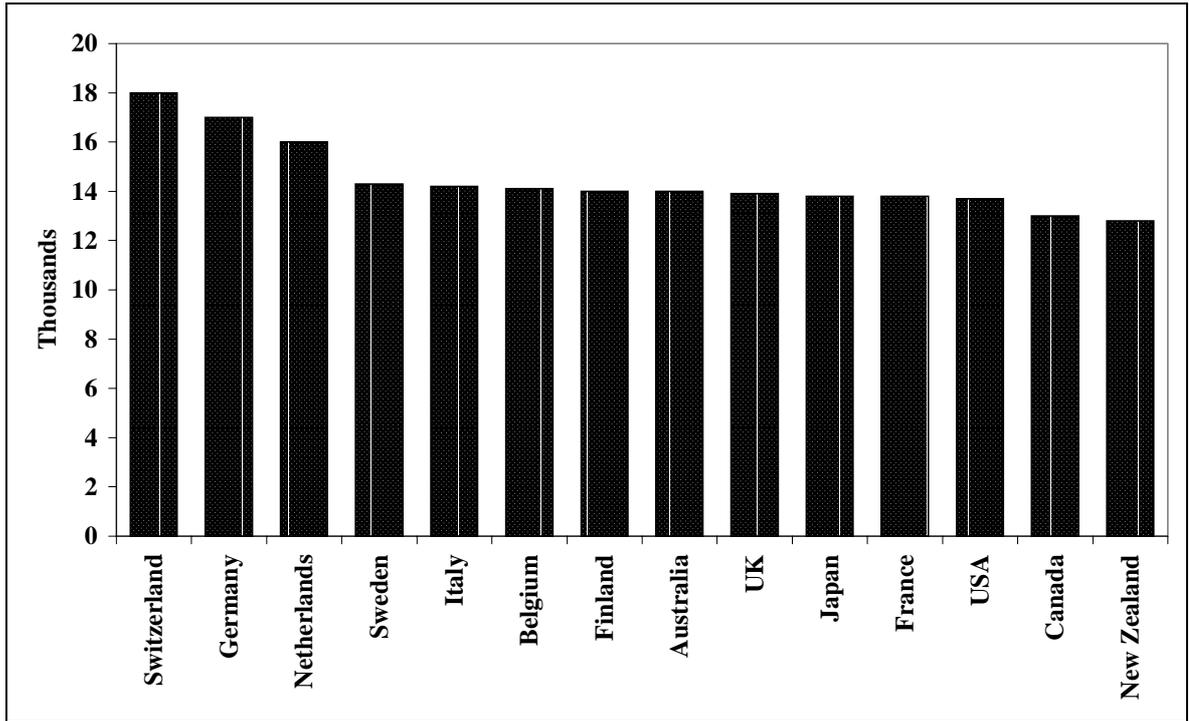
TABLE 1 TRENDS IN WAGE INEQUALITY FOR MEN EMPLOYED FULL-TIME, SELECTED OECD COUNTRIES, 1979-94

	1979	1989	1994	<i>Change from earliest to latest year</i>
Australia	2.7	2.8	2.9	0.20
Austria	2.6	2.7		0.08
Canada	3.5	4.0	3.8	0.33
Finland	2.4	2.6	2.5	0.10
France	3.4	3.5	3.4	0.03
Germany	2.3	2.2	2.2	-0.10
Italy	2.3	2.2	2.6	0.34
Japan	2.6	2.9	2.8	0.19
Netherlands	na	2.6	2.6	-0.03
New Zealand	na	3.1	3.2	0.09
Norway	2.1	2.2	2.0	-0.08
Sweden	2.1	2.2	2.2	0.09
UK	2.5	3.1	3.2	0.76
US	3.2	4.0	4.3	1.07

Note: Ratio of wage of 90th percentile earner to 10th percentile earner

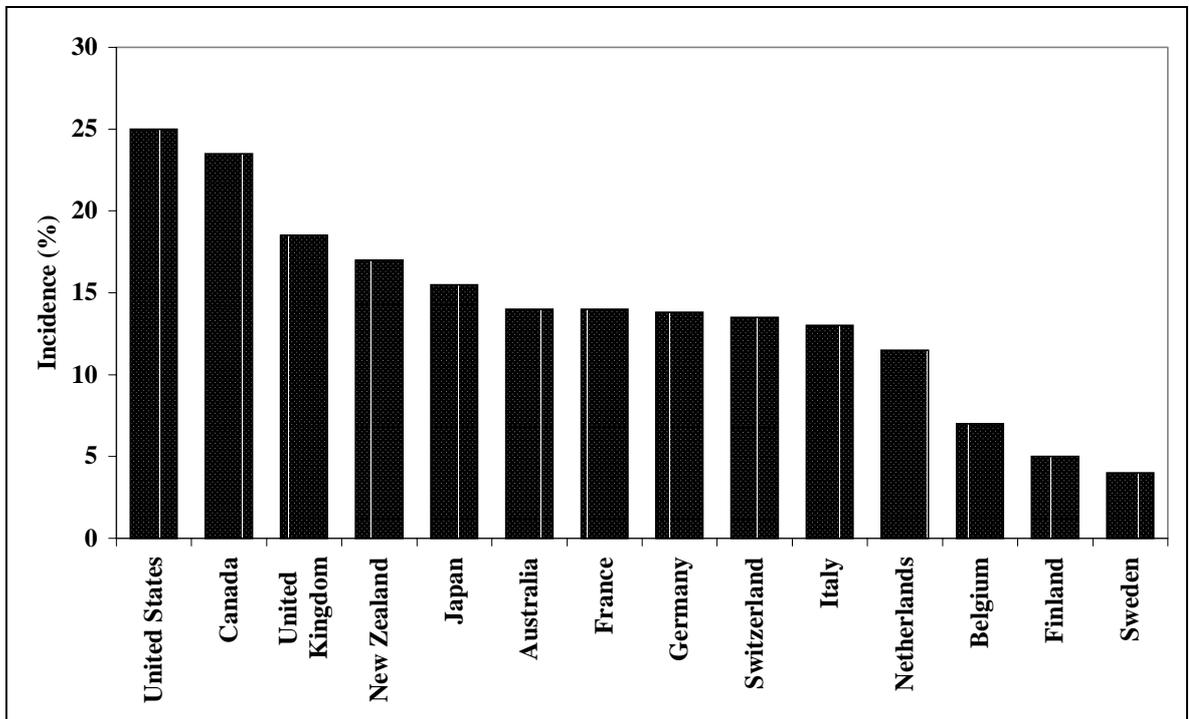
Source: Katz and Autor, 1999:1503

FIGURE 1 LOW EARNINGS OF FULL-TIME WORKERS 1994: ANNUAL GROSS EARNINGS, EXPRESSED IN US\$ USING PURCHASING POWER PARITIES FOR PRIVATE CONSUMPTION



Source: Keese, Puymoyen and Swaim, 1998:225

FIGURE 2 INCIDENCE OF LOW PAY IN SELECTED OECD COUNTRIES: 1994/5



Source: OECD 1997:48. Low earnings are defined as less than two thirds of median full-time earnings. Data are for full-time workers.

Implications for upward wage mobility

There is a growing literature on the phenomenon of a so-called “skills-biased” technological change. This bias in technological growth in favour of high skills has widened the wage gap between the low-skilled/low-paid and the highly-skilled/well-paid employees. That is, low wage jobs pay less than they used to in real terms and relative to the average. This real decline in the low skills wage could be due to changes in the characteristics of the low skills jobs and workers, or to a fall in the returns to low-skills jobs. If the latter, it suggests that the proportion of non-training jobs has risen. Gregg and Wadsworth (2000) argue that there has been a widening gap between the pay levels of entry level jobs and other jobs in Britain. Further, this is attributable to the characteristics of, and not the rewards to, low-skills jobs and low skilled workers. They conclude that there has been “---a simple decline of [the pay of] entry jobs in the distribution of all jobs unrelated to observable characteristics and returns to those characteristics.” (p 516).

It is important to appreciate that, in the English-speaking world and especially in the US, the rise in the gap between the wages of low skilled workers and high skilled (educated) workers has arisen in large part because of the *fall* in the wages of the less skilled/educated. One reason for this is, as Gregg and Wadsworth identify, that the average ability of young people with low levels of education is most likely falling. As the average levels of education of a cohort rise, those who are left behind (drop out of school) are not a random sample of the group. They are those who for a variety of reasons do not find formal education beneficial.

While technological change might have been increasing the productivity of high skill workers more than that of low skill workers, demand for each has grown at a comparable pace. That is, technological and other changes have not seen low wage jobs disappear: to the contrary, they have grown in proportion to the high paying jobs, at the expense of middle-paying jobs. This phenomenon has been referred to as the “disappearing middle”.

Freeman (1998), among others, gives evidence of what he called a “bifurcated growth” of employment in the US. This uneven growth is evident in both occupations and industries, with both high-wage services and low-wage services growing faster than any other industry group in the US. The US Bureau of Labor Statistics forecasts that of the ten jobs expected to provide the largest jobs growth to 2006, seven of them require only “short-term on-the-job training” as the required skill. They include retail salespersons, truck drivers, home health, teaching and nursing aides, and receptionists and information clerks. The other three jobs with expected fast employment growth are at the high skills end, requiring at least a college degree. The seven low skilled jobs (and there are many others like them also forecast to expand their share of employment) do not require much skill to perform and do not provide promotion ladders. It is most unlikely that workers who stay in these jobs would benefit from much skills development or wage mobility. Furthermore, this phenomenon seems to be generalised among OECD countries. If this trend continues, the fears of a low-wage/low-skills trap for individuals may prove both well founded and worsening over time, as it would be harder to cross the ever-widening hollow middle to make it to the high-wage end.

WHAT ARE LOW WAGES?

Berstein and Hartman (1999:28) provide a very useful summary of what constitutes the low wage labour market. They observe that there are two approaches to characterising this market.

Job-based definitions identify a set of jobs characterised by low wages, few benefits, and little upward mobility. Worker-based definitions are typically based on a worker's absolute or relative hourly wage, earnings (wages times hours worked), or educational level. Job-based definitions provide the theoretical foundation and worker-based definitions, the empirical basis for study of the low-wage labor market.

The job-based approach is strongly associated with the concept of segmented labour markets. Segmented labour market theory argues that there is not a single market where people are smoothly allocated to whatever job best matches their abilities, and paid accordingly. Rather, there are two distinct markets. The primary market has well paid jobs, with reasonable levels of security and opportunities for skill development and advancement. The secondary market, in contrast, comprises low paid jobs that are often insecure, have few fringe benefits or promotion possibilities and little opportunity for workers to improve their skills and wages. A key element of the concept of segmented labour markets is that it is difficult for workers to move from the secondary market to the primary market: there is much more job mobility within each of the segments than there is between them.¹

The extent to which the concept of a segmented labour market is illuminating remains controversial in economics. It is difficult to find good empirical data on the features that are distinctive to this view of the labour market. In this review, we focus on the worker-based definition of the low wage labour market. We discuss later the extent to which low wage workers are indeed stuck in low wage jobs. But we do not consider, as does segmented labour market theory, the roles of discrimination and other systemic features in trapping people into low wage jobs.

The definition of what constitutes a low wage is arbitrary. The choice made is important because it substantially affects both the numbers and characteristics of low wage workers.

There are three broad approaches to defining a low wage. The first enquires into the minimum earnings needed to ensure that an individual or family of defined composition is able to live at an acceptable standard of living. This was the approach adopted by Justice HB Higgins when he determined the first basic, or minimum, wage in Australia in 1907. The difficulty with this approach is in determining an acceptable standard of living for a full-time worker and his/her family. Of course, a given wage will deliver a different material living standard to families of different size and composition, so a wage that is adequate for a single young person may not provide an acceptable income for a family of five. These are some of the compelling difficulties that have caused the Australian Industrial Relations Commission to abandon the attempt to identify a "living wage" in recent decisions that set minimum wages.

A second approach to defining a low wage is to relate it to administratively-set expressions of what constitutes a low but acceptable income. This might be a legislated minimum wage, or

1 Berstein and Hartman (1999) believe that the notion of segmented labour markets (along with the idea of wage contours) is illuminating and important to a richer understanding of low wage labour markets. These two concepts "provide a compelling conceptual structure within which to understand the low-wage labor market. They offer a rich model of the determinants of wages and employment, which, unlike traditional labor market theory, can incorporate the role of labor market institutions (such as unions, minimum wage legislation, and international trading regimes), along with established power dynamics (such as race- and gender-based discrimination)." p 30.

some multiple of a selected social welfare payment, such as an old age pension. Such an approach enables the researcher to avoid imposing his or her own interpretation of what is a low income, and to substitute instead that determined by the parliament or some agent of government. The drawbacks with this approach are twofold. If the minimum wage is used, it will often be the case that only a small number of people (especially adults) are actually receiving this rate. If some multiple of a social welfare benefit is used, then the choice of multiple (to reflect the disutility of work) becomes as arbitrary as selecting a minimum acceptable standard of living.

The third approach defines a low wage as some fraction of the median wage. Again, the choice of fraction is arbitrary. Two-thirds of the median full-time wage is a frequently used figure. This makes low wages a relative concept – there is no direct relation with the ability to purchase some minimum basket of goods and services. A related, even more relative, approach is to take the wage that defines the bottom quintile or decile of wage earners. If a given percentile is used to define low wages then it follows that the proportion of the workforce that is employed on a low wage cannot change.

When choosing among these options, it is useful to select a measure that is widely used, in order to facilitate comparisons across countries and studies. Two-thirds of the median wage of a full-time worker is probably the most widely used measure, but the empirical work to be reported below is not uniform in the definition adopted. The two-thirds median was adopted by the European Commission Working Group on Equitable Wages. It has the advantage of being somewhat above the minimum wage of most countries, which means that a non-trivial number of workers will be encompassed within the definition. It should be noted that the conclusions about who is a low paid worker, and the degree of mobility in and out of this state, are somewhat sensitive to the choice of low wage. Specifically, levels of mobility are higher, the lower is the value of the wage chosen. So is the proportion who are youth.

People can have low earnings because they are not employed full-time - working for only a fraction of the normal working week or only a fraction of the normal number of weeks in the year. There is also quite a deal of short term volatility in the level of wages earned, especially among new entrants to the labour force. It is preferable to include as low wage workers only those who have persistently low weekly earnings, arising from a low hourly wage. People with low wages have low earnings, but people with low earnings do not necessarily have low wages. They may be receiving quite reasonable wages, but voluntarily or involuntarily, be working less than a normal working week or year. We therefore mostly exclude from consideration the issue of low earnings, as distinct from low wages.

The links between low wages, low earnings and low standard of living are set out in Figure 3, below.

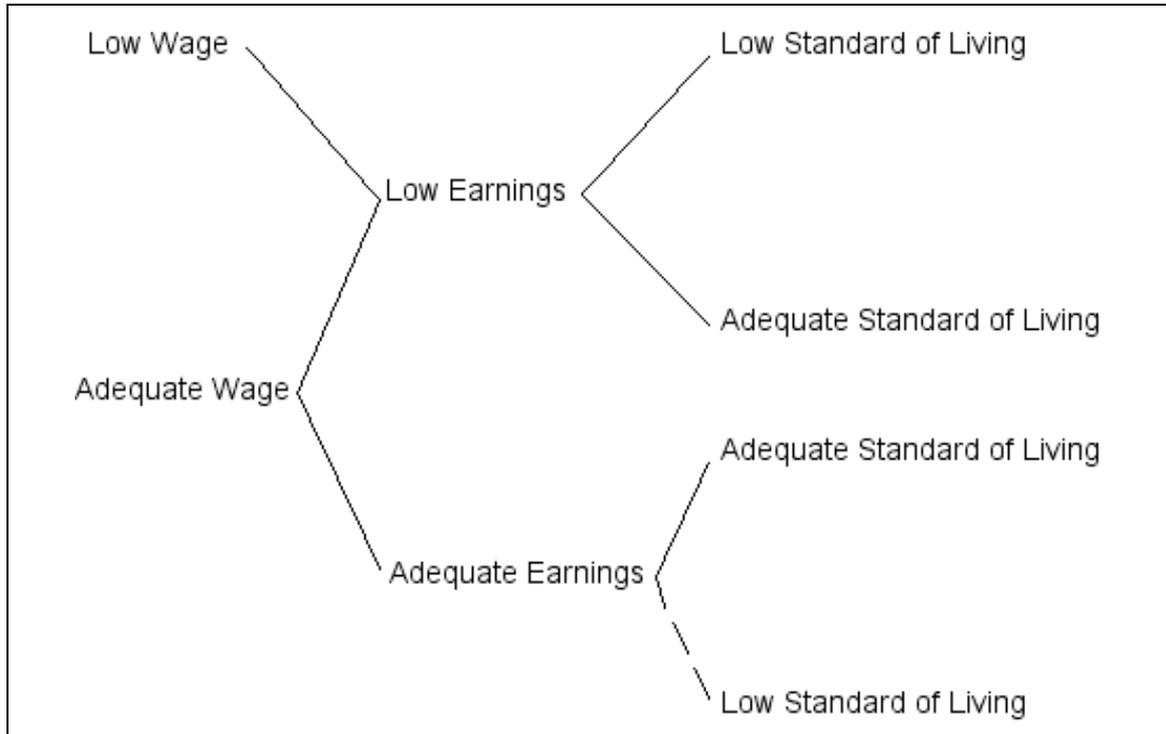
Low wages will lead to low earnings. But people who have adequate wages may also have low earnings, if they work a sufficiently small number of hours per week or per year. People with low earnings may in turn have a low standard of living. But it is quite possible, and indeed common, that they do not. The link between the level of earnings and the standard of living is indirect, because people mostly live in families where resources are shared. If the low wage/low earnings worker lives with one or more others who have adequate earnings, then his or her standard of living is likely to be quite adequate. We show a dotted link between adequate earnings and low standard of living. People who have adequate (or not-low) earnings *may* have a low standard of living, if they or their family have particularly high expenditure needs (such as a large number of dependent children, or family members with a disability).

The relationships illustrated in Figure 3 may hold at the current time (eg, for a week, month or year) or they may hold over a more extended period. The major policy concern with low wages is that people can have a low standard of living for many years, caused by low earnings, that are in

turn caused by low wages. This is a sub-set of the people who at any moment of time have low wages, and is not the whole cause of a low standard of living.

There is some empirical work that examines the link between the relationships set out in Figure 3.

FIGURE 3 THE RELATION BETWEEN LOW WAGES, LOW EARNINGS AND LOW STANDARD OF LIVING



Savage (1999) quotes a study by Dixon for New Zealand that finds that about one quarter of low wage earners live in households that are in the bottom third of the household income distribution. (p 8) Richardson (1998) and Richardson and Harding (1999) conclude that, for Australia, while the majority of low wage workers do not live in low income households, a sizeable minority does. Again, the experience is not homogeneous. "There are indeed people who earn low wages who also live in comfortable middle and upper income households. There are also low-wage workers who support dependent children and who struggle on low incomes." (Richardson, 1998:576-7). For Ireland, Nolan (1998) finds that while 24 per cent of full-time employees are low-paid (earn less than two-thirds of the Irish median gross weekly earnings), as few as 6 and 13 per cent of them live in households below half and 60 per cent of average equivalent income, respectively. These proportions of equivalent incomes are commonly used as poverty lines. However, the overwhelming majority of full-time employees in poor households (as many as 90 per cent in the UK) are low paid. So while the experience of poverty implies being low paid for people who are full-time workers, the reverse is often not true. Similar outcomes are found in the United States (eg, see Burkhauser and Finegan, 1993).

In exploring the link between low wages and low standard of living, the OECD (1997:12) observes that there is a high positive correlation, across countries, between the incidence of low paid employment and the proportion of people living in low income households. They report that while in most European countries, 10 per cent or fewer of full-time low wage workers live in poor households (ie, with an income of less than half the average adjusted household income), in the US the comparable figure is about 25 per cent.

WHO ARE THE LOW WAGE WORKERS?

Most research in this area concentrates on new entrants who are young. Youth comprise only a portion of low skill workers. In brief, people move into low wage jobs from the education system, from being outside the labour force for other reasons, from unemployment and from higher wage jobs. People move out of low wage jobs into unemployment, out of the labour force, and into higher wage jobs. We define upward mobility only as movement into a higher wage job. “Stability” obviously includes staying in a low wage job. But it also will be defined to include moving to unemployment or out of the labour force.

The OECD (1997:7) observes that “While the overall incidence of low pay varies substantially across OECD countries, it tends to be concentrated among the same workers and in the same jobs.” Low wage jobs are disproportionately found among those with relatively little education, among women and among youth and older workers. The types of people who do low wage work comprise four main groups. These are:

- school leavers (or current students) with no prior work experience
- sole mothers
- people previously unemployed or out of the labour force, such as mothers returning to the workforce
- displaced workers made redundant by business closures or restructuring who cannot find employment in their field of specialisation (such as men who lose jobs in manufacturing).

In countries with a sizeable migrant population, recent migrants and migrants who are not fluent in the language of their new country are frequently found among the low wage workers, even if they have quite high levels of formal education.

In the UK, the wages of people who are in entry jobs (ie, in the previous period were not employed, for whatever reason) are typically in the 20th percentile of the overall wage distribution: people in entry jobs get paid significantly less, given their observable and unobserved characteristics, than do other employed people (Gregg and Wadsworth, 2000).

In the US, there is also a strong race dimension to the low wage group, with blacks and Hispanics over-represented. France and Japan have a relatively high proportion of women in their low wage population.

Most research on low wage employment focuses on the first group because of the availability of longitudinal data on the employment dynamics of youth, which are rarely available for the other three groups.

Tables 2 and 3 give an excellent overview of who are the low wage workers. Table 2 shows what the typical low paid worker looks like in terms of age, sex and education. The comparisons focus on the main English-speaking countries, with Germany included to give the different European picture. Low wage workers are more likely to be women than men, except in Australia and New Zealand. Note that women make up fewer than half of the full-time workforce in all these countries, so that they are disproportionately likely to be low paid.

With the exception of Australia and Germany, a clear majority of low wage workers are prime age (25-54). This is a very important statistic, because it makes it clear that low wages are not just a temporary event that young people experience in their transition from school to adult employment. It is also important because adults have adult responsibilities, including for the support and care of their children. Other evidence shows that many low wage adults live in families with an employed partner, which means that the family income is not necessarily low. But many others do not, in particular the women in mother-headed households.

It is surprising that, with the exception of Germany, many of the low wage earners have quite high levels of education, between a fifth and a third having post-school education. De Grip and Nekkers (2001) report that in 1998, about 15 per cent of high education workers in the Netherlands, Germany, France and the UK had low wages.² This compares with between 40 per cent (UK) and 55 per cent (Netherlands and Germany) of the lowest education group.

TABLE 2 DISTRIBUTION OF LOW-PAID EMPLOYMENT BY SEX, AGE AND EDUCATION (%)*

	<i>Australia</i>	<i>Canada</i>	<i>Germany</i>	<i>NZ</i>	<i>UK</i>	<i>USA</i>
Total	100.0	100.0	100.0	100.0	100.0	100.0
<i>By sex</i>						
Men	55.7	40.0	38.9	52.5	41.7	45.4
Women	44.3	60.0	61.1	47.5	58.3	54.6
<i>By age</i>						
Under 25 yrs	46.6	22.9	58.6	41.0	28.5	21.6
25-54 yrs	47.1	69.9	37.9	51.9	59.8	68.7
55+ yrs	6.2	7.2	3.7	7.1	11.7	9.8
<i>By education</i>						
Basic	na	7.7	75.4	56.5	na	21.3
Upper sec.	na	56.5	11.	21.9	na	43.7
Higher	na	35.8	6.8	20.8	na	34.9

Note: * The data refer only to full-time workers. Low wage is defined as less than two thirds of the median earnings of full-time workers.

Source: Keese, Puymoyen and Swain, 1998:230

TABLE 3 INCIDENCE OF LOW-PAID EMPLOYMENT BY SEX, AGE AND EDUCATION (%)*

	<i>Australia</i>	<i>Canada</i>	<i>Germany</i>	<i>NZ</i>	<i>UK</i>	<i>USA</i>
Total	13.8	23.7	13.3	16.9	19.6	25.0
<i>By sex</i>						
Men	11.8	16.1	7.6	14.4	12.8	19.6
Women	17.7	34.3	25.4	20.7	31.2	32.5
<i>By age</i>						
Under 25 yrs	34.5	57.1	50.4	41.3	45.8	63.0
25-54 yrs	8.8	20.1	6.7	11.6	15.0	21.2
55+ yrs	12.5	20.8	5.4	15.6	22.9	23.7
<i>By education</i>						
Basic	na	36.3	15.9	23.5	na	54.5
Upper sec.	na	28.5	26.3	10.7	na	32.4
Higher	na	17.6	4.2	14.2	na	15.5

2 High education is defined as being in category 5-7 of the International Standard Classification of Education. Low wage is defined as the bottom three deciles of the wage distribution.

Note: * The data refer only to full-time workers. Low wage is defined as less than two-thirds of the median earnings for full-time workers.

Source: Keese, Puymoyen and Swain, 1998:230

Table 3 shows the same information as Table 2, but presented in a different way. Rather than identify the low wage workers, Table 3 shows which groups have the highest likelihood of being in low wage work. As with Table 2, the data are confined to people who work full-time. While in most of the countries considered there are more men than women receiving low wages, in all the countries the chances of being in a low wage job are higher for women than for men. This is most strongly the case in Germany and the UK and least apparent for Australia and New Zealand. In Germany, women working full-time are 3.3 times more likely to be in a low wage job than are men. In New Zealand, they are 1.4 times more likely. In Canada, the UK and the US, over one fifth of full-time workers aged over 54 receive low wages. In New Zealand the figure is 16 per cent. Germany, with only 5 per cent of older workers and 7 per cent of prime age workers working in low wage jobs, presents the strongest case for the view that low wage jobs are a temporary stepping stone for youth as they move into higher paid jobs. This characterisation is more true for Australia than it is for New Zealand, and is least true for the UK, Canada and the US. In the US and Canada, over 20 per cent of full-time workers in the prime ages of 26-54 receive low wages.

Those with more education clearly face lower risks of low wage employment in each of the countries for which there are data. In the US and Germany, it is higher education that makes the difference: in New Zealand it is upper secondary education. But more education is not fully protective. In Canada, New Zealand and the US, around 15 per cent of full-time workers with higher education worked in low wage jobs.

The information presented in Tables 2 and 3 makes it plain that low wage workers are not homogeneous. While the risk of being low paid is everywhere higher for people under age 25, in most of the OECD countries the majority of low wage workers are older than 25. In New Zealand, over half of the low paid are in the prime age group of 25-54. Similarly, while everywhere the risk of having a low wage is higher for women than for men, in Australia, New Zealand and the Netherlands the majority of (full-time) low wage earners are men. If we ask what the typical low wage earner looks like, the answer will vary across the OECD. For the main English-speaking countries, the answer is that they are fairly evenly divided between the sexes, of prime age and have a basic or (in the case of Canada and the US), upper secondary education. Clearly, low wage employment is not confined to young people who have little formal education and who are using low paid jobs as a means to acquiring the skills to move on to better paid jobs.

The picture presented above is based on people who work full-time. In the English-speaking world, there has been a substantial growth in part-time employment over the past two decades. Many of these part-time jobs pay low wages. In studies of low wage workers in Australia, Richardson (1998) and Richardson and Harding (1999) examine all workers. This work concludes that:

- the profile of low wage workers is sensitive to the level at which the low wage is set (the higher the level, the more the low wage group looks like the general workforce)
- the risks of being in low wage work are higher for people who are female, employed part-time, aged 21-24, with low education, married if a woman and single if a man, and for non-student children living at home
- the typical low wage worker is female, employed full-time, of prime working age, married and with little formal education: about one third have dependent children

- nearly all low wage men work full-time and 30 per cent have dependent children
- one-quarter have a post-school certificate or diploma and over half are married
- they are most likely found in sales, personal service or labouring jobs, employed in wholesale and retail industry
- 27 per cent lived at home with a parent
- the lower the wage, the more likely were the workers to be female, of prime age, employed part-time and married with dependent children.

Richardson and Harding (1999: 153) conclude as follows.

Low-wage workers are not predominantly the sons and daughters of the affluent middle class, working a few hours each week to finance their holiday in Bali while studying law and business. Nor are they predominantly hard-pressed heads of families struggling to put food on the table to feed their families. There are some each of these groups, but they are relatively small in number. The typical low-wage worker works full-time, is of prime age, with no formal education qualifications, probably married and equally likely to be male as to be female. One-third have dependent children. The men are more likely than the women to be found in low income families.

Bernstein and Hartman (1999:29, 39) provide a very useful summary not only of the current picture for the US, but also how it has been changing. They conclude:

- Low-wage workers are disproportionately female, minority, non-college-educated, non-union, and concentrated in retail trade.
- These characteristics notwithstanding, the low-wage workforce is becoming more male and more highly educated, which is to be expected given widespread educational upgrading and the long-term wage decline among non-college graduates.
- The likelihood of being a low-wage worker has increased, even when the wage impacts of changes in education, experience, occupation, and industry are taken into account.
- Rising education and experience levels and occupational upgrading have combined to prevent the share of female workers in low-wage jobs from rising. This has not been the case for men, even though their total share of the low-wage workforce is still below that of women.
- Like the rest of the workforce, the low-wage sector included more minorities and became older, more highly educated, and less likely to work in the manufacturing industry.
- Unlike the rest of the workforce, however, the low-wage sector included less women.
- Women made up an additional 4.3 percentage points of the total workforce, while their share in the low-wage group fell 9 percentage points.
- The “high school or less education” category declined by 13.5 per cent.

The profiles contained in both summaries confirm that not all people who are employed in low wage jobs are young, single and have low education.

Young people are, however, more likely to be in low wage jobs than are older workers. This is entirely to be expected, as young people are making the transition from student/child to independent working adult. Indeed, if all low wage workers were young (say, under the age of 25), then there would be little reason to worry about low wage jobs and every reason to believe that they represented a widely used means into higher paying jobs. By necessity, if all low wage workers are young, then duration in a low wage job is temporary.

Of course, the proportion of low wage workers who are young will vary depending on the definition of low wage and of young. Thus the picture given by different studies varies in ways that do not necessarily reflect real differences. Using US data for the first half of the 1990s, Long (1999) finds that as many as 46 per cent of the workers earning the federal minimum wage are teenagers (aged 15-19), with only 6 per cent aged 55 or more years. Similar percentages are reported by Card and Krueger (1995) and by Smith and Vavricheck (1992). When a more generous measure of low wage is used (two thirds of the median) and only full-time workers are considered, Table 2 shows that only 22 per cent of US low wage workers are aged under 25.

To illustrate the sensitivity of the characteristics of low wage workers to the level of low wage selected, Table 4 compares the profile of US workers who are low wage according to the OECD definition (and work full-time) with the profile of minimum wage workers.

Compared with other OECD countries, the value of the US minimum wage is quite low. With this in mind, Table 4 provides a clear account of how the characteristics of low wage workers vary, depending on how low wage is defined. When the wage is set very low – as for the US minimum – then the low wage population is more female, much younger and considerably less educated than when a higher value of low wage is used. This US picture is consistent with that found for Australia (Richardson, 1998), where sensitivity of the low wage population to various levels of the low wage was explicitly examined. The idea that low wage workers are mostly teenagers who live at home, and who rapidly move to higher paying jobs (and therefore whose low wages are unproblematic) has come mainly from US research that is based on the minimum wage population.

TABLE 4 COMPARISON OF THE CHARACTERISTICS OF US LOW WAGE WORKERS: (1) EARNING THE MINIMUM WAGE AND (2) FULL-TIME EARNING LESS THAN TWO THIRDS OF MEDIAN EARNINGS

	<i>Minimum wage</i>	<i>Two thirds median</i>
Total	100.0	100.0
<i>By sex</i>		
Men	40.7	45.4
Women	59.3	54.6
<i>By age</i>		
Under 25 yrs	64.6	21.6
25-54 yrs	29.8	68.7
55+ yrs	5.6	9.8
<i>By education</i>		
Basic	na	21.3
Upper sec	na	43.7
Higher	19.5	34.9
<i>Family status</i>		
Married woman	16.5	na
Married man	6.5	na
Live with other adult relatives	66.8	na
Live alone or with children only	10.2	na

Source: For minimum wages, Long 1999:496. For two-thirds earnings, Keese, Puymoyen and Swain, 1998:230

As with the Australian and US data reported above, a number of publications provide a more nuanced picture of the characteristics of low wage workers.

Entry jobs for people without higher education are typically low paid. In addition to youth, such jobs are taken by a) people who are unemployed, and b) mothers returning to the workforce.

Gregg and Wadsworth (1998), using British evidence, find that a high proportion of people in entry jobs were previously unemployed: a quarter had had an unemployment spell of more than two years, and another quarter had been less than three months out of work. Gosling *et al* (1997) found that, in the UK during the early 1990s, 56 per cent of people who moved from unemployment to a job had entry wages that were in the bottom fifth of the wage distribution. We will look later at interesting new evidence on the cycling between unemployment and low wage employment.

Mothers returning to the workforce have similar characteristics to displaced workers, with the added difficulties that their time out of the labour force is often longer and they often return to work in part-time jobs with little or no chances for promotion. The obstacles facing mothers of young children, especially sole mothers, tend to make upward mobility especially difficult. Perhaps for this reason, Kim (2000) finds that in the US low wage women tend to be never married (almost half of the women who have never married are low-paid), and have children: having three or more children under the age of six makes the risk of low pay very high. The recent changes to the US social welfare system, that prevent people remaining on social welfare payments for more than two continuous years, are likely to magnify the results reported by Kim. The sole mothers being pushed into employment are overwhelmingly going into low wage jobs. It will be of great interest to monitor what proportion are able to move on to better paid jobs after a spell. Initial indications are that there is some upward mobility in earnings, but it is modest. Savener *et al* (2002) report that "--in most states, earnings in the fourth quarter after exit [from the welfare system] grew by only a few hundred dollars when compared to earnings in the first quarter." (p 3). A longer term study of welfare leavers in Wisconsin found that over three years earnings on average rose from \$8,608 to \$10,924, " – still well below the US poverty line." (p3)

In addition to new entrants to the labour force, some people end up in low wage jobs as a result of losing a higher paying job. There is consistent evidence that workers who lose their jobs suffer both an immediate and a longer term loss in pay, even when re-employed soon after they lose their jobs. (Kletzer 1998, Gregory and Jukes 1998, Fallick 1996). Furthermore, their wage rate remains well below that of the previous job for a number of years, if not permanently. Jacobson, LaLonde and Sullivan (1993) estimate that for their sample of US displaced workers, total long-term wage losses were on average 25 per cent of initial earnings per year and persisted even six years after separation. Jacobson *et al* argue that these earnings losses are not due to any individual characteristics of displaced workers, since their original median age, skills, tenure and earnings growth were similar to those of staying workers. They find no indication that displaced workers' earnings ever return to their prior expected levels. Thus displaced workers' earnings losses may be permanent.

While the evidence of wage decline for displaced workers is strong, the research appears to be silent on what proportion of displaced workers end up in low-wage jobs as defined for this paper. This is a relatively new area of research and more is yet to be known about displaced workers. More longitudinal data are needed to further our understanding of the employment dynamics of displaced workers. Theory, with some empirical support, leads us to expect that workers suffering the greatest wage fall on displacement would be those who had a high level of human capital that was specific to their employer and/or to an occupation or industry that is in decline; had a high quality job match with their last employer; had a high-paying last employer; and had a seniority component in their pay.

The characteristics of low paid workers reported above have focussed on one feature at a time. It may well be, however, that sole mothers are likely to have low wages not because they are sole mothers, but because they are female and have low levels of education, for example. Some studies have sought to identify the impact on the probability of having a low wage of a specific attribute, holding other attributes constant.

One consistent finding of such studies is that women are significantly more at risk of low wage work than are men, other things equal (Dunlop, 2000; Eardley, 1998; Asplund and Persson, 2000). So too are youth. If young people are excluded, Dunlop (2000:16) finds no relation between age and the probability of being in a low paid job. Multivariate analysis supports the earlier conclusion, that never married people are more likely to be low paid than are those who are or have been married (Dunlop, 2000; Stewart and Swaffield, 1997). For migrant countries such as Australia, the US and Canada, there is strong evidence from the migration literature that limited capacity in English is associated with low wages (and unemployment). Geography matters too. Dunlop estimates that Australians living outside the metropolitan areas were 6 percentage points more likely to be low paid than their metropolitan counterparts (though this comparison makes no allowance for differences in the cost of living).

WHAT ARE THE LOW WAGE JOBS?

We turn now to the demand-side of the low pay literature, in a brief look at which jobs or industries are the most likely to pay low wages.

We would expect low wage jobs to be found in places where workers are likely to have a relatively low productivity. These include jobs where workers are equipped with little physical capital and which require little scarce human capital. Such jobs are found relatively frequently in the services sector, especially in personal services and in retailing. Large numbers of earnings regressions run in many countries find that employment in small firms and in the private sector, other things equal, is associated with lower wages. This suggests that small private sector firms will be responsible for a disproportionate share of low wage jobs. The empirical evidence supports these suppositions.

Long (1999) and Smith and Vavricheck (1992) found that about 55 per cent of minimum wage earners in the US in the first half of the 1990s worked in the retail trade industry—a large proportion being in hospitality. This is consistent with the Australian evidence cited earlier (although there, for men, labouring jobs were also important) and with other American evidence (Kim 2000). It is also consistent with the conclusion drawn by the OECD, that “A high proportion of all jobs in the wholesale, retail and catering sector are low paid, whereas such jobs are scarce in transportation and communications, and public administration.” (OECD, 1997:8).

In a detailed description of entry jobs, using data from 1997-98 Labour Force Survey in Britain, Gregg and Wadsworth (2000) find that low paid entry level jobs are often located in expanding or high-turnover sectors. These are mostly in *retail* (27 per cent of entry jobs), “*other*” *services*- ie, other than retail, transport or finance - (27 per cent) and manufacturing (18 per cent) industries. They are most likely to be *less-skilled manual* (40 per cent) and non-manual (30 per cent) jobs. Eighty seven per cent of entry jobs are in the private sector. According to Gregg and Wadsworth, while three-quarters of all jobs are permanent full-time, the ratio is only one-third in entry jobs. While only 7 per cent of all jobs are temporary contract jobs, the figure is one-third for entry jobs. Entry jobs are thus relatively insecure, as well as being low paid.

The above-cited literature on low-paid workers highlights the fact that certain industries and occupations pay low wages. These occupations are mostly in low-skills services such as retail, personal services, and are more likely to be in small private sector establishments. Also, the low-paid workers are often in part-time casual or contract jobs.

Many low wage jobs are part-time and/or casual. The extent of part-time work and its relation with low pay varies considerably around the OECD (ILO 1997). Australia and the UK, with about one quarter of their workers employed part-time, are at the high end of OECD countries (OECD, 1999). In most countries, part-time jobs are relatively low paid and have fewer fringe benefits than equivalent full-time jobs and are disproportionately taken by female workers. The main reason for the low pay is the type of job done: it is not usual to pay less per hour to a part-time worker than is paid to a full-time worker doing the same job (ILO, 1997). Indeed, the European *Directive on Part-time Employment* now requires countries to act to ensure that workers who are employed part-time are not thereby made worse off on a pro-rata basis. Part-time work tends to be in industries and occupations that have low pay. For example, it is unusual to have people in supervisory positions working part-time. In the European Union, in the mid-1990s only about 3 per cent of men aged 24-49 were employed part-time (OECD, 1999). While part-time work and casual work are different categories, in practice they often overlap. In Australia, people who are

employed on a casual basis are required to be paid about an additional 20 per cent in order to compensate for the absence of benefits such as paid leave. This arrangement is unusual.

In a study of part-time work in the UK, Tam (1997: 243) concludes that, compared with full-time work, it has a number of disadvantages for future employment prospects.

Because of the low-skill nature of part-time work, it has a channelling effect on women's lifetime employment prospects. This study shows that while part-time work is not associated with job insecurity and unemployment, it constitutes a trap which lowers women's lifetime employment prospects and earnings.

The link between part-time work and low wages is complex. On the one hand, part-time work is frequently used by mothers as a way of reconciling the demands of home and paid employment. In Australia, most are happy to work part-time. Such jobs are often also taken by full-time students as a way of supplementing their incomes while studying. In many of these cases, part-time work is not problematic. On the other hand, increasing numbers of young people not in full-time education, and adult males, are accepting part-time work because they can find no better. In evidence given below, sole mothers in the US are quite unable to earn enough to provide an adequate standard of living if they work part-time: the combination of short hours and low pay leads to very low earnings.

Harley and Whitehouse (2001) use UK and Australian data to examine whether women employed part-time earn less and have poorer conditions of employment than their sisters in full-time jobs. They conclude that part-time workers in the UK are worse off than those in Australia. In both countries, part-time workers have some disadvantage in terms of relative earnings, autonomy on the job, and feelings of job insecurity. But the extent of the disadvantage, especially in Australia, is generally quite small.

To this point we have defined low wages and described who occupies low wage jobs and where these jobs are found. Before we go on to consider the central question of this review – the extent to which low wage workers are able to move on to better jobs – we consider briefly why firms pay low wages, and why workers accept them.

WHY PAY LOW WAGES?

It is almost tautological to say that firms pay low wages because the marginal productivity to them of the worker is low. There is a vast amount of empirical work done by economists to understand why some workers have low productivity (ie, are paid low wages) while other people have high productivity (ie, are paid high wages). It is clear from this work that the number of years of experience in paid work and levels of formal education are important factors in causing higher wages. Generally, people who have been in the paid labour force longer and/or have more education have higher wages. It is also often true that people who have been with the same employer longer are paid higher wages, although more recent work finds that voluntary movers often have wages higher than stayers. This worker-based perspective does not explain on what basis firms choose to employ a greater or fewer number of low productivity workers.

The positive link between experience and wages is interpreted by labour economists to mean that people learn important skills on the job, formally or informally (see Acemoglu and Pischke, 1999, for a summary). These skills enhance their productivity, and it is this additional productivity that is rewarded with higher wages. Some of the skills learned will only be of value to the current employer, eg, unique work processes, culture or customer details and whether the job is a good match for worker and firm. It is these firm-specific skills that are rewarded by wages that rise with tenure. This standard interpretation is not without its critics. But it describes the empirical regularities well enough and has a coherent, human capital, theoretical base. It embeds the idea that low wage jobs provide the first foot on the ladder. People who start employment without substantial skills learned in the formal education system must learn on the job the skills needed to be a productive worker. Low wages facilitate this learning in two ways. One is that it can be profitable to employ people without particular skills if it is not necessary to pay them very much. The other is that the payment of low wages means that the costs of acquiring skills on the job are borne at least in part by the worker. It is also implicit in this standard human capital formulation that some jobs will not facilitate much upward wage mobility. These are jobs in which the skills required are low level and quickly learned and are not the foundation for further skills development in the firm or the occupation. The fact of being employed is not sufficient to ensure that more than the most basic skills (such as turning up on time and being reasonably reliable) are learned. For early employment to be the beginning of wage progression with experience, some processes must be in place to develop the productive skills of the worker. These may be formal or informal. But the repetition of relatively simple tasks, such as cleaning, will not of itself provide the foundation for upward wage mobility.

The issue to be briefly discussed in this section is what motivates firms to seek to employ workers whom they believe have a low productivity. Which firms, and why, employ new entrants to the labour force who have relatively low levels of education, and employ people who have been out of a job because of unemployment or for family and other reasons?

We know that employers of low skill labour tend to be in the private sector, to be small, and to be in service industries, particularly retailing, personal services and low skill clerical and cleaning services provided to business. But we also know that within quite narrowly defined industries and even occupations, there is a wide variation in the level of wages paid by different firms (Mortensen and Pissarides, 1999).

Intrinsic to the work

It is fully consistent with standard human capital theory and the assumption of a competitive labour market that some jobs will require low levels of skill to perform, and that the workers who

do them will in consequence be paid a low wage. Examples are cleaning, collecting tickets and picking fruit. At a macro level, the number of such jobs offered by firms will be influenced by the pattern of consumer demand, technological change, the technical and regulatory capacity to import low skill-intensive products and services, and the costs of employing low skill labour. It is clear from the diversity among the OECD countries in the proportion of workers who are low paid, that the skill intensity of overall production is not simply determined by technological possibilities. But available technology is relevant. In all OECD countries, low wage jobs are found in similar industries and occupations and this is best understood as being the consequence of shared methods of production.

If parts of a firm's production process can be performed using low levels of skill, and if the institutions of the economy permit commensurately low wages to be paid, then profit-maximising firms are likely to choose a low productivity/low wage production technology. The interesting empirical question is to understand the extent to which firms have choices about using low skill/low pay technologies as distinct from higher skill/paying alternatives. What proportion of the work performed by low wage jobs is capable of being performed in ways that are higher productivity, and thus would be consistent with paying a higher wage? This is a complex question on which recent work is shedding considerable light. We touch only lightly on this topic because we interpret the questions that motivated this paper to be ones that center on the experience of workers.

Choice of skill levels in production

While some low wage jobs may intrinsically involve low productivity, others are low wage as a matter of choice by the firm. Technology will determine some of the options available—is there a high productivity technique available? If so, what determines whether or not a firm chooses that path? One set of factors that is relevant is the capital requirements of the alternative technologies. Higher labour productivity is usually the result of the application of more capital (physical and/or human) to the production process. Thus one reason for firms to choose different skill strategies for their labour force is that they face different costs of capital. In particular, small businesses often face greater costs of borrowing than do larger firms, because they are more risky. We can understand part of the observed variation in the use of low wage labour in terms of differences in the costs of complementary factors of production.

But it is likely that in some cases there is simply more than one profit-maximising combination of skill levels and capital that is available to the firm. Some firms choose the higher skill/wage route while others choose the lower skill/wage route. The profitability of these choices will be influenced by how low the costs of employing low wage labour can fall. Lane and Stevens (2001:3) cite a number of studies that lead them to conclude that “—firms, even within quite narrowly defined industries have quite different, and persistent, workforce composition, productivity and turnover patterns.” This important work makes clear that there is not a single profit maximising technology and production strategy that will be adopted by each firm that is in the same product market. (Nor can we rule out that at any moment of time there will be a number of firms that, through incompetence, are employing strategies that are not profit maximising). The conclusion is important because the choices made by firms have substantial impacts on the opportunities that are available to workers.

There is strong empirical evidence that low wage jobs are subject to significantly higher turnover than are higher wage jobs. A firm deciding to use a low wage/skill production strategy must take into account not just the relative costs of capital, skilled and unskilled labour, but also the costs of turnover. Turnover is expensive to a firm because of the costs of hiring and firing and because workers accumulate knowledge on the job that is specific to the firm. A number of studies have noted that the US has relatively low levels of firm-provided training and relatively efficient job matching services and high levels of turnover (Brunello and Medio (2001); Freeman (1995); Blinder and Krueger (1991)). The two are believed to be related. That is, firms do not train

because they do not expect workers to stay long enough to enable them to obtain an adequate return on the costs of training. It is cheaper to acquire the skills they need from the market, or to use low skill methods of production. The lack of investment in training of workers, and the payment of low wages, in turn encourage workers to quit, which reinforces the low training, high turnover equilibrium.

WHY ACCEPT LOW WAGES?

The simple answer to the question of why accept a low wage job is that people cannot do any better. But within this overall response are hidden a number of reasons that are worth distinguishing.

Low productivity

A whole book could be written on why people have low productivity. Here we summarise the sources of low productivity without providing a full explanation of any of them. The purpose of this section is to make clear that there is a variety of reasons why people have low productivity.

In the simple model of the labour market, people are paid low wages because they have a low marginal product. In practice, low marginal product is interpreted to mean that they have low skills. A human capital perspective dominates our understanding of what comprises skills, and how to obtain them. Thus people have low wages because they have low human capital. The major components of human capital are formal education and skills learned on the job. This line of reasoning concludes that people have low productivity, and hence low wages, because they have not put the effort into learning productive skills through the formal education system, or have not found a job, and stuck at it, in which they can learn skills in a less formal manner.

Why do people not learn the skills necessary to obtain a job that pays a reasonable wage? Part of the reason may be choice. Learning skills is an investment, in which the costs are incurred early and the payoffs are received over time. As in any investment, the present value of the return on the investment depends on the discount rate, or emphasis given to the present over the future. For a number of reasons (including inability to borrow or to otherwise finance their time out for education) some people have higher discount rates than others. People with high discount rates will be discouraged from investing in education. We do not here go into the reasons for high discount rates. We note, however, that there is a systematic relation between high discount rates and low socio-economic status.

The expected returns to formal education will also be low for people (women) who do not expect to spend the major portion of their working age years in full-time employment.

But low levels of human capital are not always a matter of choice. We need to remind ourselves that earnings equations that seek to explain differences in levels of earnings, and emphasise returns to human capital, leave a great deal of the variance unexplained. Some people do not proceed with formal education because they fail. They may be poorly taught or not have the intellect required to comprehend the material, or not have access to a range of educational opportunities, or be bullied and humiliated at school. People who come from difficult family backgrounds, for example where there is abuse, or addiction or criminal behaviour or mental illness, are not likely to find the ordinary classroom a very productive place.

On-the-job learning is possible, of course, only if the work requires more than elementary skills, and the employer is willing to provide support for that learning.

People who have acquired some level of skills may lose them through job loss. Job loss can lead to loss of human capital because skills were specific to the employer or the occupation. If the job loss results in unemployment, there can be a general loss of skills and motivation, especially if the unemployment is long term.

Le and Miller (2001) study marginal workers in Australia (ie, people who obtained jobs from unemployment or under-employment). They conclude that the overwhelming reason for the low socio-economic status of the jobs these people are able to find is their low levels of human capital (formal education, general work experience, tenure on the job, and the negative effects of a long elapsed time between leaving education and finding their first job). The fact that they were less likely to work in the public sector and more likely to work for small employers also contributed to their poorer outcomes.

Other causes of low wages

While most attention in the economics literature is directed to low human capital as the source of low wages, there are other causes which we draw attention to here.

People may be paid a low wage because the skills that they have do not match what the employer wants. There is now a considerable literature on job search and the importance of a good match and we will say more about this later. A mismatch may occur because of ignorance on either side of the match. Or it may occur because the worker does not live within reach of a job that suits her or his skills. Geographical mobility is an important source of reduced unemployment, and has identifiable positive impacts on wages as well.

The job offers available to workers may be poor because of discrimination. There is a large literature on discrimination against women that identifies the wage penalty that they face on account of their sex. In the US, discrimination on the grounds of race is also well documented. People with criminal backgrounds (up to 60 per cent of young black men in the US, Rangarajan, forthcoming) face even greater obstacles. Discrimination does not necessarily mean that the only job available is a low wage job. But its effect is to lower the quality of the job offers received, and thereby will lead to a larger proportion of the relevant group having to accept a low wage job.

Wages are not the only attribute of a job. People may accept low wages because they are compensated for by other characteristics. The work to be done may be especially attractive (in the arts, or as a park ranger). There may be excellent opportunities for further skills development, as is formally structured into apprenticeships. There may be high levels of job security (although in the main low wage jobs are less attractive in non-wage benefits, including security). Finally, some people are constrained by other dimensions of their lives to limit their search to jobs that are geographically proximate or have hours of work that fit with their other obligations.

Jobs as stepping stones

The whole notion of on-the-job training as investment in human capital implies that the return to employment in a job (including a low wage job) can include the expectation of a greater level of future earnings. A job with initial low earnings that leads to a future job with higher earnings can be called a stepping stone job. In an important paper, Connolly and Gottschalk (2001) analyse such jobs both theoretically and empirically.

In brief, they model jobs as having three dimensions. One is the current wage. The second is the expected rate of growth of that wage with tenure. The third is the access that the job will give to a better set of wage offers in future. This neatly represents the difference between a dead-end job and a stepping stone job. The former is one where there is little or no prospect of real wage growth in that job *and* the job does not improve future wage offers. We report their empirical findings in a later section which discusses how to exit low wage jobs.

Is a low wage job better than no job?

It is tautological to say that people accept low wage jobs because they are better than the alternative. In the short run, the alternative to a low wage job is no job. There are a number of dimensions to the comparison between no job and a low wage job, and we here set them out briefly.

A job provides:

- a current wage
- an expected future wage in that job
- an expected future probability of being employed
- an expected future wage in a different job
- an imposed structure to the use of time
- an obligation to undertake tasks at the direction of someone else
- an impact on self-esteem and psychological well-being.

The current policy movement to emphasise employment rather than the receipt of social welfare is justified in large part by the belief that, whatever the individual at the time thinks, he or she is better off in the longer run by taking any sort of job than by being on a welfare benefit. In signing the US Personal Responsibility and Work Opportunity Reconciliation Act, President Clinton said “Today, we are ending welfare as we know it. But I hope that this day will be remembered not for what it ended, but for what it began—a new day that offers hope, honors responsibility, rewards work---” (cited in Rangarajan, forthcoming). In fact what Clinton was signing was an Act that severely limited the alternative to a low wage job that many Americans relied on. Whether or not it is in the interests of potential low wage workers (as distinct from the taxpayers) to require them to work in a low wage job, rather than to receive a welfare payment, is a question that we explore empirically later on. It is clear from their choices that many of the people affected by the welfare changes in the US did not anticipate being better off from working in a low wage job. Were they wrong?

HOW MUCH MOBILITY IS THERE?

Measuring mobility

To obtain a sound understanding of the degree of mobility from low wage jobs to better jobs, or to unemployment or out of the labour force, it is necessary to have longitudinal data, that follow the same individuals over time. These data are more difficult and expensive to obtain than normal survey data. In consequence, they are less comprehensive across time, countries and questions than are data based on cross section surveys. Nonetheless, there are now sufficient longitudinal surveys (or administrative data that enable individuals to be tracked) that reasonable conclusions can be drawn. Sound empirical data are crucial, since the question is not “is there upward mobility?”, but how much mobility is there and what causes it. In reporting on the degree of labour market mobility, it is sensible to confine attention to people who are not also full-time students.

We have defined as upwardly mobile, people who move from a low wage job in period 1 to a higher paying job in period 2. The emphasis is on movement to a higher hourly wage, rather than to a higher weekly or annual earnings (which is affected by the number of hours worked). People are immobile if in period 2 they are still in a low wage job, have withdrawn from the workforce, or are unemployed.

Mobility is usually expressed in terms of transition probabilities. These describe what proportion of the low wage group in period 1 has moved to a higher wage in the next period (or has dropped out of employment). In most cases the empirical evidence for the US and the UK concludes that *there is strong persistence in low pay status*. A person who is currently low paid has a much higher chance of being low paid in the next period, than an otherwise similar person who initially had higher pay. (Stewart and Swaffield, 1999; Stewart, 2002; Connolly and Gottschalk, 2001).

We expect that mobility will be higher the longer is the time interval that distinguishes period 1 from period 2, and empirical evidence confirms that this is the case.

Mobility in the UK

Evidence from Great Britain (Dickens, 2000) shows that hourly wage mobility measured from year to year is low, but increases when measured over longer periods of time. For example, Dickens finds that, for males in the bottom decile of the wage distribution, only between 20 and 34 per cent move up (with 35 to 45 per cent of these only moving as far as the next decile) after one year (1993 to 1994). Between 43 and 48 per cent remain in the tenth decile and the rest fall out of employment. Females' mobility patterns after one year are similar to those of males. Measured over three years (1991 - 1994), mobility is greater than for just one year, but Dickens' evidence shows that movement to a higher wage decile is still the minority experience for those who started in the bottom decile. Between 26 and 31 per cent of males in the bottom decile remain there after three years; 25 to 32 per cent move out of employment (about 10 per cent were unemployed), while only 26 to 40 per cent move up: only half of the upward-movers go beyond the second wage decile. Again, females' wage mobility is similar to that of males, although low wage women are more likely than men to leave the labour force. The evidence on wage mobility over five years shows that it is a little higher than over three years, but many are lost from the sample. Of those who could be traced, fewer than one third of men and women in

the bottom decile of the wage distribution at the beginning of the period moved to a higher decile job over five years. Stewart and Swaffield (1999) produce similar findings: they find a high degree of persistence in the earnings distribution, with low wage earners moving frequently between low wage jobs and unemployment.

The mobility estimates of Stewart and Swaffield (1999) illustrate the point that the lower the threshold for the definition of low wage, the greater the mobility. They use three measures of low wage—half the median, half the mean and two thirds of the median full-time gross hourly adult wages. These define between 8 to 22 per cent of men and 24 to 49 per cent of women as low paid (using the 1991 panel of the British Household Panel Survey). They find that for women, 75 per cent, 83 per cent and 87 per cent respectively do not move above each of the low wage thresholds. The comparable figures for men are 60 per cent, 65 per cent and 75 per cent. People who move out of wage jobs (into unemployment, non-employment or self-employment) are included in the percentage who do not move up. (p 27).

The movement between low wage employment and unemployment is examined in detail, for the UK, by Stewart (2002). Stewart seeks to explain why a large proportion of people who move from unemployment to a job then fall back into unemployment again. He describes the experience of unemployment, and of low wage employment, as exhibiting state dependence. That is, the probability of being unemployed, or employed in a low wage job, in period 2 is strongly positively influenced by having been in that same state in period 1. An innovation in Stewart's work is that he is able empirically to control for a range of observed and unobserved characteristics that of themselves predict unemployment/low wage, such as age and education. He chooses a measure of low pay that classifies about 10 per cent of employees as low paid (quite a low value—which should bias his results towards relatively high mobility). He concludes that those who were low paid in period 1 were about 17 times more likely to be low paid in period 2 than were workers who were paid higher wages in period 1. (p 4). For people who were the same in terms of years of education, possessing a qualification, years of experience, gender, marital status, health status and whether resident in London or the South East, the ratio was reduced, but only to 14. Not only are low paid workers much more likely than higher paid workers to be low paid in the next period, they are also almost three times as likely to be unemployed. He interprets this and other evidence to show that there is a "low pay-no pay cycle" (p 5).

Dickens finds that short-term wage mobility in the UK fell between 1975 and 1994. This fall in mobility mainly occurred in the middle income deciles, while the wage mobility at the top and the bottom of the wage distribution has remained low throughout the period. Nevertheless, Dickens also finds evidence that low-wage earners, the group we are focussing on, are more likely to get stuck between states of unemployment or non-employment and low-paying jobs than they were in the 1970s (see also Stewart and Swaffield, 1999). Dickens concludes that "the low paid are worse off both in terms of the relative wage they receive and in terms of their opportunity to progress out of the low-pay trap." (p 496)

Mobility in the US

British workers are not alone in their experience of reduced wage mobility. Buchinsky and Hunt (1999) report similar patterns of declining wage mobility in the US, especially at the bottom end of the wage ladder. They use data from the US National Longitudinal Survey of Youth (NLSY) for the period 1979-91, for young civilian wage earners who have ceased formal schooling. Their sample was aged from 14 to 24 in 1979. They find that wage mobility over a four-year period reduced wage inequality by 12 to 26 per cent. This mobility predominantly occurs within groups of people with the same observable characteristics (ie, the same age, sex, education, race and level of experience at the start of the time horizon). In addition, they calculate the probability of moving or staying in the same wage quintile. Here they find, for all education and experience groups, that the probability of staying within the same quintile is high for all quintiles, but much

higher for the low quintiles. Furthermore, this staying probability has sharply increased over time, meaning a rising inequality and a rapidly falling mobility. For example, the unconditional probability of staying in the first *earnings* quintile has increased from 33 per cent in 1980 to 56 per cent in 1990. Similarly, the probability of staying in the first *wages* quintile has risen from about 27 per cent to 55 per cent during the same period. Increases by about 20 - 30 per cent in the staying probabilities are common for the first to the fourth quintiles of both the earnings and wages distribution, indicating a general rise in inequality. Overall, for the years 1990-91, wage inequality over the two years was 7 per cent lower than the average of inequality for each of the two years.

Buchinsky and Hunt (1999) draw the important conclusion that the rise in cross-section wage inequality in the US, between 1979 and 1990 in their data, "reflects a severe widening of gaps between the same individuals." (p 361). The rising cross-section inequality has been accompanied by a sharp fall in mobility, across all skill groups but especially for the less skilled. There is no comfort here from the hope that high levels of wage mobility mean that cross-section inequality does not translate into worrying levels of lifetime inequality.

As expected, the upward wage mobility of youth is relatively high. In the US, it is mainly teenagers who are paid at or very close to the minimum rate. Of course, people do not stay teenagers for long, so there is considerable upward wage mobility for youth. Even so, Carrington and Fallick (2001) find that "more than 8 per cent of workers spend at least 50 per cent of their first 10 post-school years working in jobs paying less than the minimum wage plus \$1." These are predominantly black and women and less educated.

In contrast, Long (1999) finds evidence of substantial wage mobility among the low-paid US workers. Using data from the 1991 and 1992 Survey of Income and Program Participation (SIPP), Long analyses the earnings and labour force status of respondents one and two years after they were in jobs paying the minimum wage. He finds that after one year of employment, seven in ten minimum wage workers stay employed on an hourly wage, just under 6 per cent are either in a salaried job or self-employed, 5 per cent are unemployed, and 20 per cent have left the labour force. Long estimates that about 64 per cent of minimum wage workers had a real wage increase, averaging 30 per cent in one year. After two years, two-thirds of minimum wage workers were still in hourly paid jobs (down from seven in ten), with 68 per cent of them reporting real wage increases (up from 64 per cent). Minimum wage workers who moved to salaried positions reported earnings growth of more than double. These figures suggest mixed outcomes in term of employment status, and significant (given the short period of two years) upward wage mobility for US minimum wage workers who stay employed. However, Long's sample has a high proportion of youth: About 46 per cent of the respondents were aged between 15 and 19. Again, Long's findings reinforce the expectation that youth have higher upward wage mobility than other low-wage earners. Recall also that the US minimum wage is low compared with the more common measure of low wage, namely two thirds of the median wage.

Table 5, from Carrington and Fallick (2001), shows the movement into and out of minimum wage jobs in the US, for young people who had been in the full-time labour force for up to 10 years (ending in 1995). The data come from the National Longitudinal Study of Youth, 1979 panel. The measure of low wages is the minimum wage plus \$0.25. This is a very severe measure of low wage. But the transition probabilities show exactly the sort of information that is needed to obtain a good understanding of the extent to which people get stuck in low wage (in this case, minimum wage) jobs. For this reason, it is worth reporting, as an upper bound to mobility.

The table refers to people who are no more than 10 years out of full-time education. It shows the proportion who make the transition into or out of a minimum wage job in year 2, contingent on having been/not been in a minimum wage job in year 1. This is shown for people with varying levels of workforce experience. It shows that once a person leaves a minimum wage job for a higher paying one, she/he rarely falls back into a minimum wage job. People who start the year

in a minimum wage job have about a 50:50 chance of moving to a higher paying job by the next year, independent of how long they have been in the labour force. As Buchinsky and Hunt (1999) show, for many the move is not very far up the wage scale. Indeed, Carrington and Fallick themselves conclude that “- a substantial proportion of most workers early careers is spent on minimum or near minimum wage jobs” (p 23). Specifically, the average worker spent 29 per cent of his/her first 6 years of employment in jobs paying no more than the minimum wage plus \$2.00.

TABLE 5 TRANSITION RATES INTO AND OUT OF MINIMUM WAGE JOBS, BY YEARS INTO CAREER (%)

Transition	Year (t-1) – year (t)								
	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10
<i>Worker holds non-minimum wage job in first year</i>									
1. Probability of minimum wage job in second year	10.5	8.4	6.7	5.3	4.7	4.6	4.3	3.8	3.7
2. Probability of non-minimum wage job in second year	89.5	91.6	93.3	94.7	95.3	95.4	95.7	96.2	97.3
<i>Worker holds minimum wage job in first year</i>									
3. Probability of minimum wage job in second year	53.6	44.9	42.9	38.4	37.2	44.7	33.7	44.6	46.1
4. Probability of non-minimum wage job in second year	46.4	55.1	57.1	61.6	62.8	55.3	56.3	55.4	53.9

Notes: A job in year t is a minimum wage job if it pays less than the minimum wage plus \$.25 in year t, where years are indexed by their position within a person's career.

Source: Carrington and Fallick (2001), from the US National Longitudinal Survey of Youth 1979.

In an important study, Gottschalk (2001) examines the dispersion of wage outcomes for people who stay in the one job, for people who move straight from one job to another, and for people who experience a period of non-employment before finding their next job. He uses US data from the Survey of Income and Program Participation (SIPP, 1986-93). Each person (aged 18-55) in the data set is followed for a period of 24-40 months. Job changes and wages can be tracked. While on average, real wages grow from one year to the next, there is a wide dispersion of wage changes around this average. For many people, real wages fall, both for those who stay in the one job and even for some of those who move direct from one job to another. Specifically, for people who stayed with the one employer, on average real wages grew by 3.2 per cent (female) or 2.1 per cent (male). This growth rose to 3.7 per cent and 4.0 per cent respectively if people moved directly to a new job. However, if there was a spell of non-employment before obtaining a new job, real wages on average fell, by 2.6 and 2.9 per cent respectively.

These averages conceal considerable diversity. Seventy per cent of people with less than high school education experienced a *fall* in their real wage if they stayed in the same job, as did 56 per cent of those with college degrees. These percentages were less for people with longer tenure. The comparable figures for those who moved directly to a new job are 52 and 47 per cent. For those who went to a new job via a spell of non-employment, the comparable figures are 58 and 54 per cent. In each case, gender did not make a difference. For all levels of education, both average and median wage growth for those who moved via a spell of non-employment was negative. For job stayers, the median, if not the average, was also negative. (p 19-21).

The results produced by Gottshalk imply that individuals face considerable instability in their real wages, even if they stay in the same job. For the majority of employees over the period examined, the movement in their real wage was down rather than up. The least skilled were the

ones most likely to have a fall in their real wage, whether they stayed in the same job or moved. There was clearly a large range of wage movements experienced by US workers in the late 1980s and early 1990s. While the majority suffered a fall in their real wage, a minority had increases that were large enough to ensure that average wages rose. This combination of outcomes reminds us how important it is to look behind the averages when seeking to understand mobility and wage movements. It also shows how difficult it was for low wage US workers in the late 1980s and early 1990s to gain rises in their real wages: it clearly is wrong to assume that work experience and willingness to stick with a job routinely lead to rising real wages. We note that over the last 5 years low wage workers in the US have on average begun to obtain some rise in their real wages: conclusions based on the earlier period may have less force in the contemporary environment.

The evidence of limited mobility for low wage workers is reinforced by the evidence presented by Connolly and Gottschalk (2001). Their sample includes people aged 18-55 who had no more than secondary school education. It is taken from the Survey of Income and Program Participation 1986-88 and 1990-93 panels. They formally model the possibility that workers will quit their current job for one that may even pay less, if it is expected to improve future wage offers. They draw several relevant conclusions. First, people employed in jobs that have low wages and low prospects of wage growth are much more likely to have short tenure in the job than people in high wage/high wage growth jobs (only around 12 per cent of such jobs lasted more than 28 months, compared with about 55 per cent for the better jobs: p20). Second, "People in jobs with low starting wages or low wage growth are most likely to obtain offers of similar jobs. Thus, even forward looking agents are likely to remain in jobs with poor prospects." (p 31). They were unable to measure with sufficient precision whether the role played by stepping stone jobs was quantitatively substantial, so they remain agnostic on this point.

Mobility in the OECD

The evidence reported so far is derived largely from the two main English-speaking countries, the US and the UK. We know that these two countries are unusual among the OECD for the degree to which they have a hands-off approach to the labour market, and for the level of wage inequality that they experience. It is thus useful to look more broadly. To do this, I draw on recent work by the OECD.

The OECD (1997) uses comparable longitudinal data from up to six countries to compare various measures of wage mobility. They define low wage to be a wage of less than two thirds of the median. They find evidence of large disparities in wage mobility for low-wage workers among the six countries (Denmark, Italy, UK, US, Germany and France). For example, of the low-paid workers in 1986 in Denmark, only 8 per cent were still low paid in 1991, compared to over one-half in the US. However, when the reference is broadened to include all those who were in low-paid jobs in 1986 regardless of what they were doing in 1991, the report finds that seven out of ten US low-paid workers in 1986 were either still low paid in 1991 or no longer working full-time. For Danish workers, the proportion was one-third.

This, the report comments, suggests that the larger the share of employment in low-paid jobs, the higher the persistence of low pay status and the wider the earning distribution, the harder it is for low wage workers to move up the ladder.

Evidence for Germany, Denmark, France, Italy Sweden, UK and US, indicates that earnings mobility for the *entire set* of full-time workers is similar and substantial; viz about half of workers changed quintiles between 1986 and 1991, and between 11 and 17 per cent moved two quintiles. Nonetheless, the earnings inequality across the whole 5 years was about 80 per cent of the earnings inequality of one year. (Keese *et al*, 1998). These conclusions apply only to people who were continuously employed full-time workers. Wages fall as well as rise. The share

of workers with falling real wages (despite increasing experience) ranged from 6 in Germany to 29 per cent in US.

Over the five years, there is considerable movement out of the low wage category, and considerable differences in this between countries. On every measure, the US (followed by the UK) has the highest inequality and the lowest mobility. For example, if we look only at people employed full-time over the 5 years, 75 per cent of US and 61 per cent of UK workers who were low paid (ie, paid below two thirds of the median) in 1991 were also low paid in 1986. Looked at the other way, 58/40 per cent of US/UK workers who were low paid in 1986 were also low paid in 1991. In the low inequality countries of Denmark and Sweden, very few workers (6-10 per cent) stay low paid.

If we include moving out of full-time employment with staying in the low wage category as a no-upward-mobility state, then 71 per cent of US low wage workers in 1986 were not mobile by 1991. Of those who did move up, only 11 per cent had moved above 95 per cent of the median, compared with about one quarter for Sweden and Denmark. A large majority of those who left full-time employment moved out of the labour force rather than into part-time or self-employment. Low paid workers were much more likely to exit than were higher paid workers. "Averaging over the countries in our sample, first-quintile workers were about twice as likely to leave full-time employment as were third-quintile workers." (Keese *et al*, 1998: 250). If we look only at full-time workers in both years, 16 per cent of US low paid workers in 1986 had moved above 95 per cent of the median, compared with about 20 per cent for the UK, Italy, Germany and France and 34 per cent for Denmark. US low wage workers are noticeably more likely to stay low paid than are those in the other countries in the sample.

Table 6 and Table 7 show the extent of earnings mobility for the selected countries, for the period 1986-91. Low wages are measured as being less than two thirds of median wages for full-time employees. The original data are derived from the OECD. Table 6 shows the extent of mobility for people who were employed full-time in both 1986 and 1991 and in 1986 were in a low wage job. Table 7 includes all people who were employed in a low wage job in 1986.

Table 6 shows how different are the mobility outcomes across the six countries for which there are data. The proportion of low paid full-time employees who stayed low paid varied from 8 per cent in Denmark to 58 per cent in the US. In Denmark, one third of workers moved from below 65 per cent of the median to above 95 per cent, within five years. In the US, only half as many did so. The other countries displayed degrees of mobility that lay between these extremes.

Table 7 shows more broadly what happened to low paid full-time workers. It is striking that between a quarter (Denmark) and 40 per cent (Germany) were not in full-time employment five years later. For the US, fully 70 per cent of people employed full-time on low wages in 1986 were either not in full-time employment or were still in low wage jobs five years later. Upward mobility was a minority experience in the US and Germany, in clear contrast to Denmark and Sweden.

TABLE 6 TRANSITION RATES INTO AND OUT OF MINIMUM WAGE JOBS, BY YEARS INTO CAREER (%)

	<i>Low paid defined as below 0.65 median earnings</i>		
	<i>Below 0.65 median</i>	<i>0.65 to 0.95 median</i>	<i>Above 0.95 median</i>
Denmark	8.1	58.1	33.9
France	31.6	48.2	20.2
Germany	26.0	50.0	24.0
Italy	21.8	58.3	19.9
UK	39.0	39.9	21.1
USA	58.1	25.6	16.3

Source: Keese *et al*, 1998

TABLE 7 FIVE-YEAR EARNINGS MOBILITY OF LOW-PAID WORKERS: 1991 EARNINGS STATUS OF 1986 LOW-PAID WORKERS, INCLUDING MOVES OUT OF FULL-TIME EMPLOYMENT (%)

	<i>Low paid defined as below 0.65 median earnings</i>			
	<i>Not emp. full-time</i>	<i>Below 0.65 median</i>	<i>0.65 to 0.95 median</i>	<i>Above 0.95 median</i>
Denmark	25.7	6.0	43.1	25.2
Germany	40.5	15.5	19.7	14.3
Sweden	31.6	10.5	34.2	23.7
USA	30.4	40.5	17.8	11.3

Source: Keese *et al*, 1998

Tables 6 and 7 raise the obvious question of whether there is a systematic link between the extent of cross-section inequality in pay and the extent of upward mobility of low paid workers. This question cannot be answered with confidence, since the number of countries for which there are comparable longitudinal mobility data is small. However, Figure 4 suggests that mobility is higher in countries with less cross-section inequality in pay, or at least no less. Where low pay is defined as below two thirds of the median, “ – a higher share of low-paid workers become trapped in countries where the pool of low-paid workers, in any single year, is larger.” (Keese *et al* :251). Note the first panel, where low wage is defined as having a wage in the bottom quintile, suggests that there is no clear relation between overall inequality and mobility. This measure of low pay is not affected by the degree of absolute inequality.

A more detailed look at mobility in France is presented in Bazen (2001). He uses labour force survey data to examine wage mobility for the whole French labour force. He finds that:

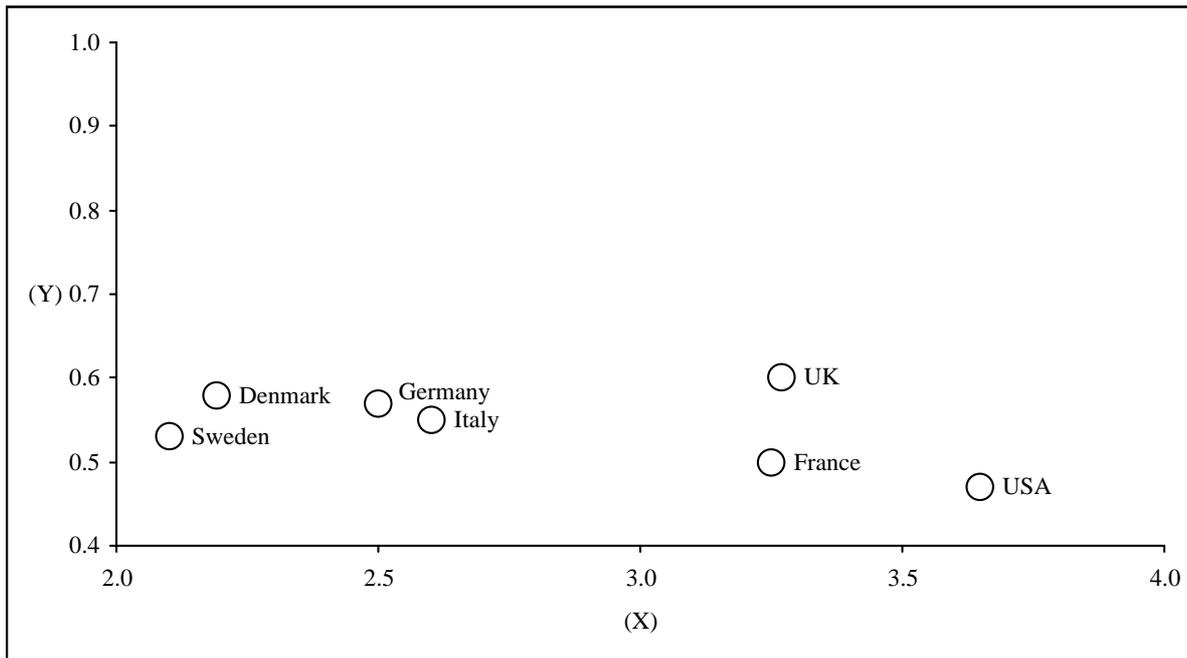
- Earnings mobility is higher for younger workers.
- There has been some fall in mobility between 1990 and 1997.
- Between 1995 and 1996, for workers aged under 30, 43 per cent of first decile workers and 35 per cent of second decile workers moved to a higher decile.
- Over the two year period 1995-7, the comparable figures were 50 and 40 per cent.
- Workers over 30 had a little less mobility than did the younger workers.
- Despite their higher mobility, in the mid-1990s nearly half of young people in the first decile of wages were still there two years later.

Welfare to low wage jobs

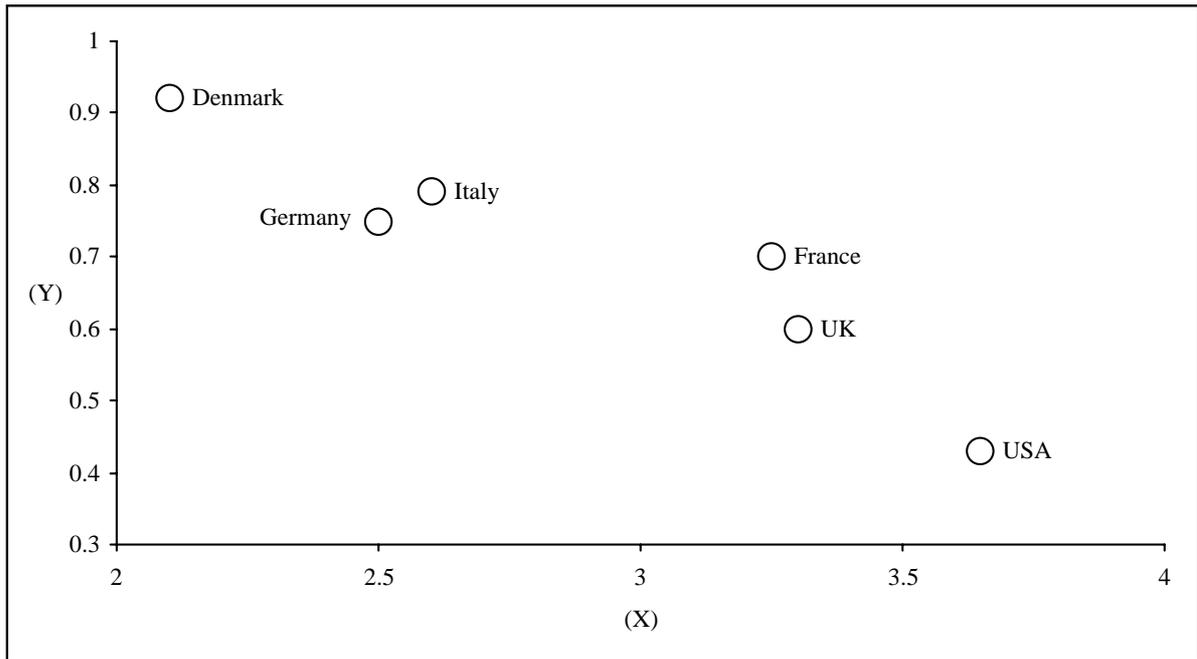
Lane and Stevens (2001) report a detailed look at the prospects for economic independence provided to welfare recipients by low wage jobs. About half of welfare recipients (aged 18-65) in Baltimore found a job of any sort between July 1990 and September 1996. Only 18 per cent of

the total were able to obtain and hold jobs that paid sufficient to enable them to leave welfare benefits for any period between 1990-96. Those who did get work generally had short tenure, averaging 3 jobs in the period. Only 2,432 of the 24,631 jobs offered to (and taken by) welfare recipients, enabled the recipients to leave welfare, and only 4,662 lasted more than four quarters. Jobs that enabled recipients to leave welfare were more likely to be in public administration, health services and social services, and to be in growing rather than shrinking firms. If anything, large firms were less likely to provide longer lasting jobs and those that permit

FIGURE 4 UPWARD MOBILITY OF LOW-PAID WORKERS AND OVERALL EARNINGS INEQUALITY



Notes: (Y) Probability a first quintile worker in 1986 had moved into a higher quintile in 1991.
(X) Ratio of 90th to 10th percentile earnings, 1991.
(a) The mobility of low-paid workers refers only to those workers employed full-time in 1986 and 1991.
Source: OECD (1996, Chapter 3).



Notes: (Y) Probability a worker earning below 0.65 of the median in 1986 was earning above 0.65 of the median in 1991.

(X) Ratio of 90th to 10th percentile earnings 1991.

(a) The mobility of low-paid workers refers only to those workers employed full-time in 1986 and 1991.

Source: OECD (1996, Chapter 3).

an exit from welfare. Firms that have recent experience of hiring welfare recipients have better matches, in terms of duration.

Overall, the conclusions from this important work are pessimistic about the capacity of low wage jobs to provide good exits from reliance on welfare, among American workers. This supports later evidence that shows the difficulty that sole mothers have in obtaining employment that is more satisfactory than even the very basic benefits available to them under the US welfare system.

Summary of evidence on mobility

We conclude from this review of the evidence on wage/earnings mobility that:

- There is considerable variation in the degree of wage mobility across selected OECD countries: policy probably matters.
- Countries with higher levels of cross-section earnings inequality have lower levels of upward wage mobility.
- The level of wage mobility among low wage workers is quite low in the UK and the US.
- Measures of mobility are sensitive to how low wage is defined and whether movement into non-employment or part-time employment is included:
 - The stricter is the definition of low wage, the greater the mobility.
 - The inclusion of movement into non or part-time employment substantially reduces the degree of upward mobility.
- Quite a large fraction of low wage workers cycle between low wage jobs and no jobs.
- Mobility is higher, the longer the time interval considered.
- Youth have higher levels of upward mobility than do older workers.
- Upward mobility is higher for men than for women, and for more educated workers.
- Thus, for older, less educated and female workers, low wages are likely to be a trap rather than the first step on the ladder.
- At least in the US, UK and France, and probably more widely, earnings/wage mobility has fallen substantially over the 1980s and 90s.

Note that the evidence on wage mobility that is cited above is derived from data which end, at the latest, in the mid-1990s. It is clear that mobility fell while (among English-speaking countries at least) inequality of wages rose, in the period from the early 1980s until the early to mid 1990s. We do not know what has happened to mobility in the last few years. The strong labour market in the US in the second half of the 1990s may, for example, have reversed the trend to reducing mobility in that country.

SOLE MOTHERS

An important group that is particularly prone to low wages is mothers of young children, and sole mothers in particular. In this section, I set out what is known about the labour market experience of sole mothers, and their prospects for upward wage mobility. The questions are “What is the role of low-wage jobs as a pathway into paid employment for sole mothers? Do sole mothers get stuck in low-wage jobs indefinitely, or do low-wage jobs provide a ladder to work up to higher-wage jobs? Most of the information is taken from the US literature, with some also from Australia and Canada.

There is a special social significance to the wage experience of sole mothers. First, they are responsible not just for themselves, but also for their children. Prospects for the mother affect prospects for the children. Evidence emerging from the US experiment with pushing sole mothers off welfare and into work is suggesting that the substitution of work for welfare, of itself, does little for children’s welfare. Only when mothers’ incomes rise do discernible benefits to children become evident (Savener *et al*, 2002:4). Second, the alternative to wage work for most sole mothers is social welfare support (though there is some financial support for the children provided by some fathers). The taxpayer therefore has an interest in the ability of sole mothers to find adequate employment, that enables them to become financially independent. The evidence of Lane and Stevens (2001) is that finding employment that provides financial independence is much harder than finding any employment.

The number of sole mothers has grown dramatically in many OECD countries over the last 20 to 30 years. By 1998, 21 per cent of all Australian families (with 18 per cent of the children) were headed by a sole parent, and the vast majority (90 per cent) of these sole parents are women (ABS, 1999). A similar growth in sole mothers has occurred in North America, to 23 per cent in 1998 (Horwitz & Scheid, 1999). Generally sole mothers comprise two main groups - older, divorced or separated women with two or three children of school age, and younger, never-married women who usually have just one child, often of pre-school age (McHugh and Millar, 1996).

The labour force participation of sole mothers

One possible way for sole mothers to improve their poor financial circumstances is to have higher wage income. In 1994, the split between economically active and inactive sole mothers was about 50:50 in Australia, whereas for married mothers the split is closer to 60:40 (McHugh and Millar, 1996). Similarly, in the US, married mothers have had a higher employment level than sole mothers since the early 1990's. In Germany however, married mothers exhibit consistently lower employment rates than lone mothers (Drobnic, 2000). Despite about half of sole mothers not working, numerous studies have found that the vast majority of sole mothers would much prefer to work than receive welfare (Edin and Lein, 1997; McHugh and Millar, 1996; Youngblut, Brady, Thomas and Brooten, 2000). There are a number of reasons why sole mothers who want to work do not do so. They include the level and availability of income support payments; the care needs of young children, access to jobs, attainable wage rates and the availability and affordability of child care (Ross and Saunders, 1990).

Unemployment is generally more of a problem for sole mothers than for married mothers. In 1995, 20 per cent of never-married American mothers with pre-school children were unemployed, compared to 5 per cent of married mothers with pre-school children (Drobnic, 2000). Despite this, the inability to get a job is not the major problem of labour force participation for sole mothers (Harris, 1993, 1996; McHugh and Millar, 1996; Spalter-Roth *et al* 1995).

Rather, the potential wage that a sole mother can earn is the major determinant of whether she will participate in the labour force or not. If a sole mother cannot find a job with wages, benefits and working conditions that outweigh the difference between welfare benefits and the costs of childcare, she has little economic incentive to enter the labour market. Jencks (1994) argues that sole mothers do not turn to welfare because they are unusually reluctant to work or prefer hand-outs, rather they turn to welfare because they cannot get jobs that pay better than welfare. The general belief of researchers throughout the late 20th century was that employment provided no exit from poverty for most sole mothers because the jobs available to them were predominantly and persistently low wage positions (eg, Mann and Albelda, 1989).

A considerable body of research appears to confirm these expectations about the role of low wage work for sole mothers. First, the types of occupations which are available to sole mothers are predominantly characterised by low wages. Sole mothers, (even those who participate in schemes designed to help sole mothers find work, such as Jobs, Education and Training (JET) in Australia), end up employed in traditional women's occupations, such as hospitality, retail, factory work, secretarial work, cleaning, and child-minding, (Edin and Lein, 1997; Leung, 1998; Mulroy, 1995). Spalter-Roth, Burr, Hartman and Shaw (1995) found in a two year longitudinal study of welfare-reliant mothers in the US that 7 in 10 single welfare-recipients reported some participation in the labour force during the 2-year period, but that these jobs were concentrated in the lowest rungs of the occupational ladder (39 per cent worked as maids, cashiers, nurse's aides, child care workers or waitresses). Among working sole mothers in Brooks and Buckner's (1996) study, cashier and food service were the most common jobs (75 per cent), with only 3.2 per cent working in management positions. Furthermore, 57 per cent of the working sole mothers worked in part-time jobs.

Thus the types of unskilled occupations typically held by sole mothers tend to be part-time, offer low wages, few if any benefits like health coverage, no paid leave, have unpredictable and limited hours, low status, and be insecure, temporary and casual (Avison, 1997; Brown and Moran, 1997; DeBord *et al* 2000; Department of Social Security, 1992; Edin and Lein, 1997; Leung, 1998; Lipman, Offord & Boyle, 1997; Mulroy, 1995; Spalter-Roth *et al*, 1995). These jobs held by sole mothers have also been found to offer few rewards for education or years on the job, short duration (averaging only about 1.8 years) and few opportunities for advancement (Brooks and Buckner, 1996; DeBord *et al* 2000; Mulroy, 1995).

Research suggests that many sole mothers cease working because the low-wage jobs they obtain often make them worse off financially than they would be if they remained on welfare. The most prominent study conducted in this area was by Edin and Lein (1997). In the early, 1990s, Edin and Lein interviewed 214 poor sole mothers who were welfare recipients and 165 poor sole mothers who worked mostly in unskilled jobs, all from the US. They found that these sole mothers had to choose between a welfare system that paid far too little to provide for their basic needs, and a labour market that offered them little more than they could have received by staying home. Wage-reliant mothers faced the largest gap between their income and expenses. Their material hardship rates reflected this large gap: wage-reliant mothers reported experiencing more material hardship than those who relied primarily on welfare. Those who worked usually fared worse than those on welfare because the government took so much back from workers and because no matter how hard life was on welfare, it was more stable than the low-wage, unskilled employment that characterised these sole mothers. Many of the wage-reliant sole mothers in Edin and Lein's study said that they were no better off financially than they would have been on welfare, that there was little prospect of promotion in their jobs, there were few rewards for job experience, their employers rarely offered any training or education, that they worked in industries characterised by unstable employment, and that working full-time placed substantial strains on their ability to be a good parent.

Edin and Lein (1997) concluded that there were a number of sound reasons why welfare-reliant sole mothers were better off not looking for work. One of them was that, no matter how long they

stayed at a job and no matter how diligently they worked, jobs in what some called “the five-dollar-an-hour ghetto” rarely led to better jobs over time.

Other researchers have obtained findings corresponding to those of Edin and Lein (1997). Using both national data and qualitative data from a sample of diverse sole mothers (not just poor sole mothers like Edin and Lein sampled), Mulroy (1995) found that about 60 per cent of all employed sole mothers were poor, because the types of jobs available to them were generally low-wage, part-time and temporary. In their analysis of unemployment and earnings data for sole mothers in Vermont, USA, McCrate and Smith (1998) also found that the major cause of sole mother's predicament was scarce job opportunities and low wage jobs that do not provide economic security. Further, an Australian study of sole mothers by Shaver King, McHugh and Payne (1994) examined older Jobs, Education and Training participants whose youngest child was about to turn 16 and who were thus about to lose the sole parent pension. They found that a year after the pension ceased, almost a third of the sample still had no paid work and more than half of the women in the study reported lower incomes after the transition off the pension than before, because their jobs were predominantly low-wage, casual and temporary.

The welfare reform in the US during the late 1990's (Temporary Assistance for Needy Families) was implemented due to the belief that this change would eliminate the “welfare trap”, where sole mothers were better off on welfare. In line with this belief, a recent study conducted after the implementation of welfare reform in the US found results contrasting with those of Edin and Lein (1997). Danziger, Heflin and Corcoran (200) found in a sample of sole mothers who received welfare in 1997, those who left welfare to work or who combined work with welfare were financially better off, on average, than those who remained on the welfare caseload. Those who worked had higher household incomes and experienced less material hardship than did non-working welfare recipients. They concluded the raised income gain now associated with moving from welfare to work was partially due to the economic boom of the 1990's producing a higher minimum wage, and the increases in benefits that supplement the earnings and subsidise the work expenses of the low wage workers. Nonetheless, Danziger *et al* (2000) had some findings that were consistent with Edin and Lien (1997). Many working mothers could not make ends meet on their wage alone; they continued to rely on government assistance (eg, food stamps), and contributions from family and friends.

Is there upward mobility for sole mothers in low-wage work?

Kalil, Corcoran, Danziger, Tolman, Seefeldt, Rosen and Nam (1998) state that virtually all participants in the (US) welfare debate agree that in the first period after leaving welfare, recipients will work at low-wage jobs (\$5 to \$6 an hour). But the hope is that as welfare recipients gain work experience, their wages will grow and they will eventually earn enough to support their families.

Burtless (1995) examined longitudinal data spanning 12 years and found that earnings growth is very slow both for welfare mothers and for mothers who do not receive welfare but are high school dropouts. Wages grew less than 1 per cent per year for welfare mothers whereas wages grew 4.8 per cent for women who did not receive welfare during 1979-1991. Burtless (1995) also found that 50 per cent of all sole mothers on welfare had fewer than 12 years of education. Among these poorly educated women who have received welfare payments at some point during the 12 years, their wages grew by only 6 cents per hour per year. This seems to suggest that low-wage jobs did not provide a ladder to work up to higher-wage jobs for these sole mothers. Kalil *et al* (1998) conclude from their literature review that getting welfare recipients a job is only the first step in moving them to self-sufficiency, because welfare recipients have a hard time keeping jobs, and their wages grow slowly, if at all, over time.

The lack of advancement provided by the low-wage jobs that sole mothers typically have is also demonstrated by the cycling between welfare and work which characterises many sole mothers.

Handler (1995) claims that low-wage work with limited benefits accounts for numerous exits from and returns to welfare. Indeed, research has shown that over the last few decades, many unskilled and semi-skilled sole mothers have cycled between welfare and work (Harris, 1993). Many welfare recipients in the US attempt to exit welfare dependency via work. However for a variety of reasons, such as a lack of health care, the cost of child care, low wages, and jobs that do not last, many of these sole mothers who make the transition from welfare to work end up returning to welfare (Greenberg, 1993). Harris (1993) found by analysing longitudinal data that more than half of welfare recipients leave welfare for work during the first year of receiving benefits. The problem however was that many also return, and then they try again and again. There was significant movement between welfare and work. Harris (1993) estimated that nearly one-quarter of all sole mothers who exit welfare for work return to welfare within one year, 35 per cent within 2 years and 54 per cent within 6 years. Subsequent exits from welfare are also rapid: half leave welfare again within 12 months of their return. Some of them then return to welfare yet again. Harris' (1996) later research concluded that the problem for sole mothers is not usually finding a job, the problem is keeping that job and staying off welfare - in this study about 25 to 40 per cent of all sole mothers who leave welfare via work return to welfare within 1 year, and up to 70 per cent return within 5 years (Harris, 1996). However, sole mothers with more than 12 years of schooling, with prior work experience, and with fewer children are less likely to return to welfare.

For the majority of sole mothers, low-wage work provides the only entry point into paid employment, because (at least in the US, where most of this research has been conducted) most sole mothers lack the education necessary for higher-wage jobs. Thus, low-wage work plays a major role in the labour force participation of sole mothers. But these low-wage jobs do not provide a pathway into higher-wage jobs. Instead, sole mothers appear to become stuck in low-wage jobs indefinitely, because these jobs do not provide opportunities for skill development. As a result of this lack of opportunity for on-the-job learning, and because low wage jobs involve considerable insecurity, many sole mothers give up and return to government benefits, if they are able to.

SOURCES OF UPWARD WAGE MOBILITY

The studies of wage mobility reported above include some evidence on the attributes of workers that contribute to an increased likelihood of upward mobility.

The evidence cited so far gives a reasonable idea about the extent of upward wage mobility among low wage workers. While there clearly is mobility, especially for younger workers, there is also a deal of stability. Older, less educated, female, rural and displaced workers have the lowest prospects of upward mobility. Mobility to a higher paying job is much less if movement out of a job (or a full-time job) is included. It is interesting, then, to ask what is known about the conditions that increase upward mobility.

Dunlop (2000) examines the rates of transition from a low wage job to a higher paying job across a range of personal and work attributes. She reports (for Australia) that those with the lowest prospects of upward mobility are women with dependent children, older workers, rural workers, part-time and casual workers and non-union members who work in a small private sector firm. A logit estimate of the determinants of moving above the low wage threshold for Australian workers concluded that young male urban low wage workers were the most likely to be upwardly mobile. However, workers employed by small firms were significantly less likely to move to a higher wage in the next period. This is most sensibly interpreted to mean that such firms do not provide systematic on-the-job training or do not have promotion ladders that provide wage growth within the firm. This finding is consistent with that for the UK (Stewart and Swaffield, 1997; Sloane and Theodossious, 1994). It should also be noted that having undertaken training in the previous year was not significantly associated with the probability of moving to a higher wage (Dunlop, 2000: 38).

The economic environment

There is tentative evidence that the state of the macro-economy has some impact on wage mobility. The form this takes is not so much immediate wage changes (at least in the US, over recent decades wages have not moved much in response to macro-economic conditions). Rather, the evidence suggests that to a modest extent a strong labour market encourages the growth of jobs in industries and occupations that have promotion possibilities. The existence of promotion ladders is indicated by the evidence that people with longer tenure in the occupation or industry have higher wages, other things equal. The return to tenure varies considerably across industries. For example, Hines, Hoynes and Krueger *et al* (2001) calculate a return to tenure in the US of virtually zero for Entertainment, Recreation, Mining and Personal Services industries, while the return was as high as 2.8 per cent per year for Finance, Insurance and Real Estate. Similarly, the returns to tenure varied from zero for farmers to 2.2 per cent per year for professional and technical workers. The question is, do people shift into occupations or industries with higher returns to tenure as the labour market moves in favour of workers? Hines *et al* conclude that as the macro-economy tightens, there is some evidence that workers, especially the lower paid, do shift into industries with career paths. A tight labour market is beneficial for low skilled workers primarily because it increases the probability of them getting a job, and of being able to work longer hours. But it seems that it is also of some benefit in increasing the chances of low skilled workers finding jobs that offer opportunities for advancement.

We note, however, that a strong macro-economy may not by itself be able to overcome serious labour market disadvantage. The 1990s boom in the US has indeed resulted in a fall in the level of unemployment among young black men (from 43 to 30 per cent during 1985-98). However,

their level of *employment* actually fell from 34 to 30 per cent during the same period. (Ryan 2001:41). Indeed, by 2000, more young black men were in gaol than in full-time work.

The value of a tight labour market is also supported by the evidence (eg, De Grip and Nekkers, 2001; Gottschalk, 2001) that voluntary job changes on average result in a gain in wages whereas involuntary ones typically cause a loss in wages. Since it is low wage workers who are most at risk of losing their jobs in a recession, they face a double jeopardy: of both job loss and of wage loss if they are able to find another job.

Job matching

The theoretical framework for analysing job mobility lies partially within models of job-search and job matching.

Several authors have developed variations of such models, which we will not review here. But as an example, Pissarides's (1994) model distinguishes between good jobs and bad jobs, and depicts a situation where firm's output and employees' wages are a positive function of firm-specific human capital. In this model, firms invest in employees' training in skills specific to the business of the firms, and reward the acquired skills by higher wages. Good jobs are those that offer such training and advancement opportunities, while bad jobs do not. Low paid jobs are initially a combination of good and bad jobs. Connolly and Gottschalk (2001) extend the idea of a good job that is low paid to include one which improves the range of job offers that the employee will face in the future.

Mortenson and Pissarides (1999: 2619) conclude that current state of the art of modelling of job matching produces the conclusion that

. . . wage dispersion can induce endogenous differentials in labor productivity rather than simply reflect exogenous differences--an employer offering a higher wage has an [sic] greater incentive to make match specific productivity enhancing investments because the future return on the investment is subject to a less quit risk.

One implication of Pissarides's and other such models is that good entry jobs are more competitive because they are sought after, not only by unemployed people, but also by employed people already in bad jobs or in good jobs to which they are mismatched (on-the-job search). This "sorting" is confirmed by Blanchard and Diamond (1994). Where there is structural unemployment (ie, the number of applicants is higher than the number of vacancies), other things equal, the already employed will generally be preferred to the unemployed applicant. Blanchard and Diamond (1994) speculate that this may be caused by the fact that many firms believe that unemployment duration either signals or causes "below average skills or work ethic". If we adopt the interpretation of Blanchard and Diamond, then the most likely upward mobility path of a previously unemployed and unskilled person is:

(0) Unemployment

(1) Bad entry job

(2) (Non-matching good entry job)

(3) Matching good entry job

(4) High wage/skills job after training

Starting from unemployment, an unskilled job seeker has little chance of finding a "good entry job". This is because these jobs are sought after by people in other "good jobs", which do not match their interest, as well as those in "bad entry jobs". Because these two groups have more experience and do not carry the negative signal of being unemployed, their chances of getting

the job, other things equal, are higher. So, the unskilled job seeker would start with a “bad job”. From the “bad job”, the worker has better chances than an unemployed job seeker, of shifting to a “good entry job” and growing from there. There is a possibility that the worker may not find a good job match at first. In this case, the worker engages in on-the-job search until a match is found. Subsequent wage growth would then occur through obtaining a better match, and through training and promotion. This is the optimistic scenario. The pessimistic scenario can be either no job or getting stuck in a bad entry job, or some combination of the two (moving between bad jobs and unemployment/non-employment). This general process is supported by the work of Gregg and Wadsworth (2000). They find that for UK workers, people who enter a new job from previous employment earn substantially more, other things equal, than people who enter a new job from non-employment.

Note that even the skilled unemployed might find it rational to go through this pathway, if there is structural unemployment. This might happen to previously employed parents after a period out of the labour force to care for children, or to displaced workers.

Job mobility and wage mobility are two intrinsically different phenomena, although they are related. An employee can move up or down the wage ladder without changing employer. And a worker can change employer without changing wage. Gottschalk (2001) provides evidence that both of these things happen: indeed, real wages rise, fall and stay the same for workers who stay in their job and for those who move. The relation between job change and wage change is quite complex, and the average relation between job mobility and wage mobility conceals as much as it reveals. Despite this complexity, there is consistent evidence that people who change jobs voluntarily (and go straight to a new job) on average experience a rise in pay. For low skilled workers, there is some evidence that a job change that also involves a move to a different industry is the most beneficial strategy (they have little specific capital to lose by such a move). Staying in one’s current job is on average not the best strategy for obtaining a wage rise for low skilled people. (De Grip and Nekkers, 2001).

On average a voluntary move to a new employer is associated with the higher wage gain than staying with the same employer. For women in the US the gain from staying was typically 3.2 per cent (2.0 per cent for men). On shifting voluntarily (ie, obtaining a better match), women gained an immediate 1.7 per cent average wage increase and men an immediate 3.1 per cent increase. (Gottschalk, 2001:11). These, however, are average figures. For low education (the nearest we can get to low wage) workers, the gain from a better job match (and the gain from staying with the current employer) was substantially less for men who had not completed secondary school than for college graduates. However, the relative gain of moving voluntarily compared with staying was similar for the two education groups. For women, it is a different story. Low education women gain almost as much (in percentage terms) from a voluntary job shift as do high education women (about a 4 per cent wage gain). In contrast, low education women face very low (1%) wage gains on the job compared with 7.5 per cent for college educated women. This suggests that for low wage women, searching for a better job match is a superior strategy for obtaining a wage rise than staying with their current employer. The advantage of searching for a better job match is much less apparent for low education men.

Gottschalk, 2001, emphasises that the average experience conceals a great deal of diversity. While on average a move direct to a new job increases the wage, for many it does not. About half of both men and women who had not completed secondary school experienced a drop in their wage on moving direct from one job to another. If the job move was involuntary for low education workers (as indicated by a spell of unemployment in between), then the new job on average had a lower wage than the initial job and almost 60 per cent experienced a fall in their wage.

Efficient job matching requires that there is no discrimination. The evidence for state dependence provided in, eg, Stewart and Swaffield (1999) and Stewart (2002) suggests that

employers use employment in a low paid job as a signal—perhaps of low productivity, perhaps of a propensity to high turnover. Other things being equal, (eg, education, experience, gender) they are therefore reluctant to employ a person who has been in a low wage job for reasons that may not truly reflect the worker's potential productivity in the job.

Choosing the right employer

Employers do matter. If the structure of employment is such that a high proportion of jobs is low wage/low skill, then upward mobility will be the more difficult. Davis (2001) argues that a competitive market with decentralised search for job matches between firms and workers will lead to a proportion of low skill jobs that is inefficiently high. This in turn is highly likely to reduce overall wage mobility.

Lane and Stevens (2001), show that the characteristics of the employer do affect the likelihood of a worker of given characteristics having low wages. Workers with poor characteristics tend to be employed a) with other like workers and b) by firms that, *ceteris paribus*, pay relatively low wages. There are low paying firms within industries, and low paying industries (especially food and drink, retail, business services, personal services).

Firms that run a high turnover policy particularly harm low wage/skill workers, because the damage to them in terms of getting another job, wage loss and hours loss from losing their job is greater than for more skilled workers.

Some recent formal search models incorporate heterogeneity among both workers and employers in identifying the rational maximising equilibrium. Bowlus Keifer and Neumann (1995, 1997) allow productivity among otherwise similar employers to vary across a small number of employer types. One conclusion from their simulations (based on US parameters) is that the reason that the earnings distribution of young whites entering the labour market from school is higher than for blacks is not because whites get more or different job offers, but because the jobs that blacks get are twice as likely to disappear from under them. The empirical evidence is strong that involuntary job change is linked with (probably causes) reduced wages.

Bontemps Robin and Van den Berg (1997), using French data, also permit the productivity of different employers to vary. They conclude that the most productive employers have substantial monopsony power and use it to pay wages well below marginal product. The least productive employers have little monopsony power and only normal profit and are forced to pay approximately marginal product. The former result implies that wage regulation that increases wages above that set by the monopsonists, but not above marginal product, would both raise wages and raise employment (using the well-known result of the monopsony model of labour demand, in which mandated (but not market-determined) increases in the wage can have the effect of both increasing the wage and increasing employment).

There is an important conclusion from this body of research for the role of low wage jobs. Low wage jobs mostly provide relatively little training and are offered by low productivity firms. The greatest chance of upward mobility for a relatively low skill worker is to get a job with a high productivity firm that is paying relatively high wages (hence faces relatively low quit rates). As a result of the low quit rates, this firm will be prepared to pay for skills development of its workers, and hence provide the conditions for upward wage mobility. But this works only if there are also lower wage jobs out there, since it is the higher *relative* wage of the high productivity firm that induces the lower quit rate. If higher wages at the bottom were mandated, then they may reduce quits to leave the labour force, but not quits to go to a better job. Hence there would be some expectation of greater employer investment in skills development, but not as great as for the same wage seen as part of a distribution, with sizeable numbers of jobs offering less.

On-the-job training

It seems clear that there are two main ways in which people can move from low paid to higher paid jobs. One is to obtain a better job match, through moving to a new job, which we have discussed in the previous section. The other is to gain additional skills. There is good evidence that skills learned on the job are a large part of most people's stock of human capital (eg, see OECD, 1991, Lynch, 1994, Brunello and Medio, 2001). These skills can be acquired through formal, off-the-job courses, or they can be acquired through learning on-the-job. The latter requires that the employer has an interest in the skills development of their workers, and that the job being done has scope for learning.

Traditionally, economists have estimated the value of skills learned on the job by estimating the returns to general labour market experience and to tenure with the firm. Measured thus, there is a great deal of skills development acquired on the job, though the amount varies systematically across firms, industries and occupations and by firm size.

While the positive empirical link between wages and experience/tenure is clear, it is difficult to know the real causal link between training and wage outcomes. Empirical work in this area is beset with problems of selection bias. And

. . . the complexity of the causal process is such that simple statistical analyses can give misleading results. The associated problems of simultaneity and heterogeneity for the estimation of statistical models of the causal process are severe.

Elias, 1998:3

While there is a positive correlation between training and earnings and a negative correlation between training and mobility, it is hard to identify the direction of causation. It may be that the people who get the training are those who any way have higher ability (hence a greater capacity to learn). What is seen as a return to training is in part then a return to ability. While the training and the associated rise in pay may cause the observed reduced mobility, it may also be that training decreases job mobility, thereby increasing earnings. This same identification problem besets efforts to estimate the returns to formal education.

A further hypothesis is that worker quality may be difficult to observe, *ex ante*, so that firms that need high-quality workers want to retain workers who they learn are high quality in order to avoid the risk of hiring a series of low-quality workers before finding another high-quality worker. Or it may be that many workers prefer long-term stable employment relationships and are more willing to supply effort in such situations (Farber, 1999:2479).

Longitudinal studies are an important tool for unravelling cause and effect. There are as yet not many such studies that have been applied to sorting out the causal contribution of on-the-job training to wage mobility.

Elias (1998) is one such study, though it has limitations. To unravel these relations, he draws on data recording month by month training, earnings, and labour force status of British young people (aged 19 and 20) who had finished full-time education and not gone to university. He concludes:

- Formal training has strong positive effects on tenure and negative effects on earnings (as youth pay for part of their general skills?).
- Informal training was widespread, but not systematically associated with earnings or tenure, except "having someone responsible for seeing that one's training needs are met tends to decrease the likelihood of a job terminating." (p 20).

Lynch (1991) followed 5 waves of US school leavers who left school in the years 1979-83 and obtained a job in the first year after permanently leaving school. These young people were followed for four years, to assess the impact of training on the probability of leaving their first job.

Three quarters left their first job within four years, and the average duration of each job was about one and a half years. College graduates were much more likely to receive on the job training than were school leavers. School leavers and women were more likely to get some off the job training. Neither on nor off the job training had a significant effect on job duration for men. For women, on the job training decreased and off the job training increased turnover.

Company training in the United States is firm-specific, even for young workers in their first job. Young workers entering the labor market can receive both good and bad draws from the labor market. There are some workers who get a bad draw who appear to move to better employment by investing in off-the-job training. Those in good jobs are more likely to obtain on-the-job training that results in higher wages and a lower probability of leaving the firm. These effects are particularly strong for women.

Lynch, 1991: 155

Firms are likely to have some discretion in whether to choose a low turnover, high training policy as compared with a high turnover, low training policy. Society is not indifferent to this choice, as it has considerable consequences for the level of skills, the profile of earnings and the extent of wage mobility of the workers employed by those firms.

An important direction for future research will be to investigate variation in the tenure earnings profile and relate it to the underlying economic forces that cause firms to make different decisions regarding their compensation structure.

Farber, 1999: 2474

Several empirical studies show a negative correlation between average wages, on-the-job training and turnover rates. That is, people who earn lower wages are likely to have higher rates of job change and lower levels of on-the-job training. Not all of this will be voluntary. The result holds across industries and across occupations (see Neal, 1999, for a review of relevant literature, and Parent, 1999). To explain this, Neal (1999) uses data from the US National Longitudinal Survey of Youth (NLSY), to show that expected returns from job specific training fall with declines in worker ability. This is true for both the worker and the firm. Thus, firms screen the workers to determine those with the highest ability for training in specific skills because they have a comparative advantage in specialised jobs and firms expect higher return on training investment from them. In turn, workers with higher ability face high mobility costs and therefore stay longer in their jobs. Conversely, workers with lower ability receive less on-the-job training, hence lower mobility costs and more rapid turnover. This turnover reinforces the reluctance of the employer to invest in their skills.

Within this broad understanding, it is clear that national variation in culture and institutions affects the nature and amount of on the job learning that occurs, especially for new entrants. In the US, it is expected that people manage their own transition to work, and their subsequent careers. Some private firms are now emerging that tailor work placement and related instruction for individuals to assist them in this transition (as do Job Network providers in Australia). Zemsky, Shapiro, Iannozzi, Cappelli and Bailey (1998) describe the US approach as follows: "There remains an almost dizzying reliance on the *ad hoc* and experimental - on political and educational arrangements that depend on temporary networks and convenient alliances as much as formal authority". (p 3).

At the other end of the scale sit Germany and Japan. These countries have highly structured links between schools, employers and vocational education that provide clear pathways from school into employment. Ryan (2001) concludes that in Germany apprenticeship "opens up to young Germans skilled occupations and high wage employers that remain closed off in countries that lack mass work-based vocational preparation." (p 58). The OECD (1993) reports that in Japan about 80 per cent of workers with less than one year of tenure received formal job training whereas the comparable figure for the US was 10 per cent. When informal training is included, the differences are smaller, but still substantial (90 per cent for large Japanese firms compared to 50 per cent for large US firms).

Compared to Germany and Japan, the US has a higher inflow rate both into and out of unemployment, and relatively efficient job matching processes. Brunello and Medio (2001) argue that this helps to explain why firm-provided training in the US is relatively low: it is more efficient for firms to recruit the skills they need than to develop them among their existing workers. Freeman (1995:7), after a careful comparison of Germany, Japan and the US, concludes that “considerable institutional structure is needed to induce firms to provide training to workers.” Germany places a deal of emphasis (and resources) on the provision of formal apprenticeship in a wide range of occupations. One result is that young German men who leave school early have about 4.4 years of employment in their first 5 years after school, compared with 3.3 years for young men in the US (see Durand-Drouhin *et al*, 1998). This early employment is a key to future success. Quoting earlier work done by the OECD, Durand-Drouhin, McKenzie, and Sweet conclude that “How quickly young people find their first job after leaving school has a powerful effect on their employment and career prospects and a poor start in the labour market can be difficult to overcome.”

This powerful effect of early experience is especially important in the light of the conclusion of Zemsky *et al* (1998), that in the US there has been “a dramatic decline in entry-level jobs offering steady advancement and stability. Employers are dismantling internal career ladders and are beginning to withdraw offers to employees of long-term jobs and substantial investments in employee education and training.” (p 27). This suggests that, if firms are to be induced to provide on-the-job training to low skill workers, they will need some incentive from government or some moral suasion.

While rationality and perfect markets imply that firms only invest in firm-specific training, it has been shown that, in the reality of imperfect labour markets, firms are willing to bear some of the general training costs. For example, Acemoglu and Pischke (1999) present a model where firms provide and pay for general training. The presence of market frictions make it possible for firms to make what would be general skills *de facto* specific skills.

Again, however, the extent of and/or return to skills learned on the job are less for people with lower levels of formal education (Bazen (2001); De Grip and Nekkers (2001)). Van Opstal, Waaijers and Wiggers (1998) conclude that in the Netherlands, tenure is relatively more important than general experience for the wages of low skilled workers.

The opportunity to move up the wage ladder through on-the-job training or job mobility differs systematically among low wage workers. Young people with more education are the ones most likely to be able to take advantage of these escape routes, especially if they are male. Older workers, adult women and the least educated have much poorer prospects. Older workers who have lost reasonably well paid jobs face substantial wages losses that last for a long time—indicating that training and mobility are not effective pathways for them (Podgursky and Swaim 1987, OECD, 1997).

Personal characteristics and mobility

The personal characteristics that economists focus on when explaining wage mobility are overwhelmingly those that may be characterised as dimensions of human capital. Indeed, the theoretical and empirical traction that can be obtained from the notion of human capital has overpowered other lines of thinking about the sources of advantage and disadvantage. Thus there is not much literature on the link between, say, family background and wage mobility. Earnings equations routinely include human capital measures such as formal education, years of employment experience (and tenure) and sex as explanators of differences in wages, if not of wage mobility directly. In some countries, notably the US, race is also included. The outcomes of such estimations systematically find that, in addition to the human capital variables, sex and race have significant effects on wages. Specifically, women earn less than men, and minorities earn

less than whites, in Western countries (with the occasional exception of Asians). In the US, the group that fares worst in the labour market, and by inference in wage mobility, is young black men with little formal education. In France, the group with the worst wage and employment prospects is young unqualified women. Ryan (2001:44) concludes that

. . . while disadvantage runs along similar lines in all countries, the distance that it travels, particularly along the tracks of ethnicity and scholastic achievement, is greater in the United States and the United Kingdom.

There is strong evidence that recent rising wage inequality is predominantly to be found within groups of workers who have the same observable characteristics (of education, sex, experience etc). This has caused economists at least to acknowledge that personal attributes of motivation, ability, personality, character and appearance are probably important in affecting wages and employment. But they have yet to delve deeply into what is still largely a black box.

There is, however, an interesting literature on the role of physical appearance in affecting wages. Again, this is not directly linked to wage mobility, but the literature concludes that more beautiful and physically attractive people have higher earnings, other things equal. Harper (2000:771), for example, using longitudinal data from the UK Household Panel Survey, finds that

. . . physical appearance has a substantial effect on earnings and employment patterns for both men and women. Irrespective of gender, those who are assessed as unattractive or short, experience a significant earnings penalty. Tall men receive a pay premium while obese women experience a pay penalty. The bulk of the pay differential for appearance arises from employer discrimination, although we find evidence for productivity differences among occupations.

Pfann, Bosman, Biddle and Hamermesh (2000) conclude that Dutch firms that have more beautiful executives are thereby more profitable and pay their executives more. It might be reasonable to infer that attractive low wage workers are more likely to be upwardly mobile than unattractive ones.

Psychologists conclude that there are strong interconnections between what happens within the individual on a psychological level and what happens in the social environment within which they grow up and develop throughout their life-course (Weiten, 1995). Both environmental and social factors are expected to be predictors of subsequent employment status. These factors include demographic background variables (such as gender, geographical location, ethnicity, type of school attended, and socio-economic-status [SES]), and family background and peer variables (such as family dysfunction, family structure, parent's educational and occupational status, and peer relationships). Personal psychological factors that are expected to affect subsequent employment status include personality variables (such as self-esteem, locus of control, vocational identity, achievement motivation, attitudes to work, and optimism); mental health and behavioural variables (such as depression, delinquency, drug use and abuse); and intellectual/cognitive variables (such as cognitive ability, IQ scores, school performance, educational attainment and job-seeking skills).

These social and psychological factors are expected to influence the level of educational attainment obtained and the amount of job seeking activities, which in turn will determine the subsequent employment status. (Kokko, Pulkkinen and Puustinen, 2000; Lynd-Stevenson, 1999; Lynn, Hampson and Magee, 1984; Winefield, Tiggerman, Winefield and Goldney 1993). This suggests a mediating effect of educational attainment and job-seeking behaviour. The suggested links are highly plausible. The main contribution that careful empirical research can make is to quantify the size of the expected effects. As in most areas of policy, the key question is whether the factor in question has a large or a small effect on outcomes. The psychology literature is much better at identifying statistically significant causal relations than it is at identifying the magnitude of the effects in question.

We could find no psychological literature that tried to explain what caused some people to end up in low wage jobs. The nearest equivalent is the literature on what causes some people to be unemployed. We only report findings from longitudinal studies because causal conclusions about the relation between psychological variables and employment status can not be drawn from lesser studies. With a few exceptions (Leana and Feldman, 1995, Lynd-Stevenson, 1999), much of this research has investigated youth during their transition between school and employment, where the aim has been to predict, on the basis of information gathered at school age, who will subsequently end up unemployed and who will succeed in finding employment (Kokko *et al* 2000).

Demographic factors that have been found to predict subsequent employment status include type of school attended (Sanford, Offord, McLeod and Boyle 1994; Winefield *et al* 1993; Woodward & Fergusson, 2000); and ethnicity (Winefield *et al* 1993). Minority ethnicity youth from lower SES backgrounds who attended public schools are at higher risk for subsequent unemployment.

Family factors that have been found to predict subsequent unemployment include family dysfunction; growing up in a single parent family; lower status occupation and qualifications of parents; and unemployment in the family. Peer relationship problems stemming back into childhood are also predictors of youth unemployment (Caspi, Wright, Moffitt and Silva 1998, De-Goede, Spruijt, Mass and Duindam 2000; Winefield *et al* 1993, Woodward & Fergusson, 2000).

Personality factors that have been found to predict subsequent employment status include lower achievement motivation and aspirations (Caspi *et al* 1998; Winefield *et al* 1993); poor conscientiousness (De Fruyt and Mervielde, 1999); and how important having a job is to the individual ("work ethic") (Feather, 1986; Lynd-Stevenson, 1999). Other personality precursors to unemployment generally involve certain ways of thinking which characterise personalities. These predictors include hopelessness about job prospects; lower self-efficacy or sense of competence; lower level of optimism; higher level of self-blame; poorer coping skills, external locus of control; poor control of emotions; passivity and; lower levels of extraversion; and poor identity development.³

Mental health factors that have been found to predict subsequent employment status include diagnosis of a major psychiatric disorder before the age of 16; psychoticism; greater perceptions of stress; neuroticism, anxiety and nervousness problems; more depressive affect; lower life satisfaction; antisocial, aggressive, and deviant behaviour; drug (ab) use; and attentional deficits.⁴

Intellectual/cognitive factors that have been found to predict subsequent employment status include the level of intelligence; level of academic potential; reading skills; high school grades; and cognitive development⁵. Individuals with lower IQs, poor reading skills, lower school performance and academic potential, and slower cognitive development thus tend to be at greater risk for subsequent unemployment. The quality of previous work experience has also been found to be an important predictor of future work status (Schneider, 2000).

From this research, the picture painted of the youth who is likely to end up unemployed is not a happy one. These adolescents are likely to have suffered lives filled with adversities such as

3 See Feather, 1986; Lynd-Stevenson, 1999; Daniels, 1986; O'Brien and Feather, 1990; Leana and Feldman, 1995; Winefield and Tiggemann, 1985; Winefield *et al* 1993; Kokko *et al* 2000; De Fruyt and Mervielde, 1999; Bynner, 1998.

4 See Jayakody, Danziger and Kessler, 1998; Layton and Eysenck, 1985; Lynn, *et al* 1984; Feather and O'Brien, 1986; De Fruyt and Mervielde, 1999; Hammarstroem and Janlert, 1997; Kokko *et al* 2000; Winefield and Tiggemann, 1985; Daniels, 1986; Feather and O'Brien, 1986; Caspi *et al* 1998; Kokko *et al* 2000; Laub and Sampson, 1994; Kandel and Yamaguchi, 1987; Sanford *et al* 1994; Woodward and Fergusson, 2000.

5 See Caspi *et al* 1998; Lynn *et al* 1984; Woodward and Fergusson, 2000; Winefield *et al* 1993; Daniels, 1986; Bynner, 1998.

family problems and a lack of resources, and they are likely to have mental health problems, a low opinion of themselves, and poor intellectual ability.

Fewer studies have investigated the paths of interrelationships between psycho-social factors and educational attainment on employment status. Kokko and colleagues (2000) found that passive and anxious behaviour measured at age 8 lead to poor educational achievement, which then lead to long term unemployment in adulthood. Capsi *et al* (1998) found that a number of social and personal factors affected employment status indirectly through the duration of education, but they also had direct effects on employment status. Woodward and Fergusson (2000)—in a study especially relevant to New Zealand found that childhood peer relationship problems lead to school related difficulties such as early school leaving, which then in turn increased the risk of youth unemployment. Thus it appears that psycho-social factors may influence future employment status through their effect on educational attainment, but that these psycho-social factors can have a direct influence on future employment as well. Some research findings have also supported the life-course perspective, in that social factors influence personal psychological factors, which in turn influence education and employment status. Bynner (1998) found that SES influenced the quality of identity development, which in turn predicted future employment status. Lynd-Stevenson (1999) found that background factors influenced hopelessness about job seeking and attitudes towards working, which in turn predicted future employment status. Lynn and colleagues (1984) also found that home background influenced a number of psychological variables such as psychoticism, work ethic, and intelligence, which in turn all influenced educational attainment, which then predicted employment status. However, many of the variables in this study had direct as well as indirect effects on employment status.

Most of the conclusions from this literature are to be expected. Employment prospects are better if you come from a high socio-economic status, well-adjusted two-parent family and are confident, motivated, intelligent and have good relationships with your peers when you are young. Perhaps only the last of these would not readily have been guessed at. These factors work on employment prospects both directly and indirectly via achievement in the education system.

The psychological literature reported above focuses on the personality and social characteristics that predict unemployment. In the absence of direct research on their links with low wages, and with wage mobility, it seems reasonable to suppose that the characteristics that predict unemployment will play a role in causing other poor labour market outcomes, including low wages.

Economists have also sought to understand the influence of personal attributes and family background on labour market outcomes. The need for comprehensive longitudinal data to enable causal relations to be identified has limited the number of studies that have been done. An important recent piece of research, Burgess, Garduiner and Propper (2001) draw on the US National Longitudinal Survey of youth (specifically, people who were aged between 14 and 19 in 1979). They are able to trace their subset for 17 years, to 1996. Their objective is to identify the link between family, school and neighbourhood characteristics of young people and their subsequent earnings capacity and risk of being poor. This is not the same as wage mobility, but, as with the psychological literature, it has sufficient family resemblance to be worth reporting (in the absence of more direct evidence). The biggest influence on future earnings came from the family, with area having little separate effect. The family variables that were significantly positively associated with higher earnings were mother and father's levels of education. For women, fewer siblings lead to higher earnings. For neither sex did coming from a sole parent family have a significant impact on future earnings. We note though, that the total explanatory power of family variables was low—about 12 per cent of variance for men and about 9 per cent for women. These findings support the general conclusion of empirical research in economics, that low levels of parental education (and in some cases, poverty in childhood) have a negative impact on adult earnings (for a review of this evidence, see Haveman and Wolfe, 1995). Family

background appears to do its work both directly and through its impact on educational outcomes. The low explanatory power of the empirical estimations suggest that many other factors are at work (or economists have not yet been able to capture the impact of family in a fully effective way).

IS A LOW WAGE JOB BETTER THAN NO JOB?

The impact of no job on the prospects of getting a job

There is a widespread belief, which underlies much of the design of social welfare policy in English-speaking countries, that any job is better than no job in terms of future prospects for employment and for psychological well-being. For example, the US Department of Health and Human Services explains that “Work First programs share a common philosophy regarding work: *any job* is viewed as a good job and program efforts should be geared toward helping recipients enter the paid labor force as quickly as possible.” (Holcomb, LaDonna Pavetti and Ricdinger 1998:4, quoted by Gottschalk, 2001:6). The reality is more complex.

A distinction is often made between unemployment and being not in the labour force (inactivity). While the distinction is clear in principle, in practice the line between the two states is blurred. Dropping out of the labour force is one response to unemployment, especially for young people and for mothers. In 1997, there were as many young males who were neither in the labour force nor in education as there were unemployed, in the Netherlands, Sweden and the US (Ryan, 2001).

Non-employment can reduce the probability of getting a job in the next period, or reduce the wage of any job offered, if employers believe that it is signalling lack of motivation or lack of skills. It might signal the latter if those in the un/non-employment pool are the ones that have been rejected by other employers. Unemployment may also have a scarring effect, whereby a person’s work productivity is actually damaged by the experience of unemployment (through psychological damage and the depreciation of work skills). Empirically, it is very difficult to distinguish whether unemployment *causes* poor labour market prospects, or whether people become and stay unemployed because they have unobserved low-productivity characteristics. What is clear is that having been unemployed reduces the prospects of a young person obtaining subsequent steady work, and most probably reduces pay when employment is found. Job loss for the least educated leads to lower probabilities of re-employment, higher chances of part-time work and lower earnings (Farber, 1999). There is more tentative evidence that unemployment does damage that can last a number of years in terms of lower wages and greater employment instability.

In a careful theoretical and empirical analysis, Stewart (2002) looks directly at the comparison between being unemployed and holding a low wage job, on both wages and employment one and two years later. He uses UK data from the BHPS, and includes people aged 18-65. An interesting dimension of this paper is that Stewart is able to identify the impact of each of unemployment and a low wage job, while holding constant a range of personal attributes. Two of his conclusions are especially pertinent here. The first is that the impact of being unemployed in period 1 on the probability of being unemployed in period 2 is not statistically different from the impact of being in a low wage job. In coming to this conclusion, he excludes from the analysis people who were continuously unemployed over the whole period. The second is that being in a low pay job in period 1 has a similar impact as being unemployed on the probability of being in a low pay job in period 2. Low paid work and unemployment have almost an equally large (negative) impact on the probability of moving to a higher paid job, compared to higher paid employment. Furthermore, being in a low paid job significantly increases the prospect of being unemployed in the next period, compared with being in a higher paying job. “Low paid jobs act as the main conduit for repeat unemployment.” (p 19) On Stewart’s evidence, there is little support for the view that any job is better than no job in improving prospects for future

employment or escape from low wage jobs. The negative effects of unemployment on future prospects have been well established (we give some examples below). What is new in Stewart's work is the direct comparison between a spell of unemployment and a spell of low wage employment.

Evidence of the negative effects of unemployment is abundant. However, analyses that carefully distinguish the independent effect of a spell of unemployment (state dependence) from other causes of unemployment are much less common. Knights, Harris and Loundes (2000) is an example for Australia of separate identification of the effects of past unemployment on future employment prospects. They use data from the late 1980s, drawn from the Australian Longitudinal Survey. They conclude that there is genuine state dependence in unemployment. Unlike the work of Stewart, however, they do not compare this with the state dependence that arises from employment in a low wage job.

Less sophisticated studies of the effects of unemployment on future unemployment and on low wages are available for a number of European countries. For France,

. . . the probability that a young worker gains (or holds) regular employment is significantly reduced by prior unemployment. At the same time, no further damage attaches to employment under fixed-term contracts or participation in labor market programs. Similarly, previous unemployment has been found to increase for German youth the probability of being unemployed---. For British youth, it increases both the probability of entering unemployment and reduces occupational upgrading in early working life. For Swedish youth, it reduces pay when employed.---among (British) males who leave school early, unemployment reduces occupational status, seven years later, only if the relevant spell lasted at least three months. Do the scars fade over time? The durability of adverse effects is uncertain.

Ryan, 2001:48

Outflows from inactivity are lower than from unemployment. "In some countries, many young people shuttle between labor market programs, inactivity, and unemployment, accumulating long spells of joblessness but not of unemployment as they go." (Ryan, 2001:41).

From a regression estimate of the causes of variance in the hourly wages earned by French youth, Balsan, Hanchane and Werquin (1998: 160-161) conclude that labour market history has more impact on women's than men's wages.

Being unemployed or in a market sector youth programme corresponds to the lowest wages. ---participation in private sector youth programmes leads to higher wages than a spell of unemployment. However, for a given unemployment duration, having several spells rather than one results in a lower wage. Apparently, queuing on the labour market and searching for a permanent position in the primary sector is more efficient from the wage point of view, rather than going through a series of short duration jobs. . . . School-to-work employment schemes help young people get into wage earning, "But they might subsequently stay quite a long time in marginal jobs which are often characterised by low wages.

Youth schemes seem to permit better access to jobs, but not to higher wages.

Unemployment, low wage jobs and mental well-being

The experience of being unemployed and its consequences for future success in the labour market will be affected by its psychological impact, as well as by the signal that it gives employers. We here report what the psychology (and some economics) literature has to say about the consequences of unemployment for mental health, and whether it is worse for mental health to be unemployed as compared with being in a low wage, low skill job.

Within the field of psychology, the vast majority of research into employment and unemployment has focussed on the psychological consequences of unemployment, rather than on the psycho-

logical predictors of subsequent employment status (Winefield *et al* 1993). Psychologists face the same problem as economists in finding it difficult to distinguish causation from selection, when they observe that unemployed people exhibit signs of psychological distress: does unemployment cause the distress, or do the distressed become unemployed?

The psychological impact of employment status

The relationship between employment status and psychological well-being is two-way. O'Brien (1986:239) states that "the majority of studies show that unemployment produces, in most people, a state of dissatisfaction and distress". It is widely found that people who become unemployed, compared to those who are employed, tend to suffer from damaged identity formation, lower self-competence, self-esteem, happiness and life-satisfaction, and have higher symptoms of stress and depression.

In an interesting recent study, Flatau, Galea and Petridis (2000) use large scale Australian health surveys to explore the empirical link between unemployment (distinguished by duration), part-time employment, non-employment and mental health. Compared with men who are in full-time employment, men not in the labour force (and not studying) have the worst mental health—worse than those who are unemployed of any duration. The negative effect of being out of the labour force is much more muted for women, though still apparent. The relation between mental health and unemployment varies by duration of unemployment, in a similar way for women and men. Mental health is worst for those unemployed for 13-26 weeks and over 52 weeks, by a substantial amount. This suggests that there may be adaptations occurring as the duration of unemployment extends. Flatau *et al* show that, controlling for a wide range of socio-demographic attributes and for levels of physical health, unemployed men and men employed part-time have lower levels of mental health than men employed full-time (aged 18-64). The impact of unemployment is diminished, but still statistically significant, if the level of equivalent income of the household is controlled for. This suggests that each of the loss of income and the direct experience of unemployment have deleterious effects on the mental wellbeing of men. The unemployment result, but not the negative effects of part-time employment, applies also to women.

Flatau *et al* rely on cross-section data, so we cannot be sure that unemployment/part-time employment cause rather than are caused by mental ill being. And they contrast unemployment with all full-time employment, not with employment in a low wage job.

Within the psychological literature, some important comparisons have been made between the psychological impact of unemployment and "good" and "bad" employment. There are also three psychological theories of employment which implicitly state within them the expected psychological impact of employment of different levels of quality.

Firstly, Jahoda's (1981, 1982). "Deprivation theory" states that, in addition to its obvious function of providing income, employment (even bad employment) has five latent functions that are psychologically beneficial and keep us in touch with reality.

First, it imposes a time structure on the waking day; second, it provides regular social contacts with people outside the nuclear family; third, it imposes goals and purposes that transcend those of the individual (shared goals); fourth, it defines status and identity: and finally, it enforces activity.

Jahoda, 1981:188

Additionally, Jahoda (1981:189) implies that even bad jobs are preferable to unemployment by stating "even unpleasant ties to reality are preferable to their absence".

In contrast to Jahoda's deprivation theory, Fryer (1986) proposed an "Agency theory", in which the five supposed benefits of employment stated by Jahoda are claimed to often be costs of

employment rather than benefits. If Fryer is right, bad employment may be detrimental to the individual's life satisfaction, perhaps to the point that no job would be better than the bad job. Agency theory stresses the proactive and independent aspects of humans, in which people wish to plan for themselves, whereas deprivation theory assumes that people are reactive and dependent (Winefield *et al* 1993).

The third psychological theory of employment is Warr's (1987) "Vitamin model", which is concerned with the effects of certain environmental features on mental health. Warr suggests that nine features of the environment have a curvilinear effect on mental health, in an analogous manner to the way vitamins influence physical health. These nine features of the environment are: 1) opportunity for control; 2) opportunity for skill use; 3) externally generated goals; 4) variety; 5) environmental clarity; 6) money; 7) physical security; 8) opportunity for interpersonal contact; and 9) valued social position.

According to Warr, some of these environmental features act like vitamins A and D, in that very high levels of them may not only stop being beneficial, but can be harmful. Others resemble vitamins C and E, in that at very high levels they stop being beneficial but are not harmful. Warr suggests that three of the environmental features, money, physical security and valued social position, are like vitamins C and E, but that the rest are like vitamins A and D, and thus can be harmful in high doses. Warr's model does not explicitly distinguish between work and non-work environments. Rather, the extent to which any environment is beneficial to mental health depends on the extent to which it provides these nine environmental features. Therefore, there can be good and bad work environments, and good and bad non-work environments. Without suggesting that employment is necessarily better than unemployment in terms of these nine features, most good jobs provide them at the beneficial levels (Winefield *et al* 1993). But the vitamin model makes it possible in theory for bad employment to be worse for mental health than unemployment.

We note here that social welfare systems clearly and strongly embed the view that substantial numbers of people would prefer unemployment to some forms of employment. This is implicit in the steps that are taken to ensure that people who receive unemployment benefits are "genuinely looking for work". Active steps are taken by most (all?) welfare states to prevent people from choosing unemployment over employment. The most dramatic recent example of policy directed to preventing a choice of welfare over employment is to be seen in the two-year limits on access to welfare implemented in the United States in 1996. Welfare economics, of course, is predicated on the assumption that people know their best interests. Social welfare policy implies that governments believe that many people, given the choice, would opt for unemployment over employment in the sort of jobs that they may reasonably expect to obtain. If we accept these two propositions, it leads us to conclude that for a sizeable proportion of people at the low end of the skill distribution, no job (with some welfare income) is better than a poor job.

A more explicitly stated, stronger opinion on bad employment is that of Leim (1992), who suggests that, by taking an unsatisfactory job, the worker gives up a sense of personal control and incurs damage to his or her sense of self. He claims that the psychological costs of accepting an unsatisfactory job are often greater than those incurred by remaining unemployed.

The psychological literature that has investigated this difference between "good" jobs, "bad" jobs, and unemployment, has predominantly supported the propositions of Fryer's (1986) agency theory and Warr's (1987) vitamin model, in that people in bad employment are usually no better off psychologically than those who are unemployed.

One method of operationalising "good" and "bad" jobs has been to measure the level of job satisfaction they provide a worker with. The sources of job satisfaction are challenging and inter-

esting work, having pleasant co-workers, adequate pay and opportunities for advancement (Weiten, 1995). These studies have found that dissatisfying work environments can lead to subsequent psychological damage (Borgen, Amundson and Harder, 1988; Burris, 1983; Landy, Quick and Kasl, 1994). O'Brien and Feather (1990) found in a longitudinal study of school leavers that the positive benefits of employment for these young people depended upon the quality of employment they had. The quality of employment (defined as good or poor) was based on the degree to which their job allowed them to utilise their skills and education. School-leavers who obtained good quality employment had lower depressive affect, higher life satisfaction, higher internal control and higher personal competence than those who were unemployed. However, there was little difference on these variables between the unemployed and the poorly employed. School leavers who took poor jobs suffered negative effects to their psychological functioning, just as those who ended up unemployed. The only—but important—difference was that the poorly employed reported feeling significantly more positive about their lives, even though they were similar on the other variables.

Kaufman (1982) and Leana and Feldman (1995) obtained similar findings in longitudinal studies of the quality of re-employment after being laid-off. Kaufman (1982) found that unemployed professionals who became re-employed in jobs that did not require a high degree of utilisation of the person's ability, knowledge or skills (termed "underemployed"), were no better adjusted than those who remained unemployed. Further, underemployment was found to be a highly stressful experience that was comparable to unemployment. Leana and Feldman (1995) found those who ended up with unsatisfactory employment or underemployment had higher levels of psychological distress and anxiety, and lower levels of life satisfaction than those satisfactorily employed, but there was a lack of differences between the unsatisfactorily employed and the unemployed. In fact, the unsatisfactorily employed reported significantly lower levels of life satisfaction than the unemployed, which suggests that a bad job can be worse in one way than unemployment.

Winefield *et al* (1993) have found in all the analyses they have conducted since 1984 on a sample of school leavers, that those who ended up with jobs that they regarded as unsatisfactory, were no better off psychologically than the unemployed. Whereas there were no differences between the unsatisfactorily employed and the unemployed on levels of self-esteem, locus of control, depression, negative mood, psychiatric symptoms, psychological distress, hopelessness and social alienation, the satisfactorily employed (and full-time tertiary students) displayed superior well-being on all of these psychological measures.

It can be concluded that all of these studies consistently suggest that "bad" or unsatisfactory employment is no better for a person's psychological well-being than having no job at all, which is in line with propositions of Fryer's (1986) and Warr's (1987) psychological theories of employment. These findings have important implications for government policy and practice. However, the four major longitudinal studies comparing "good" and "bad" jobs with unemployment (Kaufman, 1982; Leana and Feldman, 1995; O'Brien & Feather, 1990; Winefield *et al.*, 1993), are not able to throw light on the long-term consequences for psychological well-being of bad jobs in comparison to good jobs and unemployment. Winefield *et al*'s (1993) longitudinal study suggests that people in unsatisfactory employment are more likely to enter satisfying employment after one year than to remain dissatisfied employed or to end up unemployed. In this study, Winefield *et al* (1993) examined how much stability there was in employment status from one data collection point to the next. They found that on average, 55 per cent of those who were dissatisfied employed became satisfied employed one year later, and that the satisfied employed were the most stable group as 90 per cent remained satisfactorily employed after one year. However, about 32 per cent of the dissatisfied employed remained dissatisfied one year later, and another 7.4 per cent found themselves unemployed one year later. Thus it appears that for about half of the dissatisfied employed, this dissatisfaction is not a long-term, stable employment status, which suggests that for these people the negative psychological consequences of dissatisfactory employment may be short

lived. The psychological consequences for the 32 per cent who remain in dissatisfactory employment over long periods of time is yet to be determined.

DOES THE SUPPLY OF SKILLS CREATE ITS OWN DEMAND?

From a policy perspective, it is crucial to know whether the skills structure of jobs on offer from employers is responsive to the availability of skills. If it is not, then it is the structure of demand for skills (as it emerges from industry structure and choices of production methods) that determines the quantity of high, middle and low paid jobs: it is not the quantity of skilled/educated workers. Should this be the case, an increase in the average levels of education will merely lead to more educated workers doing the same jobs as were previously done by less educated workers.

The single most compelling reason for not believing that the supply of skills creates its own demand is the juxtaposition of changes in levels of education (equated with skills) with changes in inequality of the distribution of earnings. In Canada, the UK, the US, Australia and New Zealand, average education levels have been increasing over the past two decades. So too has the proportion of the workforce that has completed secondary schooling and obtained some post-school qualification. Nonetheless, in all of these countries inequality in the distribution of earnings has risen, the real pay of low wage earners has fallen and, at least for the US and the UK, mobility from low to higher wages has fallen. These trends have been strongest in the US, the country that has the highest levels of formal education in the world. Table 2 shows that education, especially in the US and Canada, does not protect people against low wages. Over one third of low wage workers in those two countries have post-school education: demand has not arisen to meet their supply of skills. These macro facts make it difficult to argue that the solution to inequality in earnings and continuing low wage employment is to be found in raising average levels of education/skills.

One concept that can explain this combination of rising average levels of education, a reduction in the size of the tail of low education, and rising earnings inequality is credentialism. This is allied to the concept of signalling. Both imply that workers' levels of education are used by employers to rank job applicants. The formal qualification may not contain any content that is relevant to the job, but it is valued by the employer as a simple and inexpensive way of deciding whom to interview among a number of job applicants. On this view, formal education signals attributes that the worker already has, such as intelligence and persistence, rather than creating new skills. Education then reduces the costs of hiring and probably improves the quality of job matches, but it does not fundamentally alter the structure of skills available to or demanded by employers. In a world of signalling, more education will be profitable for the individual worker. But its contribution to the social good will only be through its role in improving the quality of the job match. One fact in the US experience that credentialism cannot reconcile, however, is that there has been a sharp rise in earnings differences *within* each educational group (eg, Gottschalk, 1997:33). This is commonly interpreted to mean that some attributes of workers that are not easily observed, such as customer skills, motivation and flexibility, have become more highly valued by employers. It can also partly be explained by a rise in short term fluctuations in people's earnings. "Jobs were becoming less stable as well as less equal." (Gottschalk, 1997:33).

In support of the demand-determined view, Blau (1999) argues that "an abundance of labor has never spurred employment: the unemployment rate is consistent proof of that." Yet the illusion persists

. . . if only the unemployed consisted more rather than less skilled workers, unemployment would disappear. This view romanticises why workers get hired. They are not hired because they are available; they are hired because employers in the private sector believe that the value of their contribution to the business exceeds their cost. Nothing in the history of

economics suggests that a change in the skills workers possess is sufficient to alter this equation.

Blau, 1999:132

Prior and Schaffer (1999) show convincingly that in the US the growth of average levels of education has caused people with a given level of education to take increasingly lower skilled/paid jobs. This has caused a considerable downward occupational mobility at each education level. "In brief, university graduates are taking high-school jobs." (p 3) This has been accompanied by a rising joblessness of prime-age males, particularly among the less educated, which has persisted even with the strong growth in employment in the 1990s. The labour market is increasingly sorting workers by their cognitive skills (not just education, which is why there is an increasing dispersion of pay within educational categories). "Workers experiencing downward occupational mobility generally have lower cognitive skills than others with the same educational credentials." (p 4).

Prior and Schaffer argue that credentialism is a very important phenomenon, and increasing the formal education of some people will not increase total employment, just change who has the jobs, making it even harder for those with little formal education. They believe bumping down the educational ladder has been a major explanation for the fall in wages for those with low education, and the lowest educated (especially men) have fallen off the bottom rung into non-employment. Their views are supported by Pigeon and Wray (1998), who report that over the course of the 1990s, fewer than 500,000 extra jobs in the US were taken by people on the bottom *half* of the education ladder (ie, no more than high school). The 11.3 million other new jobs went to people with at least some college education. Many of these jobs were low skilled and could have been done by those with only high school education. They also report an interesting survey of employers of production labour, asking what they look for when recruiting. The answer is, in order of importance, attitude, communication skills, previous work experience, views of co-workers and previous employer, industry-based credentials, years of schooling. (p 207). Thus, adding to schooling may not do much, if does not affect attitudes and communication skills. This is hard to do if home and neighbourhood are against it.

The explanation of the rise in inequality of earnings that is based around the idea of credentialism is strongly challenged by an alternative school of thought that argues instead for the role of skill-biased technological change. In brief, this perspective argues that the simultaneous rise in the number of more highly educated workers and the return to education (strongly apparent in the US since the mid-1970s) can only be explained by a large increase in the demand for highly educated workers. Greater integration of the world economy and reduced protections for the working conditions of low wage workers are judged to explain part but by no means all of the rise in inequality (or return to education and experience). This leaves skill-biased technological change as the remaining major candidate to explain the observed facts. In an impressive review of the evidence and arguments for the role of skill-biased technological change, Acemoglu (2002) argues that it was the dominant influence over the preceding three decades in the US. This view is widely shared among American economists (eg, Katz and Autor (1999), Autor, Katz and Kreuger (1998)). He goes further to argue that the rise in the rate of skill-biased technological change was caused by a sudden expansion of college enrolments in the late 1960s, mainly as a way of deferring conscription for the Vietnam war. This view is directly contrary to that of Prior and Schaeffer. It argues that the rapid expansion in college level education made it more profitable to develop and introduce technologies that required college level skills to utilise them. That is, the expansion of skills did call forth demand for those skills.

While the skill-biased technological change story has much empirical and theoretical support, there remain several puzzles. One is that over the relevant period, wages of low skill workers fell substantially and the rate of productivity growth was low in the US. Another is that other parts of the developed world did not experience the same rise in inequality and often had faster rates of growth in productivity, yet faced broadly comparable technological frontiers. The final story is yet to be told on the links between education, inequality in wages, technological change,

globalisation and institutional and regulatory changes. In the context on concern about the role of low wage jobs, the key question is whether a strategy to increase average levels of education, or the levels of education of lower skilled workers, is likely to be effective in improving the employment outcomes for those at the bottom of the skill ladder. While there can be no doubt that improvement in the level of education of any particular person with low skills will improve their job prospects, it is more controversial to assert that the same is true for an increase in education for the whole class of low skill workers.

CONCLUSIONS

To conclude, we provide a brief summary of what has been learned, in terms of each of the questions set out in the introduction.

The extent to which low pay jobs provide the first step on the ladder to reasonably paid and reasonably secure jobs for low skill workers

This is the topic on which the literature provided the most information. It is clear that there is indeed substantial upward wage mobility for people who are in low wage jobs. It is also clear that the probability of low wage workers moving to higher paid jobs varies over time, by country, by age, education, experience, occupation and industry. It also varies according to the definition of low wage: the lower the wage, the greater the mobility. This is because there is downward as well as upward mobility (many people who lose their jobs have to accept lower wages in their next job) and many upward moves are only to a slightly higher wage.

Teenagers employed on or near the minimum wage have high rates of upward wage mobility. In contrast, sole mothers and low education adults have quite low levels of mobility. For this second group, there is considerable cycling between low wage work, unemployment and non-employment. Where there is some wage mobility, it is frequently inadequate to lift workers out of poverty. The combination of low wages and part-time or part-year employment produces very low annual earnings.

Countries with lightly regulated labour markets and relatively low levels of employment protection (eg, the US and UK) might be expected to have higher levels of wage mobility than countries with more regulated labour markets. In fact this is not so. The US does have relatively high levels of *job* mobility, and low wage workers most commonly have to change jobs in order to obtain a wage rise. But the US nonetheless has lower levels of *wage* mobility than do the more regulated European countries. One reason for this is that US firms invest less than their European counterparts in skills development of their workers on the job. The US and the UK also have relatively high levels of inequality in pay. The ability of employers to pay low wages is probably one reason why US firms find it profitable to employ workers who have continuing low productivity. A number of the European countries place a strong emphasis on the provision of structured pathways from initial low wage jobs into better paying jobs, for youth. They also have more generous welfare arrangements for people who struggle to find adequately paid employment. For these and other reasons, people are less likely to get stuck in continuing low wage employment than they are in the US and UK.

It should be noted that the relatively low levels of upward wage mobility in the US occur in a country that has the highest average levels of formal education in the world. More education is not necessarily the answer to increasing wage mobility. It matters who gets this education (the US does relatively well for the more able, and relatively badly for the less able). The role of firms in providing skills development is also important, as are institutional structures to encourage pathways to better jobs. The reader should be aware that the evidence of relative wage mobility mostly does not extend beyond the mid-1990s. A strong macro-economy, as experienced in the US and UK in the latter 1990s, is some help to upward wage mobility. Offsetting this, the literature identifies a substantial trend towards declining mobility as inequality in the cross-section wage distribution has risen.

We conclude from this review of the literature that low wage jobs are an important entry point for young people as they first become established in the labour market. For the large majority of these young people, the low wage jobs are temporary, and can indeed be seen as the first foot on the ladder. For a minority of young people, the size of which varies across countries, initial low wage jobs do not lead on to better things, but rather to a cycling between low wage employment, unemployment and non-employment. The social and economic institutions for assisting the transition from school to work are important for this minority.

This generally sanguine view of the role of low wage jobs does not apply to older workers. For older workers who are sole mothers, have lost their previous job, or who have lower levels of education, low wage jobs often do not lead anywhere. Many are inherently low skilled and are not associated with promotional ladders (truck drivers, cashiers, nurse, child care and teachers aides, cleaners etc). Note that, although the pattern varies a little across countries, the typical full-time low wage worker is a woman aged 25-55 who has basic or upper secondary education. Only in Germany were a majority of low wage workers aged under 25 (in the US, 80 per cent are over 24). Thus the high wage mobility observed for low wage youth is of little comfort to the majority of low wage workers. In Australia and New Zealand, a majority of full-time low wage workers are men. And in the US, more than one third have post-school qualifications.

Which types of low paid jobs provide the best/worst chances of upward mobility?

Low wage jobs are concentrated in particular occupations and industries. They are prevalent in service industry jobs that broadly replicate in the market the sort of activities that were once done by women in the home. These include child care, elder care, non-qualified nursing care, cleaning, food preparation and serving. These types of jobs are not part of any sort of career path and workers in them can expect a pay rise only if they move to some different job/industry. Truck driving and labouring are comparable jobs for men.

The industries in which the low wage jobs are predominantly found are similar across countries. They include retail, hospitality, personal services and business services. Firms in the entertainment, recreation, mining and personal services industries were found to provide virtually no increase in wages based on tenure in the firm, in the US. There is evidence that some firms operate a high turnover, low wage policy, which discourages both firm and worker from investing in skills related to the job. Indeed, high turnover industries/firms are likely to provide poor opportunities for upward wage mobility. First, high turnover discourages investment in skills. Second, workers who lose their jobs systematically are forced to accept lower wages in their replacement job. Indeed, the wage loss from involuntary job change often lasts for many years, if not the rest of the working life.

Small firms in the private sector were found to be systematically linked with low propensities for wage gains for their low wage workers.

The conditions that are conducive to wage growth for a low wage worker, in their current job, are employment in a large, profitable, low turnover firm that operates in industries other than retail, hospitality or personal services. Public sector employment is in most cases a relatively high wage employer of low skill people and provides relatively large amounts of on the job training.

The circumstances facing low skill workers, especially in the main English-speaking countries, has become increasingly challenging in the past three decades. The best evidence to date concludes that technological change, which has probably accelerated, has particularly favoured high skill workers (ie, those with high levels of formal education and workforce experience). It has also favoured particular personal attributes, such as cognitive ability and interpersonal skills, that are not readily acquired. These impacts of technological change on the shape of the demand for skills has been reinforced by increased international integration of the economy and

changes in the pattern of demand away from manufactured goods towards services. The protections provided to lower paid workers through unions, regulated conditions of employment and high levels of public sector employment have been diminished by sustained public policy actions, especially in the English-speaking world. The shift towards services (which cannot be stored) and the increased levels of competition in product markets have caused firms to move more towards part-time, casual and contract (just-in-time) labour. Workers employed on such terms systematically receive less on the job training than do full-time permanent workers, for easily understood reasons.

People have responded to the increased premium for skills by acquiring ever-increasing levels of formal education. One likely consequence is that the group who do not follow this path is increasingly perceived to be of low quality. The absence of much education is easily taken to indicate poor employability. Why would a person “choose” not to go on with their education unless there was something seriously wrong with them?

Changes in the structure of industry in the turbulent decades since the early 1970s have led to the obsolescence of skills for workers in the declining industries. One clear example is men working in manufacturing. Strong evidence was cited that showed that job loss in these circumstances results in large losses in wages that endure for many years, if it is possible to find a job at all. The rising withdrawal of adult men from the labour force suggests that many do not find another job. The industries that have been growing in this structural change (retail, hospitality, personal services) are ones that offer relatively little on the job training and career paths.

Overall, the economic dynamics of recent decades have provided exciting opportunities for able, well-educated workers from favourable family backgrounds. But they have made it harder for less able, low-education workers from unfavourable family backgrounds to identify and follow pathways to satisfactory employment. Many face insecure, part-time, low paid employment in small firms that offer little skills development.

Is a low paid, insecure job better than no job?

This interesting and policy-relevant question has several answers, which depend on the meaning given to “better”.

If “better” means that a person has a higher chance of being employed in the next period, then the answer is that a bad job is probably better than no job, but only modestly so. A number of studies show that movement from unemployment into a job is difficult, the more so the longer the duration of the unemployment. Indeed, theory, with some empirical support, concludes that the chances of a low skilled person moving straight from non-employment into a reasonably good job (especially one with prospects for wage growth) are small. The best prospects for a low skilled person to find a reasonable job come from securing a good match – that is, a job that makes the most of their abilities. It often takes a willingness to move from job to job before a good match is found.

The direct evidence that a bad job is better than no job in terms of securing higher pay is weak. A complete investigation of this question would require careful specification of the alternative to employment. For relatively low skill youth, evidence was cited that job programs do increase the chances of getting a regular job, but do little for wages. The most sophisticated examination of this question concluded that employment in a low wage job provides no statistically significant advantage over an episode of unemployment in the search for a higher paying job.

If “better” means better for mental well-being, then the evidence does not support the view that any job is better than no job. The low income associated with being unemployed is a major source of the distress caused by unemployment. But the overwhelming evidence from a number

of longitudinal studies by psychologists is that being employed in a poor job does not lead to better mental well-being than being unemployed, once the effects of any income difference are accounted for.

Do the costs of geographical mobility and broken employment histories inhibit wage mobility and why?

We do not report any direct evidence on the impact of the costs of within country geographical mobility on wage profiles. There is a considerable literature on both international and internal migration. This literature makes the obvious point that people who migrate for economic reasons must believe that the expected earnings in the new destination will exceed the expected earnings in the current location by an amount sufficient to cover the costs of migrating (including the psychological costs). The expected earnings in each case will be a product of the probability of finding a job and the expected wage in that job (plus any welfare available to cover periods of non-employment). An increase in the costs of moving will increase the degree of self-selection among potential migrants, in favour of those with larger expected gains. The costs of moving will be higher for risk averse people if there is uncertainty about potential wage offers in the labour market to which the migrant might move. One policy response that encourages migration among people who should benefit, is to provide high quality information about the destination labour market. Good job-matching services would play a similar role. Home ownership in declining regions has a well-documented negative effect on the propensity to shift to find a better, or any, job. The obvious reason is the capital loss involved in selling the home into a depressed housing market.

Does the supply of low skilled/high skilled workers affect the demand for low skilled/high skilled workers?

The link between the supply of and demand for different types of skills and skill structure is complex, two-way and likely to differ over the long-term as compared with the short term. There is a clear interaction between the supply of and demand for skills via the price mechanism. The wages for specific types of skills (geologists, IT specialists, accountants, bricklayers, for example) clearly are responsive to shifts in the state of excess demand or supply for those skills. Changes in relative wages in turn induce a response in the supply and/or demand. But this is not the issue that underlies the bigger question. Rather, the issue is, if low skilled people generally were given more education or other forms of skill development, would this call forth a greater demand for their new skills? Or would it merely mean that they would be over qualified for whatever jobs they were able to get? And would it mean that those who did not get the extra skills would have virtually no chance of employment, being displaced by those higher up the education ladder than themselves?

The reality is likely to be somewhere between these extremes of full response of demand and no response. But on the US evidence, the balance appears closer to no response. The very high levels of average education, and the large proportion of the US workforce that has completed secondary school and that has tertiary qualifications has not prevented the large scale growth of low wage, low skill jobs. It has had two rather disturbing outcomes. One is that people who do not have substantial levels of formal education have little hope of finding satisfactory employment. The absence of completed secondary school education is taken as a strong signal of poor employability. The other is that many people are over qualified for the work that they do. That this over qualification does not translate into greater prospects for upward wage mobility, is suggested by the relatively low levels of mobility in the US compared with a number of European countries.

Do different causes of low skill (low education, poor schooling or parenting, history on welfare, crime, drug dependence etc) affect future labour market outcomes?

Psychologists have the best evidence on this question. Numerous studies have identified the personal and background characteristics of people who have poor labour market outcomes (mostly in the form of unemployment, rather than low wage jobs).

Economists have observed that the rising inequality of wages in the English-speaking world has occurred within demographic and education groups. That is, people with the same sex, experience, education, race and even occupation are increasingly being paid different levels of wages. This has been interpreted to mean that non-observable personal characteristics, such as motivation and general ability, are being increasingly rewarded in the market place. It must be admitted that the direct evidence for this proposition is modest: it is more an inference than an observation.

The psychological literature is able to identify a range of personal and environmental factors that are detrimental to good employment outcomes. While there is no direct link between these factors and wage mobility, it is a reasonable supposition that the factors that are associated with unemployment, intermittent employment and low wages also contribute to low prospects of obtaining good wages in the future. These factors have direct effects and also effects through their impact on levels of education attained.

Minority ethnicity youth from lower socio-economic status backgrounds who attended public schools are at higher risk for subsequent unemployment. So too are those growing up in a single parent family; with parents who have lower status occupation and qualifications; and with unemployment in the family. Peer relationship problems stemming back into childhood are also predictors of youth unemployment. Young people with the worst labour market prospects not only have family problems and a lack of resources, they are likely also to have mental health problems, a low opinion of themselves, and poor intellectual ability.

Among adults, sole mothers have particular difficulty in moving upward into satisfactory jobs. While for some a low education may be part of the dynamic, no doubt also the need to find time and energy to care for their young children, and an alternative of even modest welfare support, also contribute. There is strong evidence from the US, and some from other English-speaking countries, including Australia, that sole mothers cycle between low paid insecure jobs, having a partner who will support them, and reliance on welfare payments.

POLICIES FOR WAGE MOBILITY

The following picture of wage mobility for low wage workers has emerged from this review of the literature.

Low wage workers are a heterogeneous group, though they are likely to have relatively low levels of formal education. Their best chance of getting a higher wage is to move from a low paid job to a better job. Better jobs are most frequently found in expanding industries, in the public sector and with large employers. They may do this directly by moving to a job that is a better match with their abilities and interests. Or they could, if their current job/employer makes this possible, learn new skills in their current job. If their current job does not provide an opportunity for skills development (and many low wage jobs do not), then their only prospect for improvement is through taking formal courses off the job.

There are several policies that could improve the prospects for wage mobility of low wage workers.

First, young, reasonably educated workers are very likely to be able to manage their own path upward, using a combination of formal job search, personal networks and on and off the job skills development. The more educated they are, the more employers are likely to invest in their further skills development. Therefore, scarce policy and revenue resources should probably be focussed on other groups within the low wage workforce. The two main ones are youth with low levels of formal education, and older workers, especially sole mothers and displaced workers.

There is a dilemma, or perhaps an opportunity, for policy, that arises from the link between job mobility and firm-provided training. On the one hand, the empirical evidence is that low wage workers are most likely to obtain a wage increase by moving voluntarily to another job—indeed, to another industry. On the other hand, high levels of quits inhibit firms from providing on-the-job training.

Policy to facilitate high levels of job mobility will benefit those low wage workers able to move to higher paying jobs. However, it will reduce the opportunities for low wage workers to acquire higher skills from their current employer. In brief, a high mobility policy will encourage wage mobility through more efficient job matching. But it will discourage wage mobility through increased skills learned on the job. This suggests that if a high mobility policy strategy is pursued, careful attention should be paid to the provision of financial or other incentives to firms to provide training for their lower skilled workers. Alternatively, if firm-provided training is encouraged by policies that diminish worker turnover, then ways to obtain the benefits of effective job matching must be devised.

Firms left to themselves are unlikely to provide satisfactory levels of training for low education youth (recall (a) Freeman's conclusion that "considerable institutional structure is needed to induce firms to provide training to workers." (1995: 7)) and (b) that 70 per cent of people in the US with less than high school education experienced a fall in their real wage if they stayed in the same job (Gottschalk (2001)). Further, such youth are not very likely to benefit from off-the-job classroom instruction, since they have already signalled that formal classroom education is not a good environment for them. Unemployment and non-employment for this group is clearly damaging to their future prospects. This suggests that low education young people need to be provided with jobs that contain real skills development. This could be achieved through inducements to firms to provide employment in jobs that have scope for learning, and supervision and encouragement to learn. Larger firms are probably better in this regard than

smaller ones, especially if they are in growing industries. Policy must confront the fact that most low wage jobs are with small employers, and small employers systematically provide less on the job training than do large employers. Learning could usefully be complemented with related off-the-job instruction. One advantage of some instruction off the job is that it will be less firm-specific and hence will contribute to wage mobility through facilitating movement to another job. There is an argument for some apprentice type arrangement, whereby both the firm and the employee have obligations and contribute to the cost of the skills development—the employee via accepting a lower wage. The main drawback of relying on firms for skills development is that both the employment side and the learning side of the arrangement must be satisfactory to both parties in order to obtain the desired outcome. It is likely to be beneficial to have mediators who assist in keeping both sides of the relationship running smoothly. In the US there are signs of the emergence of private “career managers” who take on the role of mediator and put together job and training packages for individuals (for a fee): (see Zemsky, 1998). Off-the-job components of the training package could be privately supplied, but this may make them beyond the reach of low wage workers who are already accepting a training wage. There is a strong case for public subsidy, and perhaps provision, of such training. There could be scope for an income-contingent fee, if the costs of the training are large enough to justify the administrative costs. It may also be necessary to work through many channels to develop a culture within firms of training and support for low education youth.

The strategy for young people may be suitable also for older low wage workers. With the older workers, however, the disenchantment with the formal education system may be more muted. This would make the conventional route to higher wages, via formal education qualifications, a complementary strategy. The policy issue is how to finance the time out necessary for study. Adult time is more expensive than youth time, in part because adults are likely to have obligations to children and perhaps to a mortgage. Flexible delivery of courses provides an opportunity for adults to learn at times of the week where their time has least alternative value.

In the end, training and learning is beneficial only if there are jobs available that will use the newly acquired skills. The decisions that firms make about the skill mix and turnover properties they look for in their workforces has immense social significance. It is clear from theory and from the US and UK experiences, that left to themselves many firms will adopt the low wage, low training, high turnover strategy. Recall that about 15 per cent of high education workers in the Netherlands, Germany, France and the UK had low wages: further evidence that supply does not necessarily generate its own demand. The outcome is high levels of wage inequality and of poverty, and low prospects for upward wage mobility among many, especially older, low wage workers. A skills development strategy on the supply side needs to be matched with policies to induce firms to recognise the social interest in the quality and character of jobs on offer. This may need to be complemented by some form of job creation subsidies and job destruction taxes.

The evidence from the psychologists that identifiable groups of people are most at risk of being stuck in a pattern of low wage/no wage jobs provides an opportunity for positive public policy. Clearly, governments cannot ensure that all people reach adulthood confident, motivated, intelligent, highly educated and with good peer relationships. But it can recognise that the prospects of being able to carve out an adequate adult worklife for oneself vary a great deal and that some at least of that variation is not reasonably seen as self-inflicted. One response could be to offer intensive assistance to people who come from the most unpropitious backgrounds. This is in contrast to a welfare system that treats everyone equally. The Jobs Network in Australia provides an example of how such a mechanism for intensive assistance might work. There, private employment agencies are paid a capitation fee by the Government for each unemployed person for whom they find a job. The capitation fee is varied, depending on the assessed difficulty of finding a job for such a person. People who are assessed to be particularly difficult to employ (such as the long-term unemployed) carry the greatest capitation fee, and a requirement that they be given intensive assistance before the fee will be paid.

A second response could be to provide particular support for the transition from school to work for young people who face unpromising prospects. The transition from school to work is reasonably smooth for the majority of young people. But in an increasingly complex world, it is a difficult and sometimes unsuccessful project for some. Tailored assistance in finding and keeping work, and finding and completing relevant training, could be targeted to those whom the research shows are likely to have the greatest difficulty in managing the transition on their own.

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TAG 11

The AIG Examples Revisited

Single Income family with one child

George works full-time and received an award rate of \$567.80¹ (ie. \$29,525.60 pa). He and his partner Julie have one child under 5.

The Commission awarded an \$18 safety net adjustment. The effect on George and Julie's family is:

Pre SNA Income	Safety Net Adjustment (SNA)	Current Income	Increased Tax Paid ²	Family Assistance Benefits (before SNA) ³	New Family Assistance ⁴	Change in Family Assistance	Benefit to Family
567.80	18.00	585.80 (30461.60 pa)	5.40	Family Tax Benefit Part A = 61.46 Family Tax Benefit Part B = 52.78 Rent Assistance ⁵ = 53.13 Health Care Card	Family Tax Benefit Part A = 63.35 Family Tax Benefit Part B = 54.39 Rent Assistance = 53.97 Health Care Card	+1.89 +1.61 +0.84	12.60 plus extra 4.34 family assistance payments

¹ This is the C7 award rate which aligns with a special class tradesperson in the metal industry (SNA date of effect 1 June 2002) or a senior clerk (eg in the Victorian industry SNA date of effect 2 July 2002).

² Tax rate on income between 20,001 and 50,000 is 30 cents in the dollar.

³ The maximum Family Tax Benefit Part A was payable for income levels up to \$29857. The maximum Family Tax Benefit Part B, calculated on the second earner's income, was payable for income up to \$1679.

⁴ After 1 July 2002 the maximum Family Tax Benefit Part A is payable for income levels up to \$30806. The payment rates for FTB Part A and Part B also increased on 1 July 2002.

⁵ Assuming rent of \$250 per week



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Family Assistance Estimator: Results.

- The results displayed on this screen are based on the answers you have provided while using this application. The application is based on current family assistance law, including the latest payment rates and thresholds.
- The results displayed are only an estimate of the amount of family assistance you may be eligible for. Some of the questions you have answered in this investigation would normally be answered by an authorised officer of the Family Assistance Office when you lodge a formal claim. This may result in your actual entitlement being different from the results displayed on this screen.
- Your actual entitlement will be worked out based on the level of your income and your family circumstances. It will also rely on you fulfilling claim requirements, such as:
 - lodging a claim form;
 - providing Tax File Numbers;
 - providing direct deposit details;
 - providing proof of identity
 - providing proof of birth or care of your child/children
- As most government payments are paid from, or after, the date on which you apply, it is important to apply as soon as possible to avoid any loss of payment.

Disclaimer:

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Your Possible Entitlement (from information you provided on 3 February, 2003 18:21 Canberra time)

Combined Total Adjusted Taxable Income. [Help.](#) \$ 30462.

Possible family assistance of \$ 343.42 per fortnight or \$ 8953.45 per year.

This is made up of:

Family Tax Benefit Part A	\$ 126.70 per fortnight.	Help.
Family Tax Benefit Part B	\$ 108.78 per fortnight.	Help.
Rent Assistance	\$ 107.94 per fortnight.	Help.

Details You Provided (as at 3 February, 2003 18:21 Canberra time):

Partnered: Yes
 Children under 5 years old: 1
 Private Rent Paid: Yes \$ 250.00 per week

Income Amounts.

You.

Your Partner.

Dual income family with two children

John works full-time and his partner Cathy works part-time (19 hours per week). Both earned the federal minimum wage of \$413.40. Family income was \$620.10 per week (\$32,245.20pa). They have two children under 5.

The Commission awarded an \$18 safety net adjustment. The effect on John and Cathy's family is:

Pre SNA Income	Safety Net Adjustment (SNA)	Current Income	Increased Tax Paid ⁶	Family Assistance Benefits (before SNA) ⁷	New Family Assistance ⁸	Change in Family Assistance	Benefit to Family
620.10	18.00 (27.00 for the couple)	647.10 (33649.20 pa)	6.93	Family Tax Benefit Part A = 114.52 Family Tax Benefit Part B = 0.63 Rent Assistance ⁹ = 47.81	Family Tax Benefit Part A = 116.62 Family Tax Benefit Part B = nil Rent Assistance = 47.67	+2.10 -0.63 -0.14	20.07 plus extra 1.33 family assistance payments

⁶ Tax rates are: John: 30c in the dollar; Cathy: 17c in the dollar (Extra tax payable is 5.40 + 1.53)

⁷ The maximum Family Tax Benefit Part A was only payable for family income levels up to \$29857. The benefit is reduced by 30c in each dollar above \$29857. The maximum Family Tax Benefit Part B, calculated on the second earner's income, was payable for income up to \$1679. The benefit is reduced by 30c in each dollar above \$1679.

⁸ After 1 July 2002 the maximum Family Tax Benefit Part A is only payable for family income levels up to \$30806. The benefit is reduced by 30c in each dollar above \$30806. The payment rate for FTB Part A also increased on 1 July 2002. After 1 July 2002 Family Tax Benefit Part B, calculated on the second earner's income, is payable for income up to \$11206.

⁹ Assuming rent of \$250 per week



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Family Assistance Estimator: Results.

- The results displayed on this screen are based on the answers you have provided while using this application. The application is based on current family assistance law, including the latest payment rates and thresholds.
- The results displayed are only an estimate of the amount of family assistance you may be eligible for. Some of the questions you have answered in this investigation would normally be answered by an authorised officer of the Family Assistance Office when you lodge a formal claim. This may result in your actual entitlement being different from the results displayed on this screen.
- Your actual entitlement will be worked out based on the level of your income and your family circumstances. It will also rely on you fulfilling claim requirements, such as:
 - lodging a claim form;
 - providing Tax File Numbers;
 - providing direct deposit details;
 - providing proof of identity
 - providing proof of birth or care of your child/children
- As most government payments are paid from, or after, the date on which you apply, it is important to apply as soon as possible to avoid any loss of payment.

Disclaimer:

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Your Possible Entitlement (from information you provided on 3 February, 2003 18:23 Canberra time)

Combined Total Adjusted Taxable Income. [Help.](#) \$ 33649.

Possible family assistance of \$ 328.58 per fortnight or \$ 8566.55 per year.

This is made up of:

Family Tax Benefit Part A \$ 233.24 per fortnight. [Help.](#)
 Rent Assistance \$ 95.34 per fortnight. [Help.](#)

Details You Provided (as at 3 February, 2003 18:23 Canberra time):

Partnered: Yes
 Children under 5 years old: 2
 Private Rent Paid: Yes \$ 250.00 per week

Income Amounts.	You.	Your Partner.
Taxable income.	\$ 11216	\$ 22433

Are you receiving income support payments: No
Is your partner receiving income support payments: No

Important:

The rates provided by this estimator are indicative only. The estimator does not cover every situation.

These are examples of situations where this estimator does not provide all the advice you may need on the assistance you might be able to get:

- People experiencing a major event such as families whose main income earner has just become unemployed may be entitled to other assistance.
- People who are separated or divorced and sharing the care of their children may be entitled to different rates of assistance.
- For Child Care Benefit, this estimator can only be used to estimate possible entitlements for people using [approved child care](#) not [registered child care](#).

You can get an accurate assessment of your entitlements by claiming at the Family Assistance Office. For further information on how to claim, please see [How to Claim](#). As most government payments are paid from, or after, the date of which you apply, it is important to apply as soon as possible to avoid any loss of payment.

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