



1. **Headline summary**

This month the CLMI headlines are:

- The impact of the global economic crisis continues to cause uncertainty worldwide and the Australian labour market has deteriorated in the August 2011 quarter.
- Total labour underutilisation has risen to 11.0 per cent in the August 2011 quarter. Over the last 12 months, total labour underutilisation has fallen from 11.2 per cent to 11.0 per cent (seasonally adjusted).
- Unemployment for the August quarter rose to 5.2 per cent; Hidden unemployment has also risen to 1.6 per cent; and Underemployment remained steady at 4.3 per cent from the May to August 2011 quarter.
- Total underutilisation has risen sharply for males and remained steady for females in August (9.2 per cent for males and 15.6 per cent for females).
- Females have higher rates of underutilisation than males on all indicators, especially those measured in hours.
- Underemployment rates for females (6.4 per cent), are more than twice that for males (3.0 per cent).
- Total labour underutilisation is highest in both Tasmania and Queensland (13.3 per cent) and lowest in Western Australia (7.9 per cent). South Australia (11.2 per cent); New South Wales (10.9 per cent) and Victoria (10.6 per cent) are next in order. This reflects relatively poorer performance across the three components of labour wastage: joblessness; reduced participation and underemployment.
- Underemployment has fallen in New South Wales, Victoria, Queensland and Western Australia in the last quarter but has risen in South Australia and Tasmania. Underemployment is highest in Tasmania (6.0 per cent) and lowest in Western Australia (3.3 per cent). South Australia (4.9 per cent); Queensland (4.7 per cent); New South Wales (4.5 per cent) and Victoria (3.9 per cent) complete the picture of underemployment in Australia.

2. **Official unemployment**

Australia's official unemployment rate at August 2011 rose to 5.16 per cent (seasonally adjusted).

However, there is a major problem with using the official person-based measure of unemployment to gauge the true state of the labour market. This arises because it fails to capture the splintering of full-time, permanent jobs into part-time and casual positions that has occurred over the last 20 years.

In the current recession, this trend has accelerated leaving increasing numbers of workers without enough hours of work even though they have retained their overall status as employed.

The ABS considers a person to be employed if they work one or more hours of paid work per week. However, it is clear from the CLMI and the official data, that there are many people working part-

time who desire more hours of employment but are unable to find employers offering the work. We consider these workers to be partly employed (the hours they work) and partly unemployed (the hours they want to work).

The CLMI developed by CoffEE are designed to incorporate these important realities and to provide broader measures of labour underutilisation. These more fully represent the degree to which willing labour resources are being wasted. A description of all the concepts used in the CLMI appears at the end of this publication.

It is important to note that even at the best of times – at the end of the recent growth phase (February 2008) when the official unemployment rate was around 4 per cent - the CLMI estimates that total labour wastage was around 7.8 per cent.

3. CoffEE's hours based indicators, Australia

Table 1 compares the CoffEE CLMI measures with the official unemployment rate from August 2009 to August 2011.

CU4 is the sum of hidden unemployment (discouraged workers) and official unemployment. It indicates that some workers stop participating in the labour force (they stop looking for work) even though they would be available for work and willing to take work if it was offered to them. They are functionally equivalent to the unemployed except they have become discouraged by the lack of job opportunities available to them.

Table 1 shows that hidden unemployment has fallen since the downturn (August 2009, 1.95 per cent, August 2011, 1.64 per cent). Hidden unemployment is the difference between CU4 and U3.

Table 1 Official unemployment rate and CLMI hours-based indicators, per cent, seasonally adjusted

Quarter	Australia				
	U3	CU4	UE	CU7	CU8
Aug-2009	5.76	7.71	4.89	10.62	12.51
Nov-2009	5.66	7.55	4.81	10.45	12.29
Feb-2010	5.29	7.00	4.52	9.83	11.47
May-2010	5.23	6.90	4.15	9.41	11.04
Aug-2010	5.19	6.85	4.44	9.61	11.20
Nov-2010	5.20	6.86	4.44	9.61	11.21
Feb-2011	4.97	6.52	4.44	9.41	10.88
May-2011	4.90	6.41	4.30	9.23	10.68
Aug-2011	5.16	6.80	4.27	9.40	10.99

Source: ABS *Labour Force* data and CoffEE CLMI estimates. Data is seasonally adjusted.

CU7 adds underemployment measured in lost hours of work to official unemployment, while CU8 is the sum of hours lost due to official unemployment plus hidden unemployment plus underemployment.

CU8 is the broadest measure of labour wastage available in the CLMI and better represents the true state of the labour market. The CLMI hours-adjusted underutilisation rates are substantially higher than the official rate indicating that overall labour underutilisation remains a major problem despite the growth period that has just finished and recent improvements in the official unemployment rate.

Claims that the economy moved close to full employment at the height of the boom are shown to be false when we consider the levels of CU7 and CU8.

The total labour underutilisation rate (CU8) rose to 11.0 per cent.

The rough rule of thumb that to measure the total rate of labour underutilisation one should “double the official unemployment rate” would appear to have some support from relationship between CU8 and U3, although the trend bias towards casualisation has seen the gap between the two widen in recent years. It is clear that the

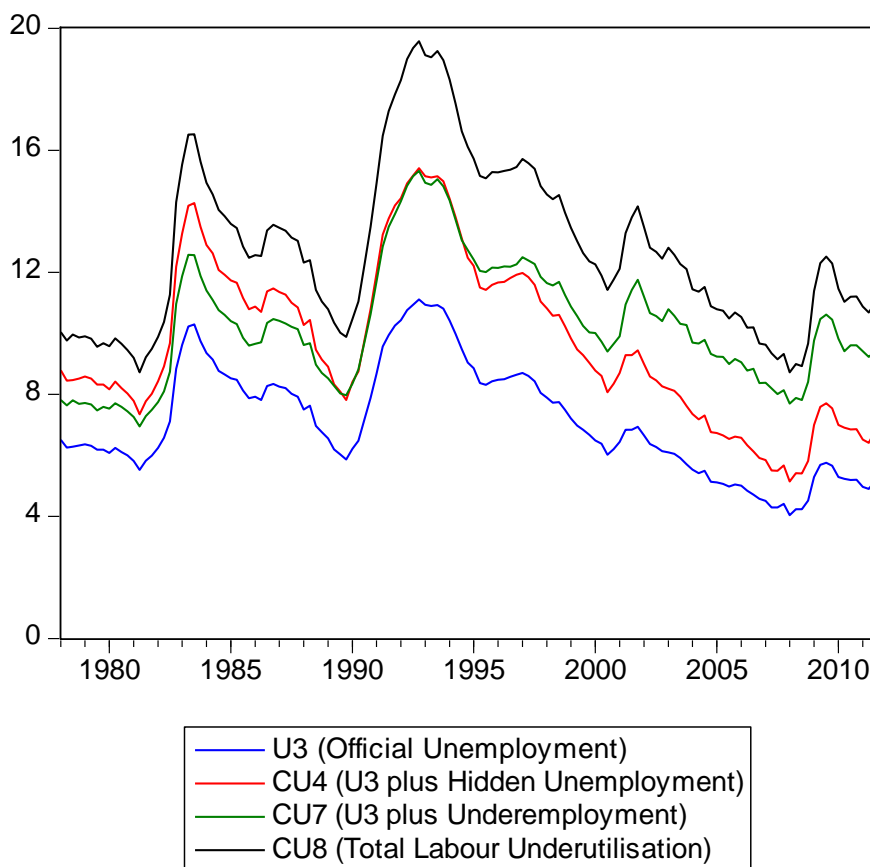
official unemployment measure U3 significantly understates the amount of labour wastage in the Australian economy.

A longer-term view of the dynamic relationship between the hours-based CLMI indicators and the official unemployment rate is provided in Figure 1.

The measures of labour underutilisation are clearly cyclical. What is notable is the time that it has taken since the last major recession in 1991 for the measures to decline. The costs of recession are spread over many years as the labour market struggles to recover.

It is also clear that since 1980 the gap between U3 and CU7 has risen. This reflects the creation of an increasing proportion of part-time and casual jobs which offer less than the hours desired by many workers noted earlier. U3, CU7 and CU8 exhibit similar cyclical patterns with pronounced cyclical asymmetry and hysteresis.

Figure 1 Official unemployment rate and CofFEE underutilisation measures, November 1978 – August 2011



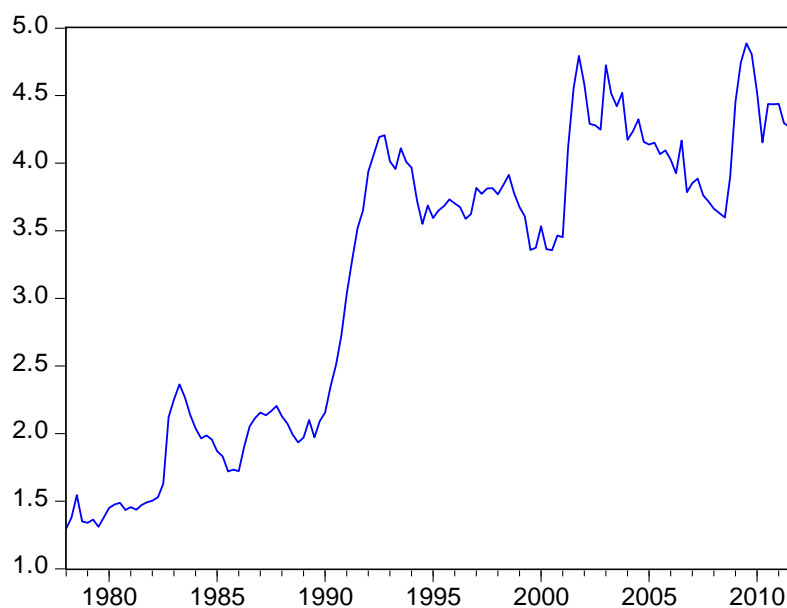
Source: ABS *Labour Force* data and CofFEE CLMI estimates. Data is seasonally adjusted.

Figure 2 shows that underemployment (UE) resembles a step function with the jumps coinciding with the major downturns over the period since 1980. Of significance is the fact that UE did not return to pre-1991 recession levels despite the long period of economic growth in Australia. This confirms the significant trend in the economy towards the substitution of official unemployment for underemployment.

The August quarter estimates show underemployment has remained steady since last quarter (4.3 per cent), just falling below the peak of the 1991 recession. As the economy struggled to resume growth in 1992, underemployment peaked in the November quarter 1992 at 4.4 per cent.

So in this current downturn, underemployment is looking like it will deteriorate further and establish new highs. This will be built into the next recovery and prolong the high rates of labour underutilisation unless there is concerted government action.

Figure 2 Underemployment, Australia, November 1978 – August 2011



Source: ABS *Labour Force* data and CoffEE CLMI estimates. Data is seasonally adjusted.

We have received some queries asking why the official Australian Bureau of Statistics estimates of underemployment are higher than hours. The reason lies in the different methodologies used. The ABS compute their estimates on a person-basis (so someone is either underemployed or not) whereas the CLMI is an hours-based measure and takes into account the extra hours that different underemployed workers indicate they desire but cannot obtain.

4. Labour underutilisation by gender

Broad labour wastage by gender

Total labour underutilisation is 9.2 per cent for males and 15.6 per cent for females.

Table 2 shows that during the August quarter 2011, the official female unemployment rate was 5.27 per cent, higher than the male unemployment rate.

During the 1980s female unemployment rates were on average 1.3 percentage points higher than male unemployment rates.

Throughout the 1990s however, male unemployment rates were consistently above female unemployment rates (average over the period of 0.7 percentage points higher).

Whilst underemployment has fallen slightly for females in the August quarter, (down 0.05 per cent), the official unemployment rate (U3) and the broad hours based measure (CU4), have risen (U3 by 0.05 per cent and CU4 by 0.1 per cent). Both CU7 and CU8 remain steady (11.7 per cent and 15.6 per cent respectively). However, the hours-based measures (CU7 and CU8) remain consistently higher for females.

Most of the burden of hidden unemployment is borne by females (4.1 per cent in August 2011 compared to 1.2 per cent for males). This reflects the sensitivity of female participation rates to the business cycle.

The upturn in hidden unemployment is less pronounced at this stage of the downturn than in previous episodes and this might reflect the dominance of the “added worker” effect over the “discourage worker” effect. There is some conjecture that this relates to the wealth losses from superannuation over the course of the global financial crisis, a proposition which remains unproven at this stage.

Taken together, the current recession is impacting more on males in terms of job loss (principally full-time) and more on females in terms of loss of part-time working hours.

Table 2 Official unemployment rate (U3) and CLMI hours-based indicators, by gender, per cent

Quarter	Males					Females				
	U3	CU4	UE	CU7	CU8	U3	CU4	UE	CU7	CU8
Aug-2009	5.95	7.49	3.53	9.48	10.94	5.53	9.91	7.13	12.65	16.93
Nov-2009	5.81	7.29	3.41	9.17	10.58	5.46	9.76	7.10	12.60	16.75
Feb-2010	5.31	6.59	3.17	8.53	9.76	5.30	9.37	6.80	12.10	16.13
May-2010	5.13	6.35	2.91	8.03	9.19	5.35	9.50	6.34	11.68	15.76
Aug-2010	5.02	6.20	3.29	8.29	9.40	5.40	9.62	6.45	11.84	15.92
Nov-2010	4.95	6.10	3.26	8.18	9.25	5.48	9.79	6.48	11.97	16.13
Feb-2011	4.68	5.73	3.19	7.89	8.90	5.34	9.46	6.64	11.99	15.98
May-2011	4.64	5.67	3.10	7.74	8.71	5.22	9.22	6.45	11.65	15.58
Aug-2011	5.07	6.26	3.00	8.05	9.19	5.27	9.32	6.40	11.66	15.58

Source: ABS *Labour Force* data and CoffEE CLMI estimates. Data is seasonally adjusted.

Note: Numbers have been rounded to two decimal places.

Underemployment by gender

The rise in underemployment (UE) discussed above shows that the labour market is now increasingly offering employment with deficient hours of work relative to the aspirations by workers for further work. Table 3 shows that underemployment is a far more serious problem for females than males, with the rates for females more than double that of males. Around 6.4 per cent of desired hours of work offered by females is wasted due to underemployment compared to around 3.0 per cent for males.

Females have significantly higher rates of underemployment than males – 6.4 per cent compared to 3.0 per cent.

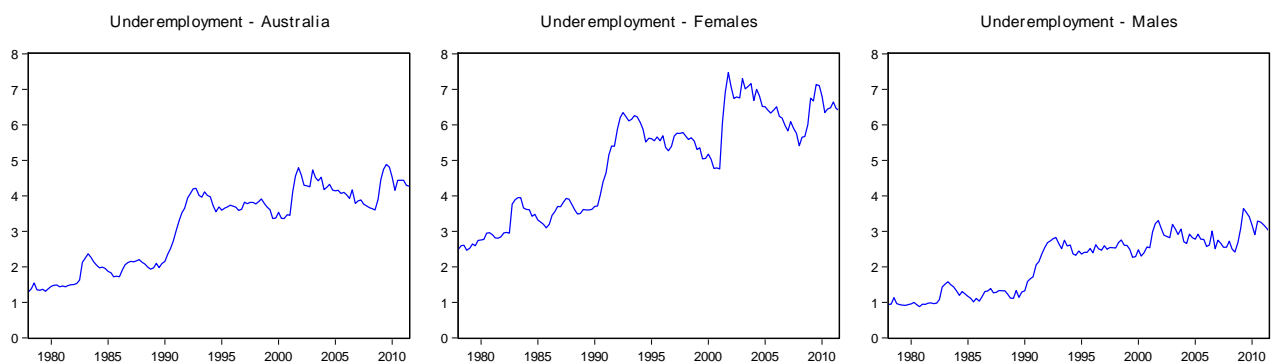
We expect that UE will rise in the current downturn as employers initially seek to convert full-time jobs into part-time jobs and increase their use of casual labour overall. This is a pattern common in the early stages of a significant economic slowdown.

Table 3 Underemployment (UE), by gender, per cent

Quarter	Males	Females	Difference
Aug-2009	3.53	7.13	3.60
Nov-2009	3.41	7.10	3.69
Feb-2010	3.17	6.80	3.63
May-2010	2.91	6.34	3.44
Aug-2010	3.29	6.45	3.16
Nov-2010	3.26	6.48	3.22
Feb-2011	3.19	6.64	3.46
May-2011	3.10	6.45	3.35
Aug-2011	3.00	6.40	3.40

Source: ABS *Labour Force* data and CoffEE CLMI estimates. Data is seasonally adjusted.

Figure 3 Underemployment by gender, per cent



Source: ABS *Labour Force* data and CoffEE estimates. Vertical scales are common for comparison.

Figure 3 presents underemployment by gender and reveals the sharp disparity between males and females, which reflects the fact that the dominant employer of females remains the service sector where fractionalised and low-pay dominates.

Historical relationships between U3 and broader CLMI measures by gender

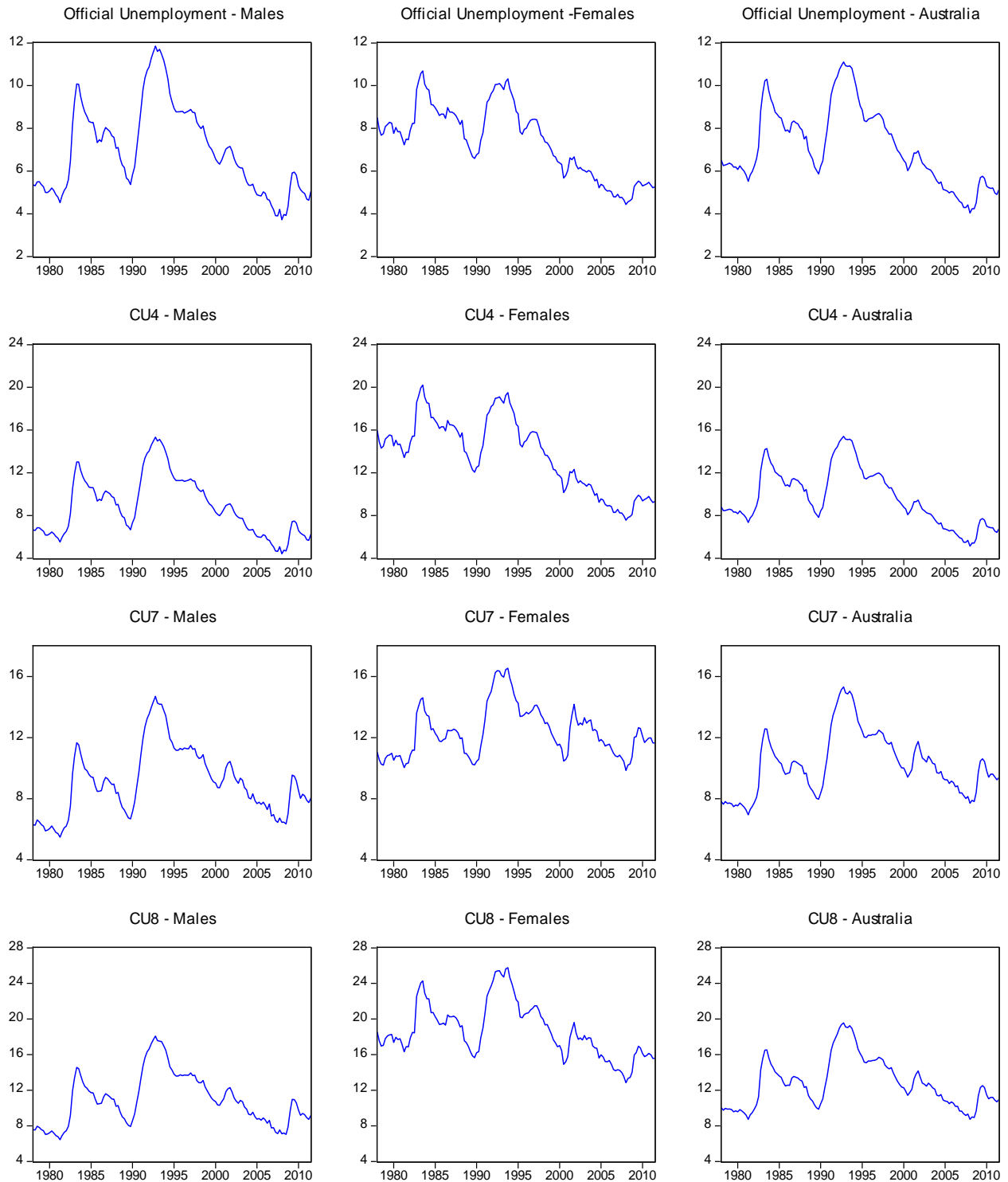
Figure 4 shows the time series behaviour of the various CLMI measures and the official unemployment rate (U3) since February 1978 for females, males and Australia. The labour market indicators move in a cyclical fashion in common with the national economy. For both males and females, there were major upwards shifts associated with the 1991 recession with males suffering higher unemployment rates than females.

Females are more likely to be hidden unemployed than males. This reflects the fact that for many women work is an additional task to their primary child care responsibilities and further that they may not be entitled to benefits relating to unemployment.

The gap between U3 and CU7 is consistently higher for females which shows that it is females who are most constrained by the lack of hours available. For both males and females, the gap between U3 and CU7 has risen since 1980, which indicates that a proportion of jobs created over that period have been part-time but with less than desired hours on offer.

The broadest underutilisation measure (CU8) is consistently and significantly higher for females, largely due to the higher underemployment experienced by them. This is also reflected in the measure UE where the rate for females is more than double that of males.

Figure 4 Labour underutilisation measures by gender and Australia, per cent



Source: ABS *Labour Force* data and CoffEE estimates. Vertical scales are common for comparison across each row.

5. Underutilisation by States

Broad labour wastage by State

Unemployment rates are highest in Queensland and lowest in Western Australia.

Table 4 shows the deterioration in the labour market by state over the last 24 months (from the August quarter 2009 to the August quarter 2011). The official state unemployment rates (U3) have varied across states. The largest rise over the 24 month period in official unemployment occurred in Tasmania.

Underemployment has again fallen in most states in the August quarter, with Tasmania performing the worst over the last 24 months. Underemployment is highest in Tasmania (6.0 per cent), followed by South Australia (4.9 per cent); Queensland (4.7 per cent) and New South Wales (4.5 per cent). New South Wales, Victoria, Queensland and Western Australia all recorded improvements to underemployment in the 24 month period. Western Australia and Victoria had the greatest improvements of -1.3 and -1.2 per cent respectively; whilst New South Wales and Queensland showed more modest improvement of -0.5 and -0.3 per cent over the past 24 months. The deterioration in the Tasmanian labour market is most pronounced.

Total labour underutilisation is highest in both Tasmania and Queensland (13.3 per cent) and lowest in Western Australia (7.9 per cent). South Australia (11.2 per cent), New South Wales (10.9 per cent) and Victoria (10.6 per cent) are next in order. This reflects relatively poorer performance across the three components of labour wastage: joblessness; reduced participation and underemployment.

Total labour underutilisation is highest in both Tasmania and Queensland (13.3 per cent) and lowest in Western Australia (7.9 per cent).

Table 4 Underutilisation measures by State, per cent

	NSW	VIC	QLD	SA	WA	TAS
<u>Official Unemployment Rate (U3)</u>						
Aug-09	5.92	5.84	5.83	5.74	5.57	5.02
Aug-11	5.32	5.05	5.81	5.01	4.03	5.25
Change	-0.60	-0.79	-0.02	-0.73	-1.54	0.24
<u>Underemployment (UE)</u>						
Aug-09	4.93	5.09	4.92	4.90	4.58	4.79
Aug-11	4.47	3.92	4.66	4.92	3.28	5.97
Change	-0.47	-1.17	-0.27	0.02	-1.29	1.18
<u>Official Unemployment and Hidden Unemployment (CU4)</u>						
Aug-09	7.28	8.01	8.65	7.19	6.59	6.82
Aug-11	6.47	6.80	8.60	6.18	4.62	7.18
Change	-0.80	-1.21	-0.05	-1.01	-1.97	0.35
<u>Broad Labour Underutilisation (CU8 = CU4 + EU)</u>						
Aug-09	12.18	12.94	13.56	12.12	11.09	11.75
Aug-11	10.91	10.62	13.26	11.15	7.87	13.34
Change	-1.27	-2.33	-0.30	-0.97	-3.21	1.58

Source: ABS *Labour Force* data and CofFEE estimates.

Underemployment by States

Table 5 shows that as at August 2011, Tasmania (6.0 per cent), South Australia (4.9 per cent), Queensland (4.7 per cent) and New South Wales (4.5 per cent) suffer the highest rates of underemployment, and are well above the national average of 4.3 per cent. Western Australia and Victoria experience the lowest rates of underemployment of 3.3 and 3.9 per cent respectively.

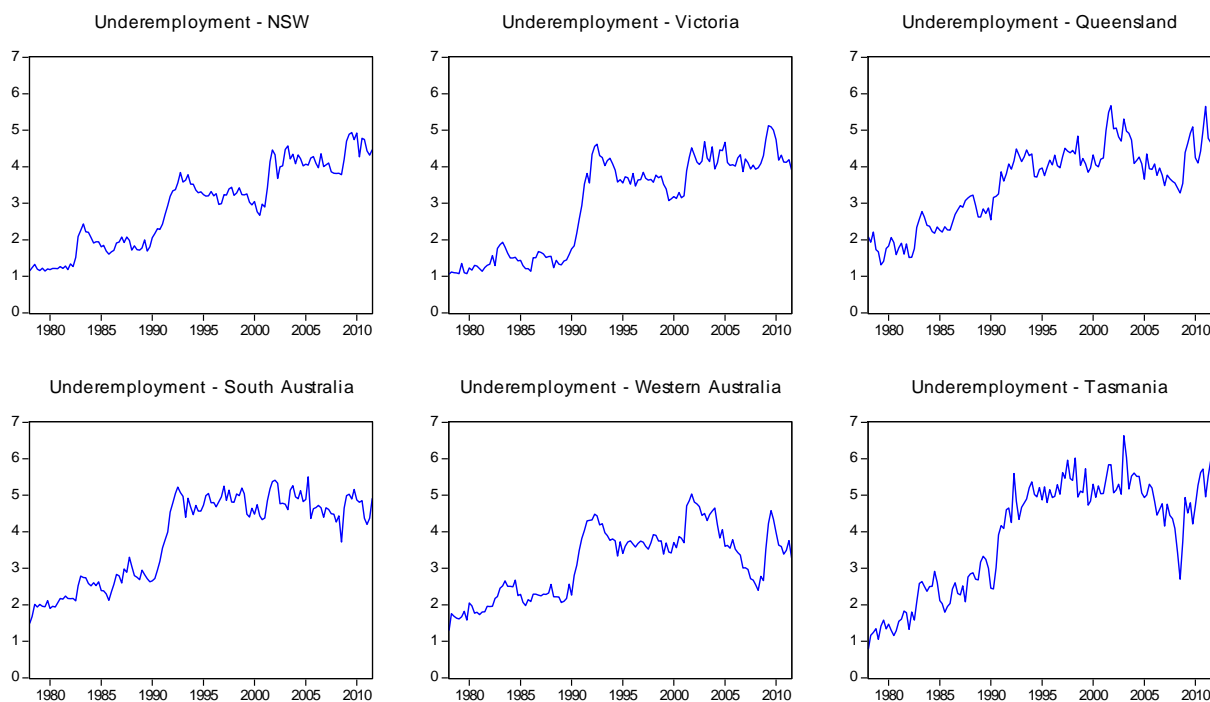
Table 5 Underemployment (UE), by state, August 2009 to August 2011, per cent

Quarter	NSW	VIC	QLD	SA	WA	Tas	AUS
Aug-09	4.93	5.09	4.92	4.90	4.58	4.79	4.89
Nov-09	4.74	5.00	5.09	5.16	4.34	4.22	4.81
Feb-10	4.92	4.74	4.24	4.87	3.98	4.71	4.52
May-10	4.27	4.18	4.10	4.81	3.63	5.27	4.15
Aug-10	4.78	4.32	4.43	4.85	3.59	5.62	4.44
Nov-10	4.75	4.13	4.99	4.37	3.39	5.72	4.44
Feb-11	4.44	4.12	5.66	4.20	3.49	4.95	4.44
May-11	4.32	4.19	4.78	4.37	3.76	5.52	4.30
Aug-11	4.47	3.92	4.66	4.92	3.28	5.97	4.27

Source: ABS *Labour Force* data and CoffEE estimates.

Figure 5 shows that the massive increases in underemployment following the 1991 recession still persists in all states.

Figure 5 Underemployment by state, February 1978 to August 2011, per cent

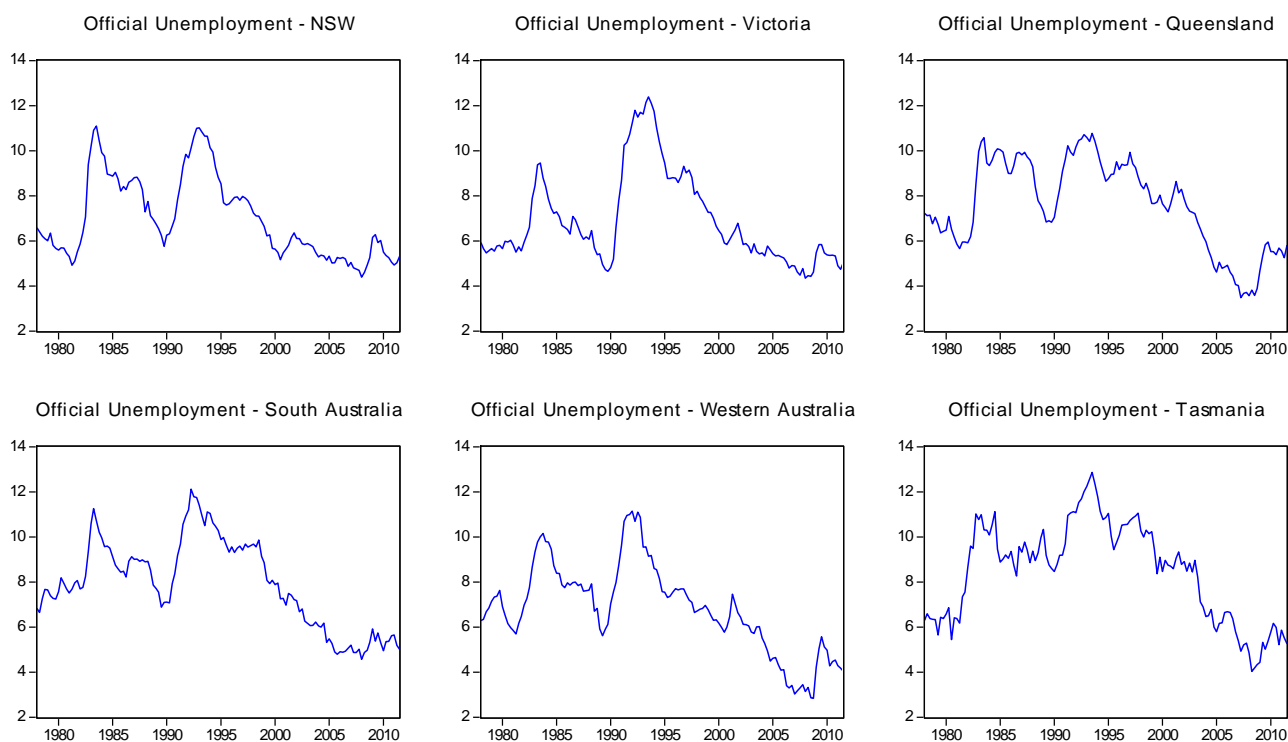


Source: ABS *Labour Force* data and CoffEE estimates. Vertical scales are common for comparison.

Historical relationships between U3 and broader CLMI measures by state

Figure 6 shows the official unemployment rate for the six states from February 1978. For consistency, a common left hand scale has been used on each of the graphs. While all states were adversely affected by the 1991 recession, the worst affected were Victoria, South Australia and Tasmania. The recovery in the 1990s was very slow and official unemployment only gradually fell in all states.

Figure 6 Official unemployment (U3) by State, February 1978 to August 2011, per cent



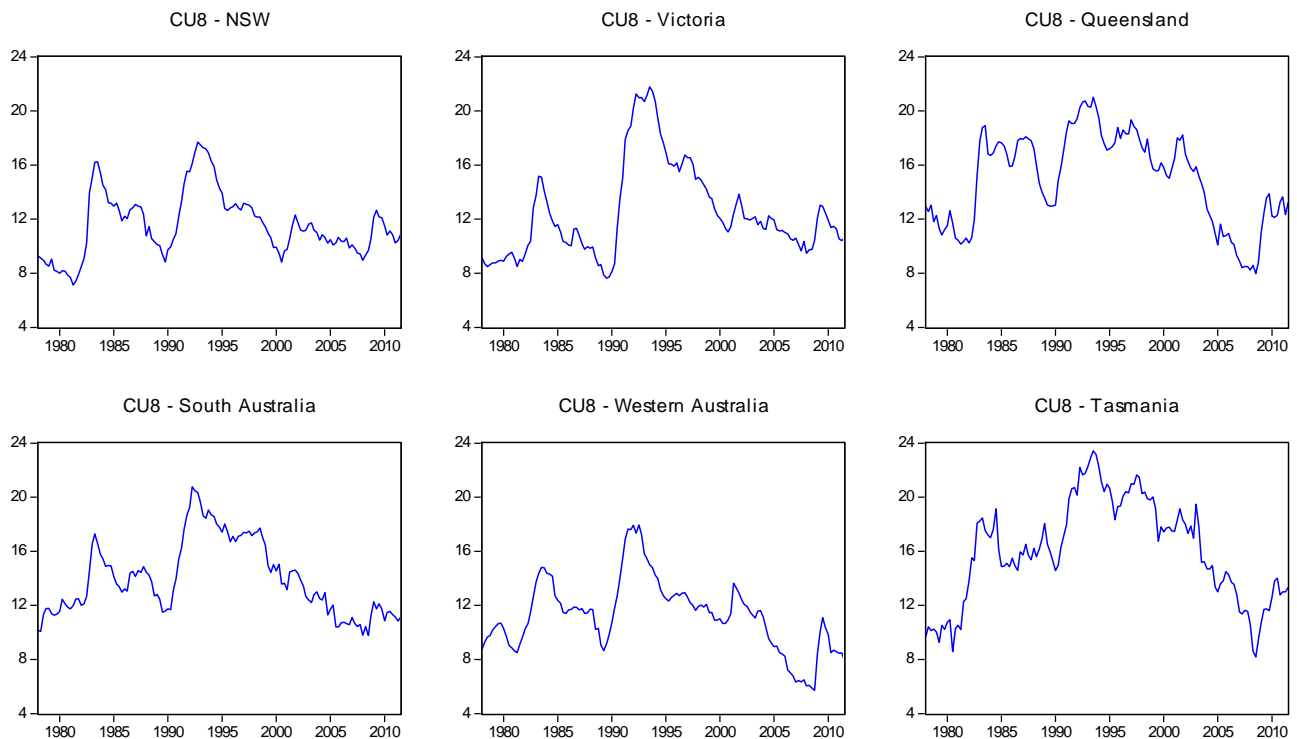
Source: ABS *Labour Force* data. Vertical scales are common for comparison.

In terms of the broader indicators, Figure 7 reports total labour underutilisation (CU8) for the six states from February 1978. This shows that relative trajectories of labour wastage over the three main business cycles that occurred over the period. Clearly total underutilisation skyrocketed in every state during the 1991 recession with nearly a $\frac{1}{4}$ of Tasmania's willing labour force being denied adequate hours of work.

The slow recovery in most states after that recession was also caused by the rise in underemployment that occurred during the 1991 recession only slowly tapered off as economic growth ensued. Notwithstanding these improvements, the data indicate that the state labour markets carried a large amount of underutilisation as the boom ended.

We expect these underutilisation rates will continue at high levels throughout 2011 and into 2012, as the disruptions in Europe and the USA continue to inject considerable uncertainty into the world economy.

Figure 7 Total labour underutilisation by State, February 1978 to August 2011, per cent



Source: ABS *Labour Force* data and CofFEE estimates. Vertical scales are common for comparison.

Background - labour underutilisation concepts

Official measures: The labour force is the most commonly used measure of available labour resources in the economy. It counts all those over 15 who are either employed or unemployed. A person is defined as employed if they have at least one hours work per week. A person is defined as unemployed if they do not have work, but they are available for work and they are actively seeking work. The unemployment rate measures the number of persons unemployed as a percentage of the economically active population (the civilian labour force). The inference from the measure is that the economy is wasting resources and sacrificing income by not providing enough opportunities for work and underutilising labour.

Underutilisation refers to all persons who are currently not working but who are willing and able to undertake work. Some of them may be classified as ‘in the labour force’, like the unemployed. Others may not be ‘in the labour force’ but nevertheless have an attachment to it. These persons are referred to as marginally attached workers of which the hidden unemployment is a subset.

The *hidden unemployed* or discouraged workers want to work and are available to start work in the reference week but are not actively looking for work. A major reason for their lack of search activity is that they believe that search is futile given the poor state of the labour market. They are discouraged from actively looking for work, and thus participating in the labour force, because of labour-market related constraints. The discouraged worker is thus more like the unemployed (in the labour force) worker than they are, for example, like a retired person or a child in full-time education, who are clearly not in the labour force. It is therefore appropriate to take into account their labour market attachment by including them in measures of underutilised labour.

Underemployment refers to employed workers who are constrained by the demand side of the labour market to work fewer hours than they desire. It can also reflect underutilisation of skills due to lack of opportunities. In terms of time-related underemployment, a part of an underemployed

worker is employed and a part is unemployed, even though they are wholly classified among the employed. Given this, it is appropriate to also include this unsatisfied willingness-to-work in measures of unused labour resources.

Typically, if these groups are taken into account, it is based on the numbers of persons involved. A truer measure of underutilisation is gained by taking into account how many *hours* each of the unemployed and marginally attached workers would like to work. Similarly, underemployment can be measured by considering how many more hours each of the currently underemployed would like to work. CoffEE has developed *hours-based* indicators which address these issues.

CoffEE's hours-based indicators

U3 Total unemployed, as a percent of the civilian labour force (official unemployment rate)

CU4 Total unemployed, plus discouraged workers, as a percent of the civilian labour force plus discouraged workers. CU4 adds to U3 an estimate of working hours lost due to hidden unemployment.

CU7 Hours-adjusted unemployment rate which includes the unemployed based on the number of hours they wish to work as well as an estimate of the impact of underemployment of part-time workers, who want to work more hours than they are currently working. CU7 is U3 unemployment measured in hours plus an estimate of working hours lost due to underemployment of those working. It is the ratio of unutilised hours of work available to the total available (fully-utilised) labour force in hours.

UE A derivative measure of underemployment derived from the components of CU7.

CU8 Hours-adjusted unemployment rate with hidden unemployment (discouraged workers), which is equal to CU7 plus an estimate, in hours, of the unused resources currently not counted in the labour force but still willing to work – the so-called hidden unemployed. These discouraged worker estimates are explained in Mitchell (2001). CU8 extends CU7 by including the hours-aspirations of the hidden unemployed.

CU7 and CU8 distinguish between full-time and part-time employment, and take into account the fact that a substantial number of part-time workers (and in CU8 the hidden unemployed) are frustrated by their failure to gain fulltime work or more part-time hours. CU8, the hours-based measure augmented by estimates of hidden unemployment is the most comprehensive measure of underutilisation and underemployment.

All series are seasonally adjusted.

The labels used here reflect the fact that CoffEE computes a range of indicators; for consistency, we retain them here. For example, CoffEE has also computed measures CU7A and CU8A. These latter measures deviate from CU7 and CU8 from May 2001 because they exclude all part-time workers who preferred more hours of work but did not actively search for it or were unavailable. This is consistent with changes in data presentation by the Australian Bureau of Statistics.

For the purposes of this report only, the measures CU7A and CU8A as defined above are designated as CU7 and CU8. For the full range of indicators, see <http://e1.newcastle.edu.au/coffee/indicators/indicators.cfm>.

Next CLMI publication: November 2011