The Australian Beveridge curve in the wake of COVID-19



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The Beveridge curve - informing debates on the labour market for decades







We can see that the vacancy rate has dropped sharply since May 2022, but the unemployment rate has only drifted upwards







The recent behaviour of the unemployment rate and vacancies raises two questions:

Has the relationship between the unemployment rate and the vacancy rate changed?

That is, has the Beveridge curve shifted?

What does this mean for the natural rate of unemployment?





The labour market in the wake of COVID-19

Estimating a time-varying parameter version of the Beveridge curve

A time-varying parameter version of the Beveridge curve:

$$\ln(u_t) = \alpha_t + \beta \ln(v_t) + \varepsilon_t$$





In UV-space the Beveridge curve has shifted inwards





The observed outcomes in the labour market also depend on hirers. Hirers placed more ads and the number of applications per ad dropped





Hirers upped their salary offers and lowered their requirements







Combining these indicators allows us to focus on recruitment intensity





Looking at the estimated Beveridge curve movements and recruitment intensity, there were broadly four phases following the onset of COVID-19





The reopening following the initial lockdowns spurred labour demand before the labour market began to normalise







Pulling these together, the Beveridge curve has shifted inwards and the job creation curve has steepened







Drivers of the shift

An extended Beveridge curve to take into account factors that might shift the curve

Following Groenwold (2003), Kennedy *et al* (2008) and Borland (2011) estimate an extended Beveridge curve:

$$\ln(u_t) = \alpha + \beta_1 \ln(v_t) + \sum_i \beta_i Z_{it} + \varepsilon_t$$

The extended specification is intended to capture an equilibrium relationship between the unemployment and vacancy rate considering factors that might shift the relationship.

Theoretical concept	Empirical equivalent/proxy	Coefficient	Adjusted R ²
Labour productivity	GDP per hour worked	-0.40	0.82
	Market GVA per hour worked	-0.28	0.75
Recruitment intensity	Ads per hirer	-0.25*	0.72
	Applications per ad	0.13***	081
	Average advertised salary	-0.86**	0.78
	Recruitment intensity factor	-0.51***	0.85
Participation rate	Participation rate	-4.0	0.83
	Female participation	-1.15	0.83
	Youth proportion	-0.21	0.82
	Recent migrant proportion	0.15	0.60
Job destruction rate	Separation rate	0.63**	0.83
Matching efficient/mismatch			
	Long-term unemployment rate	0.40***	0.97
Structural change - task	Employment by tasks	-0.26	0.82
Structural change - industry	Employment by industry	-1.61**	0.85
	Unemployment rate by industry	0.87***	0.89
	Standard deviation of industry unemployment rates	0.23*	0.84
Labour mobility	Standard deviation of SA4 unemployment rates	0.49***	0.76
Measurement	Part-time employment share	-0.59	0.83

The long-run unemployment rate looks like a good proxy for shifts in the Beveridge curve







Implications for monetary policy from the Beveridge curve?

Calculating a natural rate requires an equilibrium vacancy rate







Using the Beveridge curve to estimate a natural rate produces point estimates below the RBA's central estimate of the NAIRU



Region	Equilibrium vacancy rate	Current full employment estimate	Current unemployment rate
National	2.2%-3.4%	3.9%-4.3%	4.1%
New South Wales	2.3%	4.0%	3.9%
Victoria	2.7%	4.5%	4.2%
Queensland	2.1%	4.4%	4.2%
Western Australia	2.2%	4.5%	4.2%
South Australia	1.9%	4.5%	3.9%
Tasmania	1.3%	5.0%	3.8%
Northern Territory	1.0%	6.4%	4.0%
Australian Capital Territory	2.9%	3.3%	3.8%

Source: ABS, Author's calculations



The vacancy rate looks to have been drifting up since the 1990s





Conclusion

In the wake of COVID-19:





QUESTION TIME!



Questions?

The associated working paper is available by email request: bchapman@seek.com.au It will also be available on SEEK's website soon.







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Time-varying intercept under alternate specifications







Allowing slope to vary as well





