

September 2023

BCEC

Bankwest Curtin Economics Centre

LABOUR MARKET UPDATE

Providing monthly updates and expert insights and analysis around key labour market indicators.

- Labour market weakens, but headline unemployment rate falls.
- Exodus of males from the labour force as male participation rate falls 0.7ppt to 71.0 per cent; female participation rate returns to 62.7 per cent record high.
- Signs that job vacancies have started to moderate, but labour market conditions remain very tight.

All eyes on Wednesday's inflation figures

While the headline national unemployment figure fell from 3.7 per cent to 3.6 per cent, on balance the September 2023 figures pointed to a weakening in the labour market. The fall in the unemployment rate can be primarily attributed to a sharp drop in the male participation rate. Employment did increase, but barely, and by well below the rate required to keep unemployment from rising in the longer term. Moreover, there was a substantial fall in the number of full-time jobs, offset by a slightly larger rise in part-time jobs.

Other signs of weakening include falling job vacancies, notably in the key ABS quarterly series (down 8.9 per cent for August), and a 0.5 per cent drop in workers' average monthly hours worked. However, vacancies remain at very high levels by historical standards. Add in the old adage of never reading too much into a single month's figures, and the conflicting signals from the September Labour Force Survey won't offer any extra breathing space for the RBA on the need for a further interest rate rise. That will all come down to the September quarter inflation figure, due out on Wednesday.

For the RBA, the critical question is whether the state of the labour market will be adding to or subtracting from inflationary pressures. The most recent data available suggest nominal wage growth is already running above the upper bound of the RBA's 2-3 per cent inflation target band, and probably accelerating. The number of unemployed persons per job vacancy has increased slightly over the course of this year but that ratio remains near historical lows, adding to workers' bargaining power.

Some reporting suggested September's fall in the participation rate reflected people giving up on looking for work. We feel that's a misreading of the current conditions. Flows data for September show an increase in the rate at which unemployed people found work last month, and the notable increase in exits was in the form of full-time workers leaving the labour force.

We noted last month that the high male participation rate was counter to long-term trends and might not be sustainable. On the same basis, we suspect the drop in male participation in September represents something of a 'correction' as families and workers pursue their preferred working arrangements, rather than a change in underlying labour market conditions.

The new RBA Governor, Michele Bullock, recently expressed concerns that the series of external supply-side shocks may be fuelling inflationary expectations. The ongoing strength of the labour market will mean those expectations are more likely to translate into nominal wage pressure, making the RBA's goal of bringing inflation under 3 per cent more difficult. Wednesday's CPI figure will need to provide evidence that inflation is continuing to fall to save mortgage holders from a further rate rise in November.

The labour market marriage premium

Between the release of key aggregates from the monthly Labour Force Survey, the Australian Bureau of Statistics publishes more detailed results in February, May, August and November. The recently released August 2023 estimates provide deeper insights into developments in the labour market, such as changes in employment by industry and occupation, and labour force outcomes for specific demographic groups.

One such breakdown is by 'social marital status', which focuses on labour market outcomes for those in a married or de facto cohabiting relationship ('married' for short). The female participation rate hit a record high of 62.7 in May and September this year, while the male participation rate (71.0 per cent in September) has been following a long-term downward trend. Data by marital status reveal what's behind these long run trends. When the current series began in 1978, the male participation rate was close to 80 per cent, way above the female participation rate of around 45 per cent (see Figure 1). Participation was around 10ppt higher for

AUTHORS: Michael Dockery and Alan Duncan.

Special thanks to Alex Buckland and Valentina Sanchez Arenas for their assistance in creating this publication.

CONTACT: bcec@curtin.edu.au

September 2023

BCEC

Bankwest Curtin Economics Centre

LABOUR MARKET UPDATE

Providing monthly updates and expert insights and analysis around key labour market indicators.

The labour market marriage premium cont'd

married men (82%) than for single men (72%). Both far exceeded the participation rates for females, which were 47 per cent for single women and 41 per cent for married women.

So while married women had the lowest participation rates in the late 1970s, the subsequent rise in their participation has been the most profound change, resulting in the record female participation rates seen today. From just over 40 per cent, married women's participation increased to pass 50 per cent from around 1990 and to overtake that of single women at about the same time. At over 66 per cent today, it is on par with the rate for single men, and around 10ppt higher than for single women. Over the full series, the participation rate for married women has increased by almost 25ppt, compared to 11ppt for single women. Meanwhile, participation of married and non-married men have both trended downwards (by about 9ppt and 5ppt, respectively).

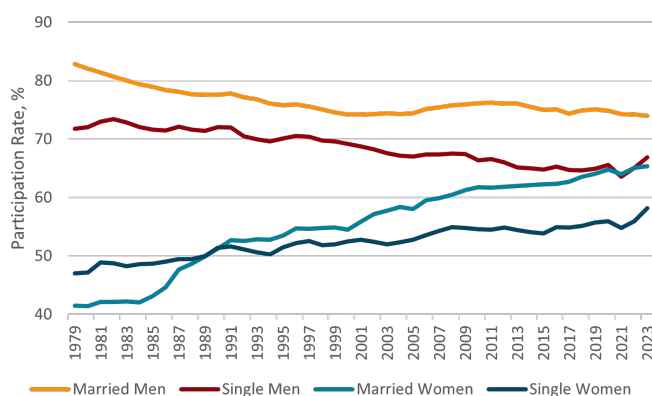
While the story of increasing participation among married women will be familiar to some, less well known is the differences in unemployment rates by marital status. Over the 45 years of the current Labour Force Survey the unemployment rate for married men and women

has been half or lower than that for their non-married counterparts. While the unemployment rate for August 2023 stood at 3.7 per cent in non-seasonally adjusted terms, it was just 1.9 per cent for married persons compared to 6.6 per cent for non-married persons. Both married men (1.6%) and married women (2.3%) continue to have far lower rates of unemployment (Figure 2).

Since 2000, married men have tended to have only marginally lower unemployment rates than married women, whereas the gap was more marked in the late 1970's and early 1980's. This is a significant outcome given the substantial increase in participation of those married women. In contrast, single men have had consistently higher unemployment rates than single women this century.

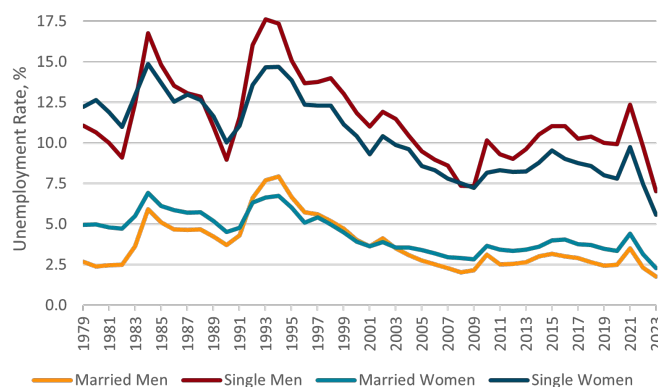
All this has important implications for income distribution between households. Over the course of this century, single persons' share of the labour force has remained fairly stable at around 38 per cent. Rising female participation within couples and their lower unemployment rates will have contributed to a growing number of dual-earner households and higher relative incomes for couple households.

Figure 1: Participation rate, by marital status and gender, Australia



Notes: Data is an annual average.
Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 6291.0.55.003 Table 1.

Figure 2: Unemployment rate, by marital status and gender, Australia



Notes: Data is an annual average.
Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 6291.0.55.003 Table 1.

AUTHORS: Michael Dockery and Alan Duncan.
Special thanks to Alex Buckland and Valentina Sanchez Arenas for their assistance in creating this publication.
CONTACT: bcec@curtin.edu.au

Labour market fundamentals

Key takeaways

- Nationally, the number of employed persons increased by a very marginal 6,700 persons.
- This resulted from 46,500 more part-time workers countered by 39,900 fewer full-time workers.
- At 66.7 per cent, the national participation rate decreased 0.3ppt as men left the labour force.

The Australian labour market saw a marginal increase in the number of employed persons of 6,700 workers in September (see Table 1). Moreover, this increase was a result of a very substantial increase in part-time employment of 46,500 positions offsetting a fall of 39,900 workers in full-time positions. Despite growth in total employment stagnating in the month, a fall in the participation rate saw the unemployment rate edge down to 3.6 per cent. Employment grew sharply in QLD (5,700 persons) and TAS (1,800), while NSW (-5,700) and WA (-3,200) saw the biggest falls in the number of employed persons (Table 1).

National employment increased by 0.4 per cent for women and decreased 0.3 per cent for men. Both genders saw strong growth in part-time work (0.7% for women and 1.9% for men), while full-time work increased for women (+0.3%) and fell for men (-0.8%). As shown in Figure 3, the fall in male full-time employment was experienced across

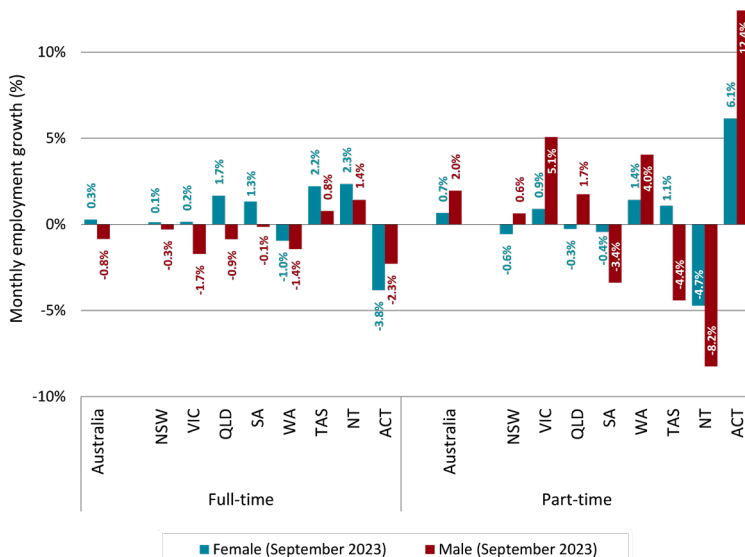
most states and territories. There was a strong increase in female full-time workers for NT and TAS (2.3 per cent and 2.2 per cent, respectively), offset by ACT and WA, which had a 3.2 per cent, and a 1.0 per cent decrease, respectively. At 66.7 per cent, the national participation rate decreased 0.2ppt. This was driven by men leaving the labour market, with the 0.7ppt decrease in the male participation rate (to 71.0%) one of the largest monthly drops ever recorded in the series (see Figure 4). Women recorded a marginal increase in participation of 0.2ppt, bringing the female participation rate back to equal its record high of 62.7 per cent observed in May of this year. Falling male participation was observed for all jurisdictions except for the ACT, with WA leading the way with a 1.3 per cent decrease. The highest participation growth for women was in TAS with a 0.6ppt increase (to 60.2%), followed by VIC and NT with both evidencing a 0.4ppt increase (to 63.5% and 70.8 per cent, respectively).

Table 1: Employment changes: states and territories

	Employed Persons ('000)	Change from:				Change from August 2023 ('000)		Change (%) from September 2022	
		September 2023	August 2023 ('000)	Rank	September 2022 (%)	Rank	Full-Time	Part-time	Full-Time
Australia	14,111.2	+6.7	--	▲ +2.9%	--	-39.9	+46.5	▲ +2.5%	▲ +3.7%
NSW	4,366.4	-5.7	8	▲ +2.3%	5	-3.9	-1.8	▲ +3.2%	▲ +0.1%
VIC	3,652.6	+0.3	3	▲ +3.8%	2	-25.1	+25.4	▲ +1.7%	▲ +8.7%
QLD	2,853.0	+5.7	1	▲ +2.2%	6	+2.4	+3.3	▲ +2.3%	▲ +2.0%
SA	956.7	-2.0	6	▲ +4.7%	1	+2.5	-4.5	▲ +5.0%	▲ +4.2%
WA	1,564.0	-3.2	7	▲ +2.7%	4	-13.8	+10.5	▲ +1.3%	▲ +6.1%
TAS	291.2	+1.8	2	▲ +1.9%	7	+2.4	-0.6	▲ +1.9%	▲ +1.8%
NT	138.0	+0.2	4	▲ +1.0%	8	+2.0	-1.7	▲ +3.8%	▲ -8.9%
ACT	266.3	-0.9	5	▲ +3.5%	3	-6.1	+5.3	▲ +2.0%	▼ +8.1%

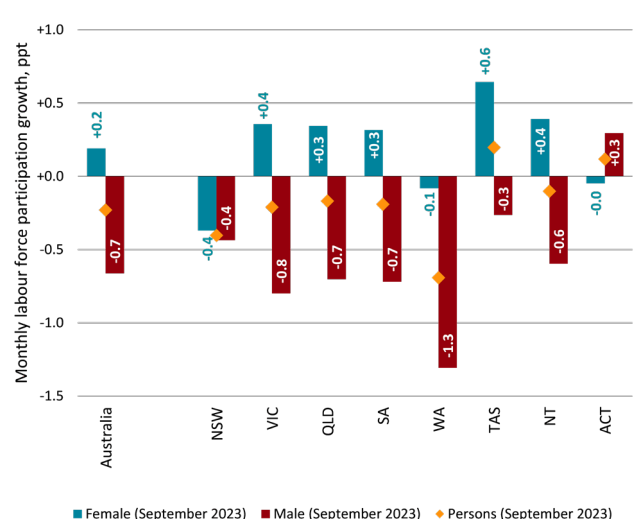
Notes: Seasonally adjusted values are used. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 6202.0.

Figure 3: Employment growth by state and gender



Seasonally adjusted values are used. Figures show change from August 2023 to September 2023. ACT and NT values are generally more volatile than other states. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 6202.0.

Figure 4: Monthly change in labour force participation



Notes: Seasonally adjusted values are used. Figures show change from August 2023 to September 2023. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 6202.0.

Underemployment and unemployment

Key takeaways

- The national unemployment rate decreased to 3.6 per cent.
- The unemployment rate for women increased by 0.1ppt, to 3.7 per cent, and fell to 3.4 per cent for men.
- National underemployment increased by 0.2ppt to 6.8 per cent; remaining virtually unchanged for women at 7.8 per cent.

The national unemployment rate decreased by 0.1ppt to 3.6 per cent in September 2023 (see Table 2); with the number of unemployed persons falling by 19,800. Sizeable decreases in the unemployment rate were observed for WA (-0.5ppt to 3.3%), and NSW (-0.3ppt to 3.3%). It's important to note both those states experienced falling employment and large drops in their participation rates, rather than strengthening labour markets. In terms of the number of unemployed persons, the most substantial decreases were also observed in NSW (-11,000) and WA (-8,200). SA was the only state countering the national down trend with a 0.1ppt increase in its unemployment rate to 3.7 per cent (+1,000 persons). Across gendered lines, women nationally saw a slight rise in the unemployment rate, increasing by 0.1ppt to 3.7 per cent (see Figure 5), with roughly 8,600 more women being unemployed. At the state level, much of this difference was driven by increasing unemployment in VIC, with 6,700 more unemployed women in the state when compared to August 2023, contributing to

a 0.3ppt increase in the female unemployment rate, up to 3.4 per cent. Men saw their biggest decrease in unemployment numbers in VIC, with roughly 8,600 less unemployed men resulting in a 0.4ppt decrease to 3.6 per cent unemployment; followed by WA with 8,300 less unemployed men, leading to a 0.9ppt decrease in the unemployment rate to 3.3 per cent.

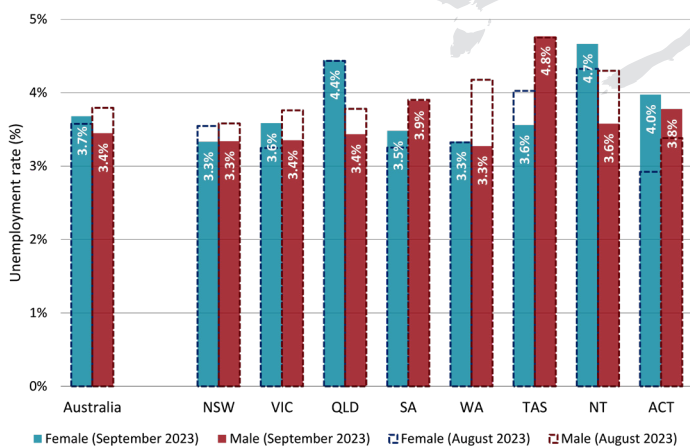
The national underemployment ratio decreased by 0.2ppt to 6.8 per cent this month (Figure 6), with a 0.2ppt decrease for women (to 7.5 per cent of women workers reporting underemployment) and a slight 0.1ppt decrease for men (to 5.8%). At the state level, NSW saw the highest decrease in the female underemployment ratio by 0.9ppt to 6.6 per cent, counterbalanced by NT and QLD with a notable 0.5ppt and 0.3ppt increase in underemployment to a ratio of 5.8 per cent and 8.4 per cent, respectively. Meanwhile, the NT saw the greatest drop in the underemployment ratio for men, decreasing by 1.2ppt to 2.6 per cent, followed by SA with a 0.8ppt drop to 6.1 per cent underemployment rate.

Table 2: Unemployment rates and changes: states and territories

	Unemployment Rate		Change (ppt) from:		Unemployed ('000)	Change ('000) from:	
	September 2023	Rank	August 2023	September 2022		August 2023	September 2022
Australia	3.6%	--	▼ -0.1	0.0	520.5	▼ -19.8	+11.0
NSW	3.3%	2	▼ -0.3	0.0	150.7	▼ -11.0	+3.8
VIC	3.5%	3	0.0	0.0	131.1	▼ -1.9	+4.0
QLD	3.9%	6	▼ -0.2	+0.1	116.5	▼ -5.1	+6.6
SA	3.7%	4	▲ +0.1	-0.7	36.7	▲ +1.0	-5.4
WA	3.3%	1	▼ -0.5	-0.1	53.4	▼ -8.2	-0.8
TAS	4.2%	8	▼ -0.2	0.0	12.7	▼ -0.6	+0.2
NT	4.1%	7	▼ -0.2	+0.2	5.9	▼ -0.3	+0.3
ACT	3.9%	5	▲ +0.7	+0.8	10.7	▲ +2.0	+2.5

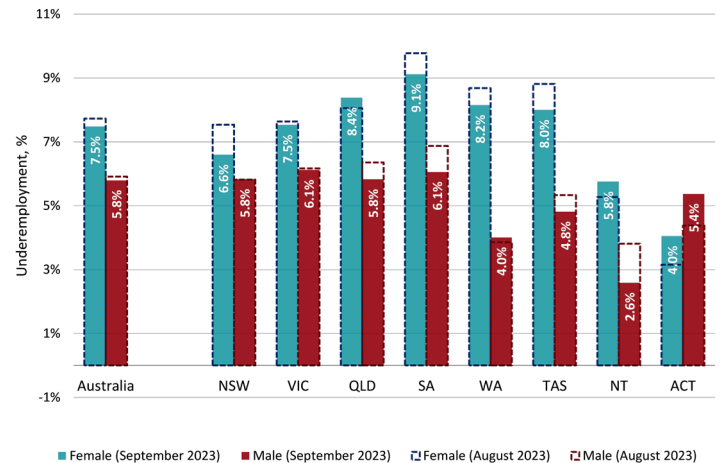
Notes: Seasonally adjusted values are used. State and territory numbers of unemployed people do not sum to the figures for Australia due to ABS seasonal adjustment methods. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 6202.0.

Figure 5: Unemployment rate by state and gender



Notes: Seasonally adjusted values are used. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 6202.0.

Figure 6: Underemployment ratio by gender: states and territories



Notes: Seasonally adjusted values are used. Figures show change from August 2023 to September 2023. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 6202.0.

Strength of the labour market

Key takeaways

- Some evidence the number of vacancies is now moderating.
- Occupation classes across the board saw vacancies decline; sales workers getting the worst of it.
- Average monthly hours worked fell nationwide by 0.5 per cent.

Recently released data from the ABS job vacancies series show a sizeable 8.9 per cent drop for the August 2023 quarter, to be down by 15.2 per cent over the year. Conceptually, the ABS series is an estimate of all vacancies available to be filled in the economy, and arguably the most comprehensive measure of vacancies. In contrast, the Internet Vacancy Index (IVI) is based on a count of vacancies advertised on-line. This series ticked down slightly in the month of September 2023, falling by 2.1 per cent nationally to be 4.2 per cent down over the year. However, both series remain very high in historical terms: the ABS series is up 76.2 per cent and the IVI up 60.1 per cent compared to their corresponding pre-COVID levels.

As useful gauge of labour market tightness is the ratio of unemployed persons to vacancies. Based on the ABS vacancy series, this reached an all-time low of 1.1 in the second half of 2022 – almost just one unemployed person for every vacancy (Figure 8). For August 2023, it had increased to 1.4, suggesting the labour market is still very tight. By comparison, the average for the

decade prior to COVID was 3.9 unemployed persons per vacancy. The metrics are different but the general story is much the same for vacancies advertised on-line, with the ratio of unemployed persons to vacancies sitting at around half of the pre-COVID trend.

At the occupational level, shifts in online vacancies were almost universally negative over September 2023 nationally (Table 3); with only machinery operators and drivers (thanks to some growth in NSW and WA) and community and personal service workers (thanks to the ACT) seeing any kind of vacancies increase.

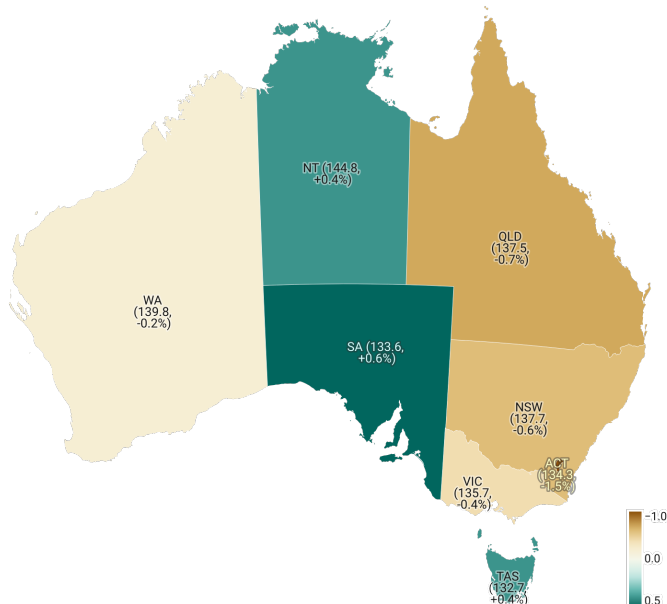
Workers' average monthly hours worked continued to decline over the month of September 2023; falling by 0.5 per cent to 136.7 hours nationally (Figure 7). This decrease was observed across most major states and territories outside of SA (where average hours worked increased by 0.6 per cent to 133.6 hours), and TAS (increasing 0.4 per cent to 132.7 hours). WA recorded a marginal decrease of 0.2 per cent, and still holds the title of most hours worked, with 139.8 average hours worked over the month.

Table 3: Change in Internet Vacancy Index, by Occupation: August 2023 to September 2023

Major Occupation Group	Australia	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Managers	-3%	-3%	-4%	+0%	+3%	-3%	+9%	-1%	-0%
Professionals	-3%	-4%	-4%	-2%	+1%	+0%	+3%	-3%	-12%
Technicians And Trade Workers	-1%	-4%	-2%	-3%	-1%	+1%	+11%	-4%	-1%
Community And Personal Service Workers	+0%	-1%	-1%	-2%	-2%	-1%	-4%	-9%	+1%
Clerical And Administrative Workers	-4%	-5%	-6%	-6%	+1%	-2%	+8%	-5%	-6%
Sales Workers	-5%	-5%	-6%	-5%	-2%	-4%	-3%	-7%	-8%
Machinery Operators And Drivers	+0%	+2%	-3%	-3%	-2%	+1%	+4%	+11%	-5%
Labourers	-1%	-1%	-3%	-2%	-3%	-6%	-6%	-3%	-0%
Total	-2%	-4%	-3%	-2%	+0%	-0%	+2%	-3%	-6%

Notes: Seasonally adjusted values are used. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Government, Jobs and Skills Australia.

Figure 7: Average monthly hours worked: states and territories



Notes: Seasonally adjusted values are used. ACT and NT figures are not shown. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 6202.0.

Figure 8: Ratio of unemployed persons to job vacancies, Australia



Notes: Seasonally adjusted values are used. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 6291.0.55.003 Table 24, and Cat No. 6345 Table 2.

Labour market dynamics

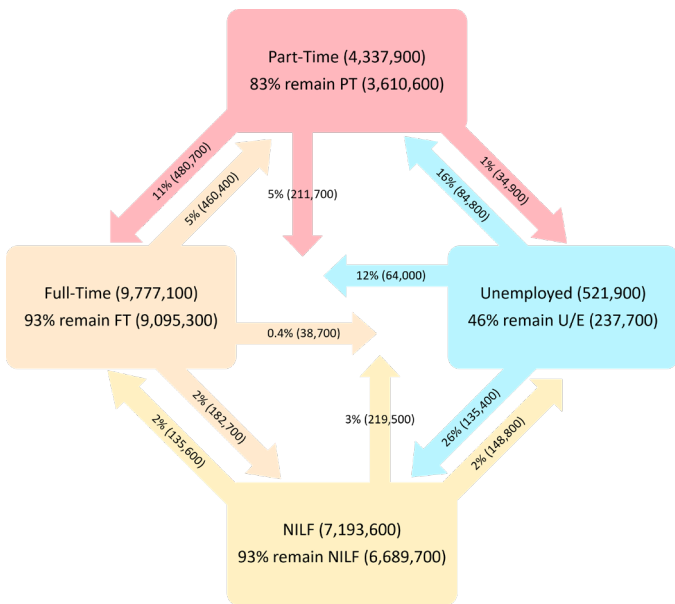
Key takeaways

- There was a net outflow of 25,900 persons from the labour force.
- Outflow driven by full-time workers, of whom 47,100 moved out of the labour force.
- 0.2ppt increase in youth unemployment; driven by NSW and VIC.

In line with the fall in the participation rate, September 2023 saw a net outflow of 25,900 persons (Figure 9) from the labour force, reversing the previous month's 28,500 net inflow. Following the observed trends elsewhere in the data, full-time work saw a hefty net outflow of 47,100 persons out of the labour force; partly counterbalanced by a net flow of 20,300 persons into full-time work from part-time positions. 75,200 persons moved out of unemployment into full- and part-time positions, a notable increase over last month's 12,700 persons. This contributed to more than half (54%) of those looking for work in August having left unemployment by September.

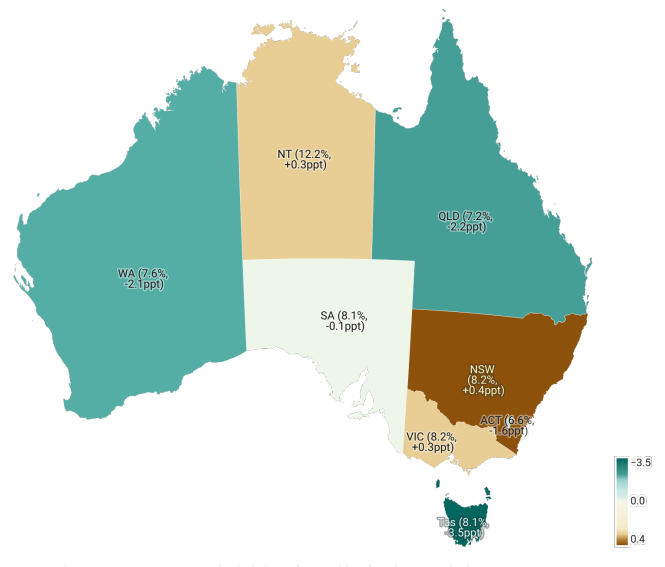
Youth unemployment moved in the opposite direction to overall employment over the month; albeit with only a somewhat marginal 0.2ppt increase nationwide (Figure 10). Trends in youth unemployment put the scale of state-level populations into perspective; despite a notable 2.1ppt decrease in WA, 2.2ppt decrease in QLD, and 3.5ppt decrease in TAS, increases of just 0.4ppt in NSW and 0.3ppt in VIC were enough to drag the national figure up. QLD is now the state with the lowest level of youth unemployment in Australia; with a rate of just 7.2 per cent; followed by WA with a 7.6 per cent youth unemployment rate.

Figure 9: AUS labour force flows: August 2023 to September 2023



Notes: The ABS labour market flows series is based on a matched sample of respondents who are present in the labour force survey in two consecutive months. Around 78% of ABS survey respondents in August 2023 were also present in the September 2023 survey. Due to rounding and scaling, figures may not match totals from elsewhere in this MLMU. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 6202.0, Table 23 & Pivot table GM1.

Figure 10: Youth unemployment rate: monthly change, states and territories



Notes: Seasonally adjusted values are used. Figures show change from August 2023 to September 2023. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No 6202.0.

Industry

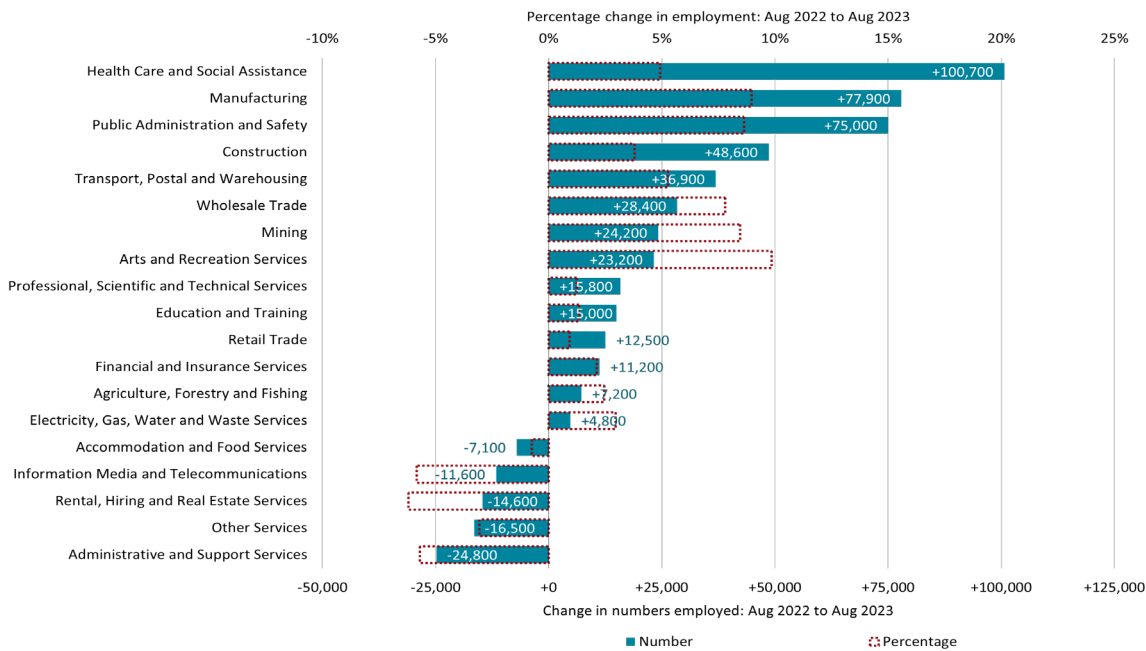
Key takeaways

- Health care workers have been the primary driver of national jobs growth over the year to August 2023.
- Administrative services continue to face job cuts, with 27,000 less positions held.
- Health care workers grew the strongest in WA, increasing 9.3 per cent over the year to August.

Health care and social assistance industry workers led the pack in terms of numbers growth over the year to August 2023, with 100,700 additional positions (Figure 11), followed closely by growth in the national manufacturing sector with +77,900 new jobs. Overall jobs growth over the year was held back somewhat by a decline in the number of workers in the administrative and support services sector (-24,800 workers); though the largest decline in workers in per-cent terms was observed in the rental, hiring, and real estate services industry (-6.2%). The largest increase in workers in per-cent terms over the year was the arts and recreational services industry, with a near 10 per cent increase in employed persons, followed by manufacturing (+9.0%).

At the state level, construction’s growth decline is particularly visible in VIC (-8,100 less construction workers over the year, see Table 4) and SA (-10,400 less construction workers). Meanwhile in WA, the Electricity, Gas, Water, and waste services sector saw a hefty decline in workers over the year (-9,300 workers; equivalent to a 38.7 per cent decrease), whilst it followed the national trend in strong growth in health care and social assistance workers; with an additional 18,500 workers over the year to August 2023 (and the highest per cent growth in healthcare workers out of all of the states, with a 9.3 per cent increase).

Figure 11: Employment change by industry, Australia, year to August 2023

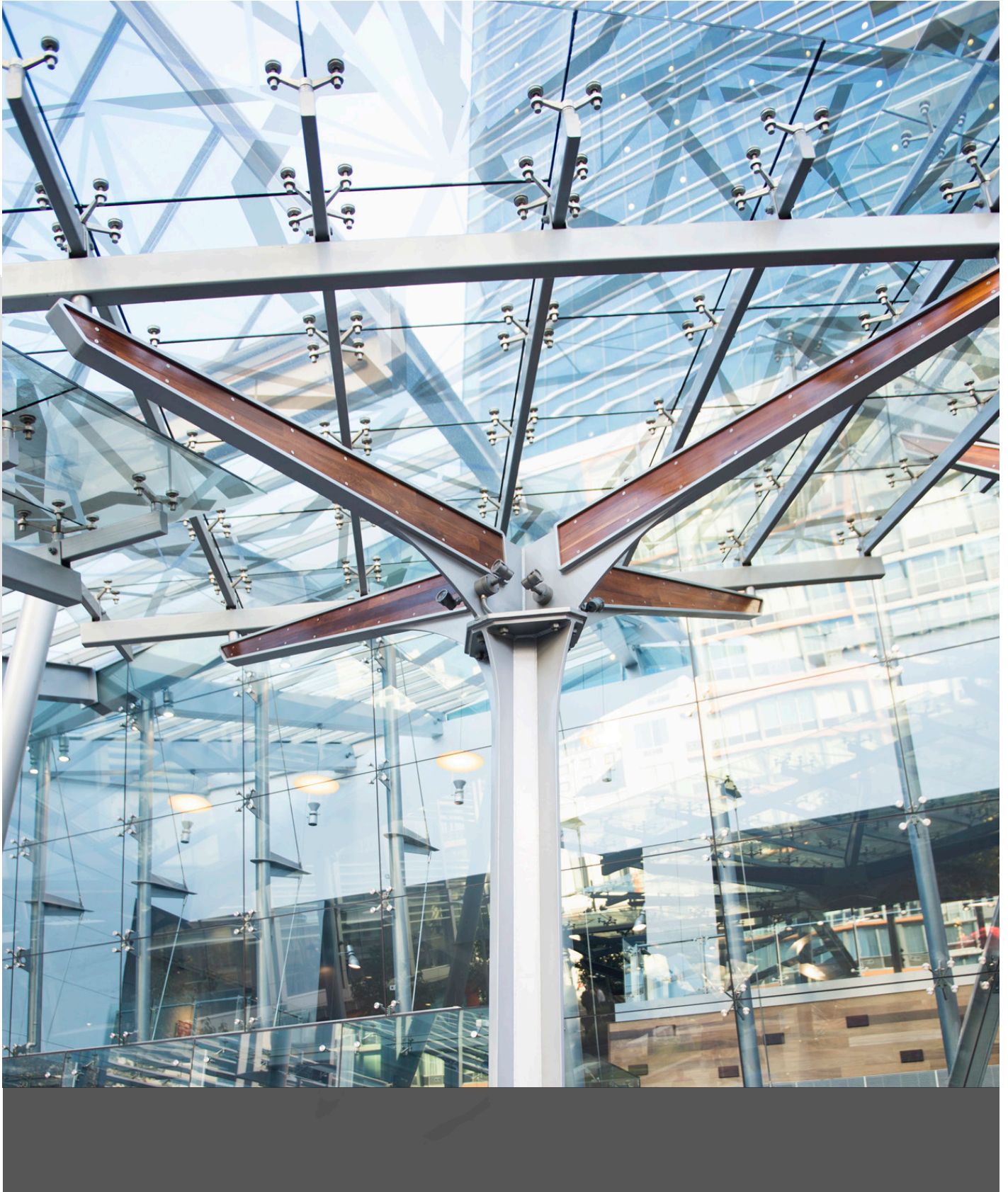


Notes: Seasonally adjusted values are used. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No. 6291.0.55.003 Table 4.

Table 4: Top and bottom three industry by employment growth and state, year to August 2023

Rank	NSW		VIC		QLD		SA		WA		TAS	
	Industry	Change in numbers employed	Industry	Change in numbers employed	Industry	Change in numbers employed	Industry	Change in numbers employed	Industry	Change in numbers employed	Industry	Change in numbers employed
1	Public Administration and Safety	+52,800 [+22.3%]	Health Care and Social Assistance	+44,000 [+8.2%]	Construction	+32,100 [+12.4%]	Health Care and Social Assistance	+14,100 [+9.2%]	Health Care and Social Assistance	+18,500 [+9.3%]	Administrative and Support Services	+4,200 [+84.6%]
	Manufacturing	+31,800 [+13.4%]	Retail Trade	+42,500 [+13.4%]	Transport, Postal and Warehousing	+31,700 [+12.9%]	Public Administration and Safety	+9,400 [+15.8%]	Retail Trade	+17,500 [+13.6%]	Public Administration and Safety	+4,100 [+22.5%]
	Health Care and Social Assistance	+25,700 [+4.2%]	Manufacturing	+39,800 [+15.3%]	Wholesale Trade	+24,800 [+35.9%]	Retail Trade	+9,200 [+10.4%]	Construction	+16,000 [+12.0%]	Health Care and Social Assistance	+4,000 [+8.8%]
19	Information Media and Telecoms	-25,500 [-28.4%]	Rental, Hiring and Real Estate Services	-12,700 [-18.9%]	Retail Trade	-51,600 [-16.8%]	Construction	-10,400 [-12.0%]	Public Administration and Safety	-18,200 [-18.5%]	Accommodation and Food Services	-3,200 [-13.8%]
	Other Services	-15,600 [-9.1%]	Construction	-8,100 [-2.4%]	Administrative and Support Services	-9,400 [-9.4%]	Other Services	-10,100 [-24.4%]	Accommodation and Food Services	-11,500 [-10.4%]	Agriculture, Forestry and Fishing	-1,700 [-11.2%]
	Wholesale Trade	-12,000 [-9.2%]	Other Services	-7,800 [-6.4%]	Arts and Recreational Services	-6,800 [-16.4%]	Financial and Insurance Services	-3,800 [-12.7%]	Electricity Gas Water and Waste Services	-9,300 [-38.7%]	Financial and Insurance Services	-1,400 [-20.8%]

Notes: Original values are used. Source: BANKWEST CURTIN ECONOMICS CENTRE | Australian Bureau of Statistics Cat No. 6291.0.55.003 Table 5.



Bankwest Curtin Economics Centre

GPO Box U1987, Perth WA 6845, Australia

ph. +61 8 9266 1744
e. bcec@curtin.edu.au
w. bcec.edu.au

For media enquiries contact
bcec@curtin.edu.au

