

The Tip of the Iceberg

Measuring unemployment in Australia

The Reserve Bank of Australia's decisions on interest rate increases rely on the concept of balancing inflation and unemployment.

However, the official unemployment rate is based on strict and outdated definitions, and significantly underestimates the actual number of Australians looking for work. If those who are looking for work but are categorised as "not in the labour force" were included in the official unemployment rate, that rate would more than triple.

Discussion paper

Lilia Anderson

David Richardson

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Level 1, Endeavour House, 1 Franklin St
Canberra, ACT 2601

Tel: (02) 61300530

Email: mail@australiainstitute.org.au

Website: www.australiainstitute.org.au

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Summary

Unemployment has traditionally been used to measure the relative tightness of the labour market. As an example, the Reserve Bank of Australia (RBA) uses theory associated with the non-accelerating inflation rate of unemployment (NAIRU) as a way of organising its thoughts and developing policy on inflation. At the estimated NAIRU the economy is thought to be neither too hot nor too cold. Estimates of the NAIRU depend on the behaviour of the actual unemployment rate.

As such, the RBA's approach—and the theory that underpins that approach—is built on the assumption that relevant categorisations of sections of the labour market are accurate, and that the categories' names mean what they say. The categories in question are provided by the Australian Bureau of Statistics (ABS), and today they are measured by a survey undertaken every month by the ABS.

The ABS data separates the working-age population into three categories. The first two categories—those who are considered “employed” and those who are considered “unemployed”—combine to make up the “labour force”. Those who do not meet the criteria for being either employed or unemployed fall into the third category, “not in the labour force” (NILF). These categories date back to the 1950s.

To be classified as “unemployed” in the monthly survey, the interviewee must have:

1. Worked zero hours in the week of the survey;
2. Carried out specific job search activities; and
3. Been ready to work in the reference week.

If an individual does not meet the first criterion—i.e., if they have worked at least one hour in the week of the survey—they are considered “employed”. If they do not meet either of the other two criteria, they are considered NILF. The ABS also provides information about the characteristics of those determined to be NILF; the category includes so-called discouraged workers and other categories of people who declare they want to work, despite the ABS categorising them as not in the labour force.

The official unemployment rate is calculated as a portion of the labour force, not of the entire working-age population. As such, those determined to be NILF are not counted in these figures, regardless of whether or not they do in fact want to work. This makes the official figure for unemployment particularly problematic—if discouraged workers and others who want to work but are not considered unemployed were included in this official figure, it would more than triple.

The discussion of those NILF thus strongly suggests they should be considered in any assessment of labour market tightness—but doing this is not straightforward. To get an idea of the quantitative importance of those NILF, this paper examines monthly labour flows, a dataset that tracks month-to-month movements between the main labour market categories. If the unemployment category means what we expect it to mean, then we should observe the majority of month-to-month movements would be from employment to unemployment and back again.

Instead, we found that of those who left employment in January 2023, only 17 per cent went into unemployment; the rest were categorised as NILF. In a similar way, of the entrants into employment, only 21 per cent had been classified as unemployed; the rest came from the ranks of those considered not part of the labour force at all. In other words, the bulk of movements into and out of employment completely bypass unemployment. This suggests that the number of people categorised as “unemployed” at any given time is likely to be just a small fraction of the true number of unemployed Australians. The unemployed numbers are certainly not a reliable indicator of the numbers potentially available to fill employment opportunities.

We also constructed a time series to examine how these figures behaved over time. The findings suggest that the proportions coming out of unemployment into employment and back again are quite volatile from month to month. Beyond this volatility, there is a gradual downward trend in the case of the proportion of people moving from employment to unemployment. From those observations, we conclude that we cannot readily infer that a given level of unemployment is a stable multiple of the unobserved true amount of unemployment. We cannot even rely on movements in unemployment rates to be a genuine reflection of the direction in which the actual level of unemployment may be moving.

Overall, this suggests that unemployment is a very poor indicator of labour market tightness for policy purposes, let alone as a basis for measuring unobservable and hypothesised variables such as the NAIRU. Historically low levels of unemployment are being used, in part, to justify bigger increases in the official cash rates than anything seen since the RBA first published its target cash rate in 1990. However, the nature of the data suggests that a given level of measured unemployment does not necessarily mean the same thing over large time spans. In other words, the statement that the unemployment rate is the lowest seen in 50 years may not actually say much about labour market conditions, then or now.

Introduction

In November 1954, the world's labour statisticians descended on Geneva for their eighth international conference. One of the issues on their collective agenda was the establishment of international standard definitions for terms relating to unemployment figures.¹

It scarcely needs pointing out just how different the world of 1954 was to that of 2023: the arrival of television in Australia was still two years away, the young Queen Elizabeth II was approaching the third anniversary of her coronation, and as the statisticians' conference drew to a close, a small restaurant called "Burger King" was opening its doors for the first time in Miami, Florida. With this in mind, everyday Australians may well be startled to learn that the categories that the Australian Bureau of Statistics (ABS) to determine who is employed, who is unemployed, and who is not part of the labour force remain essentially the same as those agreed to in Geneva that year.

The ABS itself explains that the labour market classifications it uses "conform closely to [those] recommended by the Eighth International Conference of Labour Statisticians held in Geneva in 1954."² In the nearly 70 years since that conference drew to a close, the nature of the world's labour market has changed drastically. There has been a large increase in the participation rate of women in the workforce, as well as the proportion of workers in part-time, casual, or gig-economy work. It is therefore significant that the metrics used to measure unemployment have failed to keep up with these changes in the labour market.

Ever since it was realised that governments could influence the level of unemployment governments became accountable and were obliged to target low unemployment, especially in the post war period. This obligation is clear in documents that date from this era: for example, the *Reserve Bank of Australia Act 1959* states its objective is to pursue "the stability of the currency ... and the maintenance of full employment in Australia".³ The 1945 White Paper on Full Employment began with the sentence, "Full employment is a fundamental aim of the Commonwealth Government."⁴

¹ International Labour Office (1954) *The Eighth International Conference of Labour Statisticians*, https://www.ilo.org/public/libdoc/ilo/1955/55B09_58_engl.pdf

² ABS (1974) *Yearbook*, p 692 at [https://www.ausstats.abs.gov.au/ausstats/free.nsf/0/220D4A56EFB298D3CA257AF70011532E/\\$File/13010_1974_chapter20.pdf](https://www.ausstats.abs.gov.au/ausstats/free.nsf/0/220D4A56EFB298D3CA257AF70011532E/$File/13010_1974_chapter20.pdf)

³ Reserve Bank Act (1959). Section 10(2) of the Act. The economic prosperity and welfare of the people of Australia is listed as the third objective in the charter.

⁴ Commonwealth of Australia (1945) *Full Employment in Australia*, Canberra. Australian Government Printer.

In the decades since, there has been some backtracking on this commitment to full employment—and even on what “full employment” means. Today, in a classic example of doublespeak, “full employment” is defined as a particular rate of unemployment. In a 2010 article, journalist Ross Gittins describes David Gruen, then a senior Treasury officer, telling a Senate committee that it was “a long-standing practice” to regard full employment as 5 per cent unemployment, although he conceded that there was “a reasonable band of uncertainty around that number”.⁵

This figure arises from the application of conventional macroeconomic theory, to which the RBA subscribes. In this framework, “full employment” is defined as a level of unemployment that matches the “non-accelerating inflation rate of unemployment” (NAIRU). For example, the US Bureau of Labor Statistics (BLS) defines “full employment” as a situation where:

... the unemployment rate equals the nonaccelerating inflation rate of unemployment (NAIRU), no cyclical unemployment exists, and GDP is at its potential.⁶

As the name suggests, the NAIRU is thought to be the lowest unemployment rate that can be sustained without causing inflation to accelerate. The NAIRU theory indicates that when unemployment is low, and the labour market is tight, workers will be able to demand higher wages—resulting in accelerating inflation. In contrast, when there is a larger pool of unemployed workers, their bargaining power is thought to be reduced, thereby keeping wage growth—and inflation—in check.

In other words, the RBA sees unemployment and inflation as a trade-off around the NAIRU: where unemployment is too low, inflation will accelerate, and where unemployment is high, inflation will decelerate.⁷ The Australia Institute has criticized the NAIRU concept elsewhere,⁸ but for present purposes, it is sufficient to point out that the NAIRU is ultimately arbitrary and problematic. It is also important to highlight that the NAIRU concept relies on an accurate measurement of unemployment.

As of February 2023, the RBA estimates that the NAIRU is probably “in the low 4% [unemployment]”.⁹ By contrast, official unemployment in the same month was 3.5%.¹⁰

⁵ Gittins R (2010) “Few good reasons why 5% unemployment is considered full employment” *Sydney Morning Herald*, 10 July.

⁶ BLS (2017) “Full employment: an assumption within BLS projections”, *Monthly Labor Review*, Nov.

⁷ This orthodoxy is reflected in the Phillips Curve named after AW Phillips (1958). Phillips, A. W. (1958). “The Relationship between Unemployment and the Rate of Change of Money Wages in the United Kingdom 1861-1957”. <https://onlinelibrary.wiley.com/doi/10.1111/j.1468-0335.1958.tb00003.x>

⁸ Richardson D (2019) *Tolerate Unemployment, but Blame the Unemployed: The Contradictions of NAIRU Policy-Making in Australia*, Centre for Future Work, The Australia Institute

⁹ Read (2023) “‘Just one piece of information’: Lowe shrugs off job losses.” *Australian Financial Review*. <https://www.afr.com/policy/economy/just-one-piece-of-information-low-e-shrugs-off-job-losses-20230217-p5clb9>

¹⁰ ABS (2023) *Labour Force, Australia*.

Upon comparing the two figures, RBA Assistant Governor Luci Ellis remarked she thought it “manifest that we are below the NAIRU at the moment”.¹¹ For the RBA, this discrepancy means that the low rate of unemployment is increasing inflation, or that it is threatening to do so if it induces higher wage costs. This makes *increasing* the rate of unemployment a key target of the RBA’s inflation-control measures. In other words, by pushing up unemployment through interest rate hikes, the RBA believes it can take the heat out of the labour market and thus decelerate inflation.

Whatever we might think of the NAIRU as a concept, its role and comparisons with the actual rate of unemployment are both critical inputs into Australian policymakers’ deliberations on macroeconomic policy. In February 2023, the RBA made it clear that in its view, unemployment is too low, and that it is comfortable with projections that unemployment will trend upwards towards around 4.5%.¹² The Governor of the RBA, Philip Lowe, recently confirmed this forecast, stating:

Our central forecasts have the unemployment rate getting to 4.5% next year ... and that being enough broadly to get the inflation rate down to 3% over the next couple of years. If we can do that, that central fall forecast comes to fruition. It’ll be a good outcome for the country.¹³

Sure enough, Lowe’s statement was followed by an increase in interest rates. In early June 2023, the RBA lifted the cash rate target by 25 basis points to 4.1%—the 12th increase in just over a year.¹⁴ ¹⁵ There will be a hefty economic price to pay for these interest rate rises. For one, they will mean increasing the number of Australians out of work by more than 100,000.¹⁶ But raising interest rates also has broader effects on the economy. Higher rates reduce demand and investment, which in turn contracts the economy.¹⁷ In trading unemployment for increased interest rates, the RBA risks slowing the economy too much and pushing it into recession.

¹¹ Read (2023) “‘Just one piece of information’: Lowe shrugs off job losses.” *Australian Financial Review*. <https://www.afr.com/policy/economy/just-one-piece-of-information-lowe-shrugs-off-job-losses-20230217-p5clb9>

¹² RBA (2023) *Statement on Monetary Policy*, February.

¹³ AFR (2023) “RBA’s Lowe defends lunch meeting, focus is inflation”. *Australian Financial Review*. <https://www.afr.com/policy/economy/rba-s-lowe-defends-lunch-meeting-focus-is-inflation-20230215-p5cknq>

¹⁴ RBA (2023) “Statement by Philip Lowe, Governor: Monetary Policy Decision”, <https://www.rba.gov.au/media-releases/2023/mr-23-13.html>

¹⁵ Hannam (2023) “RBA interest rates: Reserve Bank increases cash rate by 25 basis points in attempt to quash inflation”, *The Guardian*, <https://www.theguardian.com/australia-news/2023/jun/06/rba-interest-rates-reserve-bank-increases-cash-rate-by-25-basis-points-in-attempt-to-quash-inflation>

¹⁶ Jericho (2023) “The Reserve Bank wants unemployment to rise. It should be careful what it wishes for”. *The Guardian*. <https://www.theguardian.com/business/grogonomics/2023/feb/09/the-reserve-bank-wants-unemployment-to-rise-it-should-be-careful-what-it-wishes-for>

¹⁷ Ibid.

Either way, those caught in the fallout from this policy will be the increasingly large numbers of Australians pushed into unemployment. In return, they will receive punitive poverty-level benefits for looking for work that, in many cases, does not exist. This is not news to the RBA: the day after the most recent increase in interest rates was announced, Lowe told a bank conference that while the effect of increases was “felt unevenly across the community ... causing significant financial pressure for some households... this unevenness is not a reason to avoid using the tool that we have”.¹⁸ To those feeling the “unevenness”, Lowe’s suggestion that “people can cut back spending, or in some cases find additional hours of work, [which] that would put them back into a positive cash flow position”¹⁹ must have felt like adding insult to injury.

The gravity of the consequences of the RBA’s approach to inflation means that the way in which it defines and measures unemployment, and defines unemployment’s relationship to inflation, is of significant importance to everyday Australians. Put simply, even if one accepts the NAIRU concept, the fact remains that if the measured rate of unemployment overstates the inferred labour market tightness, the RBA’s policy will be unnecessarily cruel.

As such, it is crucial that the way in which the RBA measures unemployment be accurate, and that it be based on accurate assumptions. This report examines the way in which unemployment is measured. Our analysis suggests that ABS measurements of unemployment have long reflected a systematic underestimation of real unemployment in Australia. In particular, the way in which a person is determined to be “employed” has no facility to consider the concept of underemployment, while the way in which it is determined whether a person is or is not part of the “labour force” masks significant unemployment. The latter point is particularly important as the official rate of unemployment is calculated as a percentage of the labour force, *not* of the working-age population as a whole.

The RBA—a primary consumer of this data—has consequently long been making policy decisions based on inaccurate measures of labour market tightness. This paper looks into how and why this has been the case. We begin by considering the way in which key indicators of the labour market are defined. In particular, we unpack how systematic underestimation of unemployment occurs through unemployment hidden within the NILF category and explore how underemployment is concealed through problematically low threshold limits on the measurement of employment. Our analysis also highlights how the definition of unemployment excludes too large a portion of Australians who are genuinely

¹⁸ Hannan (2023) “Struggling Australians can cut back spending or work more to get into ‘positive cash flow’, Philip Lowe says”, *The Guardian*, <https://www.theguardian.com/australia-news/2023/jun/07/rba-governor-philip-low-e-australia-interest-rates>

¹⁹ Ibid.

seeking work—especially those with existing childcare responsibilities, as well as those who are interested in work but who have given up on looking for it.

These problems indicate that many of the key assumptions that guide the definition of unemployment have failed to keep up with changes in the labour force market, and that the actual unemployment rate could be much higher than ABS figures suggest. If the number of people who are categorised as NILF but who in fact want to work were included in the official unemployment rate, that rate would more than triple.

Measuring key labour market indicators

In this section, we outline the main ABS classifications of individuals for the purpose of defining the labour market and the role of individuals in the labour market. The ABS has strict rules about how labour force categories are defined. The current system classifies individuals into one of three categories:

- (a) Employed;
- (b) Unemployed; or
- (c) Not in the labour force (or NILF).

Each category is designed to meaningfully capture the portion of Australians who are, respectively, in work; not in work but looking for work; or disengaged from the workforce and therefore economically inactive. The next section of this paper considers the discrepancies between the ABS figures and the categories they are designed to capture.

DEFINING “UNEMPLOYMENT”

The official figure for unemployment as of March 2023 sat at 507,000.²⁰ To count as unemployed, an individual must:

- Have worked zero hours in the reference week;²¹
- Have been *actively* seeking work in the four weeks leading up to the end of the reference week;²²
- Have carried out specific kinds of tasks to substantiate active job seeking, for example²³:
 - Contacting employment services;
 - Responding to job advertisements;
 - Checking at worksites; or
 - Uploading a resume online.

²⁰ ABS (2023) *Labour Force, Australia*.

²¹ ABS (2022) “Unemployment” <https://www.abs.gov.au/statistics/detailed-methodology-information/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/2021/concepts-and-sources/unemployment>. The reference week refers to the week of the survey.

²² Ibid. Individuals waiting to start a new job—termed ‘future starters’—are also included in the unemployment category, on the condition that they could have begun work in the reference week if it were available to them then.

²³ This criteria also includes activities related to starting up a business or agricultural undertaking, such as seeking permits, awaiting registration, or looking for land.

Merely passively scanning job advertisements is insufficient to fulfil the definition, as the ABS views passive job seeking in itself as inadequate to obtain employment. This also means that if an individual would accept a job in the reference week if it happened to be offered to them, but did nothing to actively look for it, they would not be counted as unemployed.

In addition, to count as unemployed, an individual must be available to start work during the reference week. In this sense, the unemployment indicator measures readiness to begin a job.²⁴ However, this means that those job seekers who require, for example, childcare provisions that would take more than a week to organise are not counted as unemployed. In fact, a 2022 ABS report found that the most common reason why women were unavailable to start a job within a reference period was that they were caring for children.²⁵ As a result, many female job seekers with caring responsibilities are excluded from official measures of unemployment.

The definition of unemployment is critical to our understanding of the labour market. It dictates how policymakers think about labour market tightness and, consequently, the role of the labour market in inflationary processes. There has been a long history of thought in which the size of the “reserve army of labour” governed wage increases and the distribution of income between capital and labour. The “reserve army of labour” might be thought of as the underlying un- and under-employed ready to take up job offers and whose existence keeps downward pressure on wages.

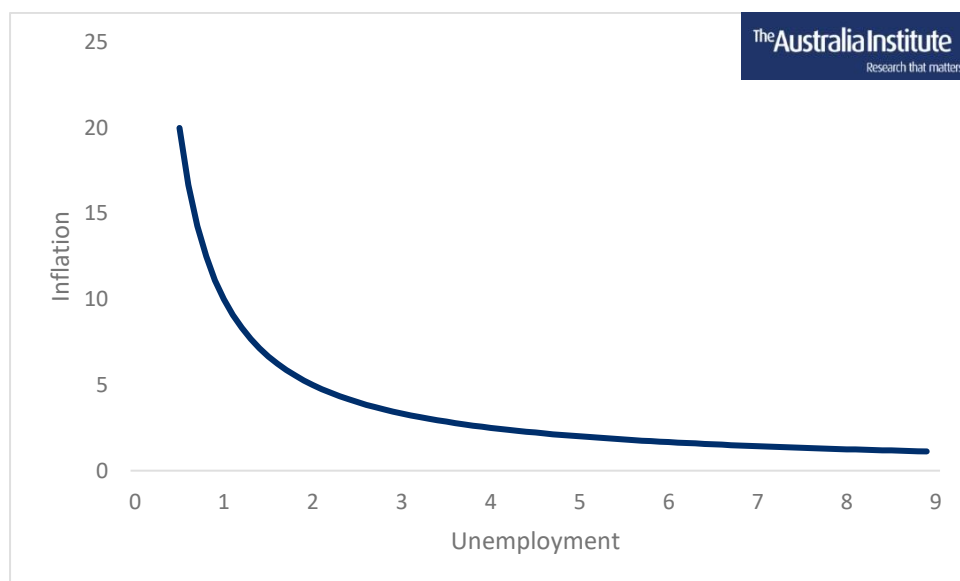
The term may have had underground connotations, but it really just expresses the thinking behind the Phillips Curve, namely that higher unemployment moderates wage pressures and is associated with lower inflation. Figure 1 shows a hypothetical Phillips curve showing the relationship between inflation and unemployment. The Phillips Curve is routinely estimated by researchers including those from the RBA.²⁶

²⁴ Ibid.

²⁵ ABS (2022) *Barriers and Incentives to Labour Force Participation, Australia*.

²⁶ Bishop J and Greenland E (2021) “Is the Phillips Curve Still a Curve? Evidence from the Regions”, *RBA Research Discussion Paper, RDP 2021-09*

Figure 1: Hypothetical Phillips curve showing the relationship between unemployment (%) and inflation (%)



DEFINING “EMPLOYMENT”

The official figure for employment sat at 13.88 million as of March 2023.²⁷ To be seen as “employed” by the ABS, an individual must have worked at least one paid hour in the reference week.²⁸ This category also includes those who normally work but are on a temporary leave of absence due to, for example, shift work, flex time, workers’ compensation, annual leave, personal leave, or striking activity.²⁹ In these cases, the person must maintain an attachment to their job throughout the period of absence.

Unemployment and employment are mutually exclusive categories. If an individual works even one hour during the reference week, they count as employed and hence cannot be unemployed. As such, the very low threshold limit means that the category of “employed” ends up including any Australians who are underemployed (i.e., workers who are formally employed but would prefer and are available to work additional hours). March 2023 figures for underemployment sat at 895,600.³⁰ This comprises 6.5 per cent of the employed workforce.³¹ It also makes up a sizable proportion of those in part-time work.³²

²⁷ ABS (2023) *Labour Force, Australia*.

²⁸ ABS (2021) “The labour force framework” <https://www.abs.gov.au/statistics/detailed-methodology-information/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/2021/concepts-and-sources/labour-force-framework>

²⁹ Ibid. This leave of absence should generally be less than three months.

³⁰ ABS (2023) *Labour Force, Australia*.

³¹ Ibid.

³² ABS (2022). *Underemployed Workers*.

Underemployment can be hard to escape. The most recent ABS *Underemployed Workers* survey found that of those in underemployment, close to half (44%) reported having been stuck in underemployment for one year or more.³³ This indicates that for many, underemployment is not just a short or transient stage on the way to full-time or adequate work.

The degree of underemployment has increased over time, in part due to regulatory changes within the labour market. Where the underemployment ratio once sat around 2.7 per cent of the formally employed workforce, it now routinely exceeds 6 per cent,³⁴ and before the COVID-19 pandemic, this figure routinely exceeded 8.5 per cent.³⁵ In addition, where one in ten Australians worked part-time 40 years ago, now more than a quarter of workers do.³⁶ This means that where once meeting the criteria for being considered “employed” was a good proxy for adequate employment, today this assumption cannot hold.

This is due to fundamental changes in the labour market, including the prevalence of gig economy work, sham contracting, and the casualization of the labour force. These are all concepts that simply did not exist when the theory that underlies the ABS’s definitions was drafted. As the category of employment does not distinguish between those in sufficient employment and those in underemployment, the official employment figure can tend to mask just how many Australians are seeking work. This is one way by which the extent of unemployment continues to be understated in official figures. The Australia Institute has provided more extensive analysis of underemployment in other reports.³⁷

DEFINING THE “LABOUR FORCE”

The combination of the section of the population classified as unemployed and the section classified as employed is referred to as the “labour force”. The proportion of the total Australian population aged 15+ years engaged in the labour force was 66.7 per cent as of March 2023.³⁸

The concept of the “labour force” is critical to understanding official unemployment statistics, because these statistics are shown as a portion of the total labour force—not of the total working age population. The official unemployment rate is calculated by

³³ Ibid.

³⁴ ABS (2023) *Labour Force, Australia*. Comparison of the first and last figure in the relevant time series (Feb 1978 – March 2023).

³⁵ Ibid.

³⁶ Cassidy and Parsons (2017) “The Rising Share of Part-time Employment” <https://www.rba.gov.au/publications/bulletin/2017/sep/pdf/bu-0917-3-the-rising-share-of-part-time-employment.pdf>

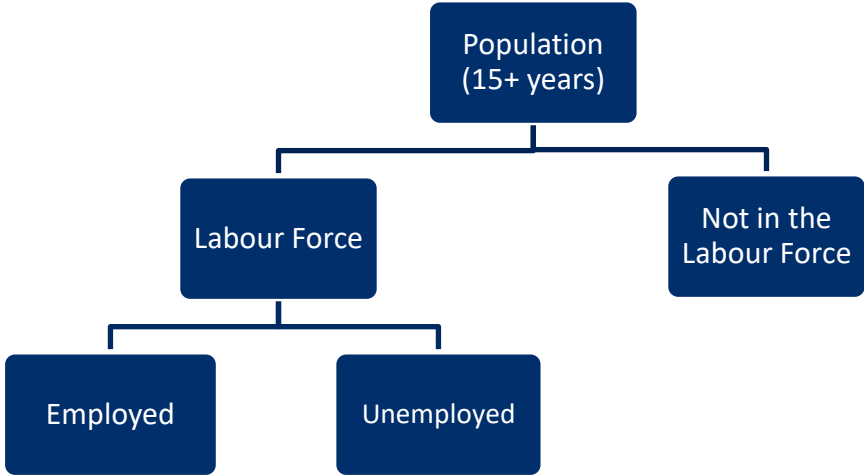
³⁷ Denniss (2001) *Measuring Employment in the 21st Century: New measures of underemployment and overwork* https://australiainstitute.org.au/wp-content/uploads/2020/12/DP36_8.pdf

³⁸ ABS (2023) *Labour Force, Australia*. This percentage is termed ‘the participation rate’.

determining the percentage of people who are unemployed *as a portion of the total labour force*.

This means that the unemployment rate may be better understood as a measure of the *portion of the labour force* who are unemployed—rather than the *portion of working-age Australians* who are unemployed. This is reflected in Figure 2. In other words, those classified as outside the labour force have no bearing on the unemployment rate. This means that the efficacy of the current measurement of unemployment depends on those classified as “not in the labour force” being genuinely outside the labour force.

Figure 2: Labour force framework



Source: ABS (2021), The Labour Force Framework

DEFINING “NOT IN THE LABOUR FORCE”

Those who do not meet the ABS’s strict criteria for being considered either “employed” or “unemployed” are classified as “not in the labour force” (NILF).³⁹ As of March 2023, there were 7.1 million Australians classified as NILF.⁴⁰

People who fall into this broad category are considered economically inactive, and are—in principle, at least—not part of the labour supply. And indeed, many Australians who have no attachment to or interest in work are included in this category. These include retirees,

³⁹ ABS (2021) “Not in the Labour Force” <https://www.abs.gov.au/statistics/detailed-methodology-information/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/2021/concepts-and-sources/not-labour-force>

⁴⁰ ABS (2023) *Labour Force, Australia, detailed*.

carers, full-time students, persons with a permanent disability, and those who are in hospitals or other institutions.⁴¹

However, there are also a significant number of individuals within the NILF category who want to work. This includes individuals who are either:

- Actively looking for work, but not available to start work in the reference week; or
- Available to work, but not actively looking for work.⁴²

The first category includes those unable to start work during the reference week, for example, because they have existing childcare responsibilities. The second category includes those known as “discouraged job seekers”. This group is comprised of individuals “who want to work and could start within four weeks if offered a job, but who have given up on seeking work for reasons associated with the labour market”.⁴³ These people are formally excluded from the ABS’s definition of unemployment because they are not *actively* seeking employment.

Worker discouragement has several possible causes. People may be discouraged by the perception that there are no jobs available in their area of work or their locality, or that there are simply no jobs available to them at all.⁴⁴ Alternatively, they may be discouraged by the view that there are no jobs available for them because of discrimination in the workforce (for example, that they may be too young or too old, or that their disability will prevent them from becoming employed), or that they may lack the necessary education, skills, or experience to apply for available jobs.⁴⁵ Others in this group may not be actively looking for work, but for reasons not related to the labour market.⁴⁶

The most recent ABS *Participation, Job Search and Mobility* survey, published in May 2022, found that out of the approximately 6.8 million Australians who were classified as NILF, 5.5 million either did not want to work or were permanently unable to work.⁴⁷ The remaining 1.2 million individuals wanted to work, but were excluded from being considered

⁴¹ ABS (2021) “Not in the Labour Force” <https://www.abs.gov.au/statistics/detailed-methodology-information/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/2021/concepts-and-sources/not-labour-force>

⁴² Ibid.

⁴³ Ibid.

⁴⁴ ABS (2021) “Not in the Labour Force” <https://www.abs.gov.au/statistics/detailed-methodology-information/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/2021/concepts-and-sources/not-labour-force>

⁴⁵ ABS (2021) “Not in the Labour Force” <https://www.abs.gov.au/statistics/detailed-methodology-information/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/2021/concepts-and-sources/not-labour-force>

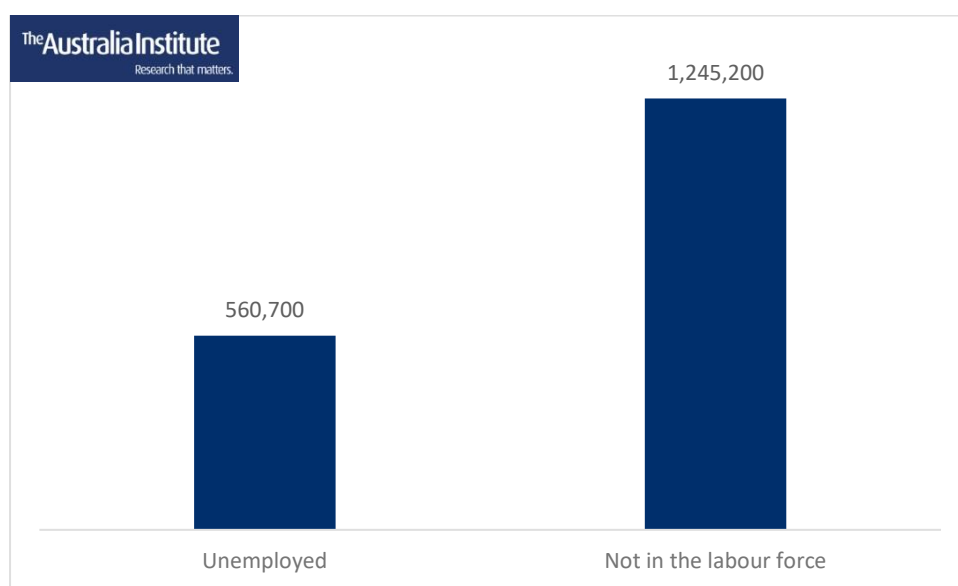
⁴⁶ ABS (2021) “Not in the Labour Force” <https://www.abs.gov.au/statistics/detailed-methodology-information/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/2021/concepts-and-sources/not-labour-force>

⁴⁷ ABS (2022) *Participation, Job Search and Mobility, Australia*.

“unemployed” under the official definition of unemployment.⁴⁸ Even though this represents a relatively small minority of the total NILF category, its bearing on the level of unemployment could be very significant: if taken into account, this number would more than triple the ranks of the unemployed.

Another way of putting this is that official unemployment figures currently only capture around 32% of those seeking work. Adding the 1.2 million job seekers in the NILF category to the 560,700 officially unemployed gives a total of 1.8 million non-employed people looking for work during the survey period.⁴⁹ This puts the rate of unemployment as high as 12%—far exceeding the official figure of 3.5%. See Figure 3 below for more detail.

Figure 3: Potential workers: February 2022



Source: ABS (2022) Participation, Job Search and Mobility, Australia.

The situation looks even worse if underemployment is factored into the equation. The total underemployment figures for the same survey period found that there were 920,000 underemployed workers.⁵⁰ These workers are classified as “employed” in official employment figures, and thus contribute to the other side of the unemployment equation—they inflate employment numbers so that it appears that unemployment is lower than it would be if these individuals were counted at a pro-rata employment rate.

⁴⁸ Ibid; ABS (2022) “Job mobility rises over the second year of the pandemic” <https://www.abs.gov.au/media-centre/media-releases/job-mobility-rises-over-second-year-pandemic>

⁴⁹ Ibid.

⁵⁰ ABS (2022) *Labour Force*. A 2018 parliamentary library report employed a similar analysis on figures at this time. See Vandenbroek, P (2018) Underemployment statistics: a quick guide. https://www.aph.gov.au/About_Parliament/Parliamentary_departments/Parliamentary_Library/pubs/rp/rp1819/Quick_Guides/Underemployment

Adding these 920,000 underemployed workers to the number of officially unemployed people and those who are seeking jobs but classified as NILF gives a total of 2.7 million Australians who were looking for a job or looking for more work during this period.

The number of discouraged workers tends to rise and fall along with broader trends in employment. With rising employment, individuals tend to transition from NILF into employment as more jobs become available and discouragement declines. Conversely, with rising unemployment, the discouraged worker effect tends to become more pronounced, and more potential workers move into the NILF category. In other words, in a period of rising unemployment—exactly the situation that the RBA’s anti-inflation policies are attempting to bring about—official unemployment figures fail to reflect just how many individuals are moving out of the workforce.

Labour market flows

The discussion in the previous section made a case that people in NILF should not be ignored in discussions of unemployment. The following argument suggests that this group should not be ignored based on an examination of the labour market flows.

Fortunately, the ABS publishes figures on monthly flows among the labour market categories, and investigation of this data throws light on the question of the nature and extent of the “reserve army of labour”. The data are summarized in Table 1. The data included in Table 1 are almost the same as the ABS monthly labour flows although Table 1 combines the full-time and part-time employment categories.

The leftmost column of Table 1 indicates into which category people fell in December 2022. The columns to the right show where those people ended up in January 2023. For example, 66,400 people were unemployed in December 2022 but employed in January 2023. Similarly, 198,600 people remained unemployed in both months, while 94,700 people were unemployed in December 2022 and were NILF in January 2023.

Table 1: Monthly employment flows, ‘000s of people, Dec 2022 to Jan 2023

Labour force status - previous month	Current month: Employed	Current month: Unemployed	Current month: not in the labour force (NILF)
Previous Month: Employed	10,487.5	110.1	519.4
Previous Month: Unemployed	66.4	198.6	94.7
Previous Month: Not in the labour force (NILF)	247.0	122.6	5,181.2

Source: ABS (2023) Labour force, Australia.⁵¹

The striking thing about Table 1 is that the numbers of people shifting between labour market categories is so high. The diagonal cells (descending from top left to bottom right) in Table 1 show the people who did not change their labour market status: 10,487,500 people remained employed in both months, 198,600 people remained unemployed, and 5,181,200 were NILF and remained so.

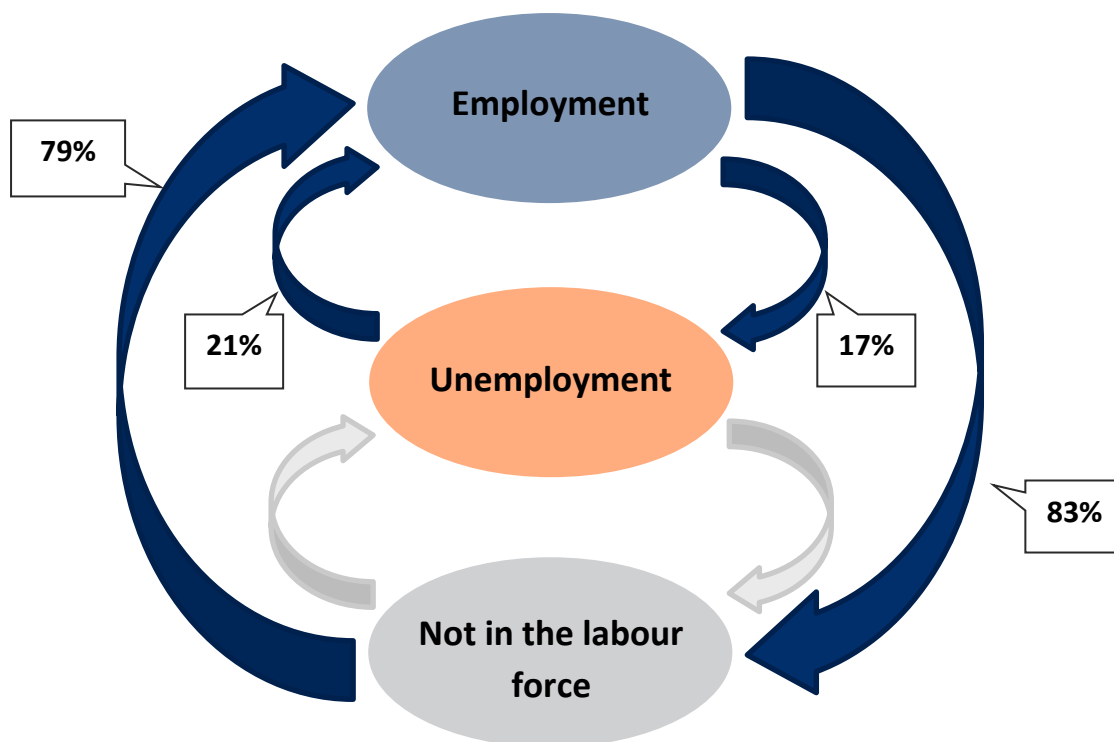
The remaining cells represent people who changed their status, a total of 1,160,200 people. These flows are quite large compared with the month-to-month changes in the total

⁵¹ Note the ABS revises its figures which can make slight changes to the numbers. The numbers in this table and Figure 4 come from the February 2023 reference period of the Labour Force statistics.

unemployment and employment figures, which state that employment decreased by 11,500 people and unemployment increased by 21,900 in January 2023.⁵²

If we consider the flow of people into employment we observe that 66,400 came from those officially described as unemployed while a much larger number—some 247,000—came from NILF. That means that of the entrants into employment, 21 per cent had been classified as unemployed, while the remaining 79 per cent were classified as NILF. In the same month, some 519,400 people left employment to be NILF compared with 110,100 who moved from employment into unemployment. So just 17 per cent of the total exits from employment went into unemployment; 83 per cent went to NILF. These labour market flows are illustrated in Figure 4.

Figure 4: Flows in labour force status, Dec 2022 to Jan 2023, %



Source: ABS (2023) *Labour force, Australia*.

If the official definition of unemployment accurately reflected the number of people who were seeking employment, one would expect that most of those moving into and out of employment would fall into the category of “unemployed”. In reality, only 20 per cent of the monthly movement into and out of employment came from the ranks of the unemployed. If we think of unemployment as the resting place between spells of employment, the flow

⁵² ABS (2023) *Labour force, Australia*. Note that these aggregate figures are seasonally adjusted while the monthly flow data are original data based on those whose status could be identified in the two consecutive months. Hence the monthly movement data and the net flows cannot be inferred from each other.

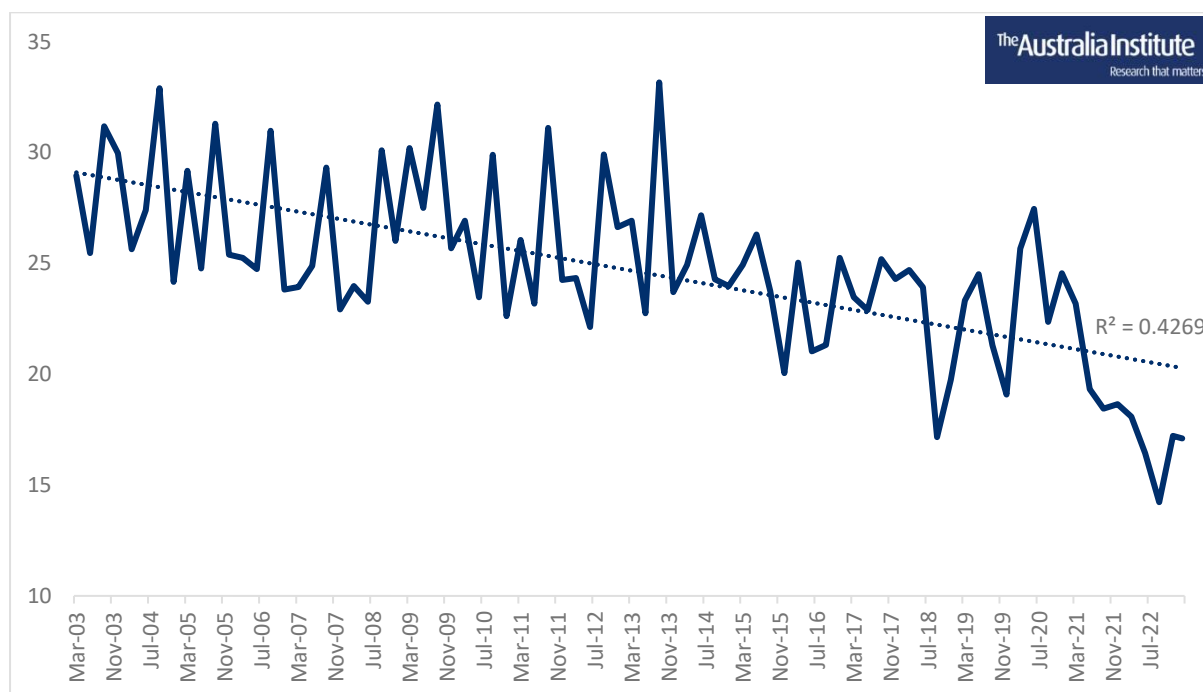
data suggests the real figure is some relatively high multiple of the measured level of unemployment.

As the previous section of this paper mentioned, there are valid reasons why people may move from employment to NILF or from NILF to employment. The former category includes, for example, people moving into retirement, going into full-time study, or who have been admitted into institutions.⁵³ The latter category includes, for example, school leavers or former carers re-entering the job market. However, these movements should be relatively stable over time and should not dominate all labour flow movements.

For one reason or another, the bulk of the people in between jobs do not appear to fit the official definition of unemployment. They may have worked an hour last week, they may have given up and not looked for work, it may take them a bit of time to organise childcare and the like. Nevertheless, the data make it clear that they need to be treated as part of the industrial reserve army.

The ABS does not produce a time series that gives, for example, the flow from unemployment to employment every month. As such, we have had to construct such a series which can then be examined. This data has been constructed for each of the flows into and out of employment and presented in Figure 5.

Figure 5: Movements from employment into unemployment over time as a share of total movements out of employment, %



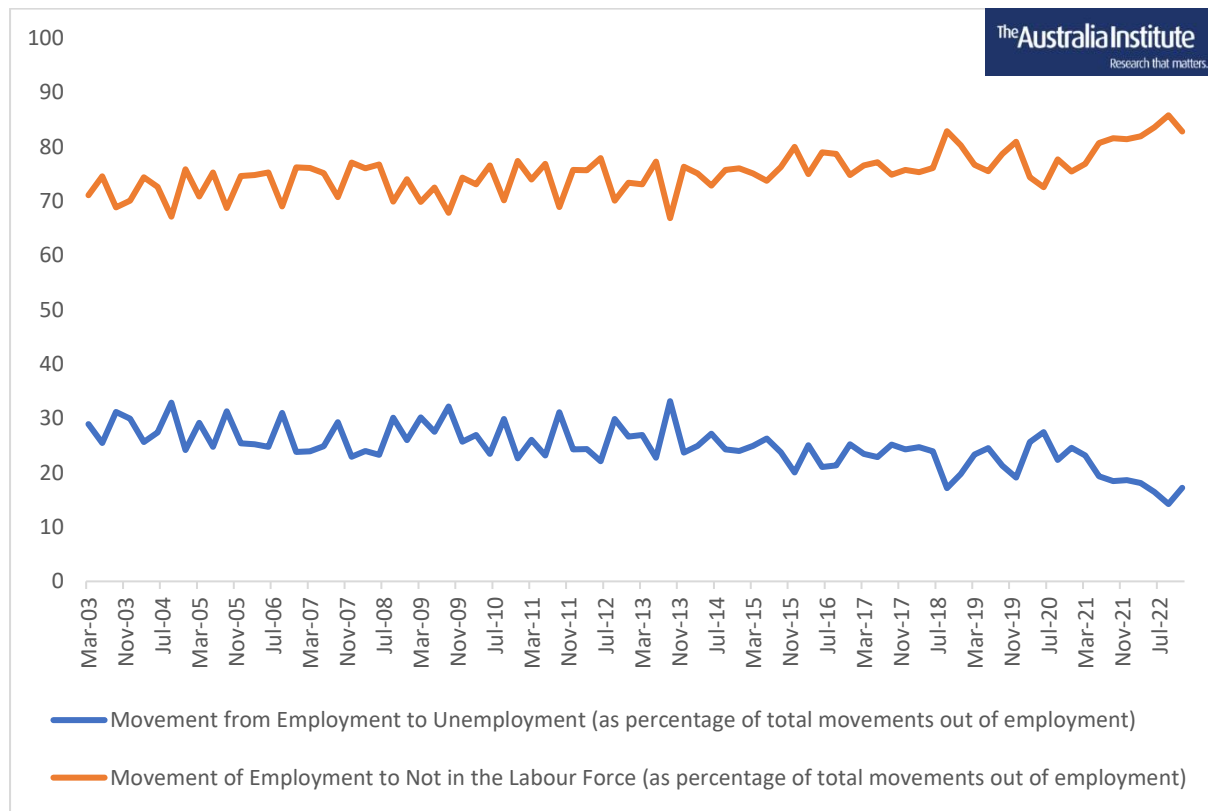
⁵³ ABS (2021) “Not in the Labour Force” <https://www.abs.gov.au/statistics/detailed-methodology-information/concepts-sources-methods/labour-statistics-concepts-sources-and-methods/2021/concepts-and-sources/not-labour-force>

Source: ABS (2023) Labour force, Australia.

The time series data shown in Figure 5 show the labour flows from employed to unemployed as a share of all movements from employment. As people have exited work over the last two decades, only about a quarter have transitioned from employment into unemployment. The remainder have transitioned directly from employment into NILF. This means that approximately three-quarters of the total movement out of employment is accounted for by movements into NILF.

To assist the reader the data in Figure 5 is included in Figure 6 which also includes the proportion of people who move out of employment and go to NILF.

Figure 6: Movements from employment into unemployment and into NILF over time as a share of total movements out of employment, %

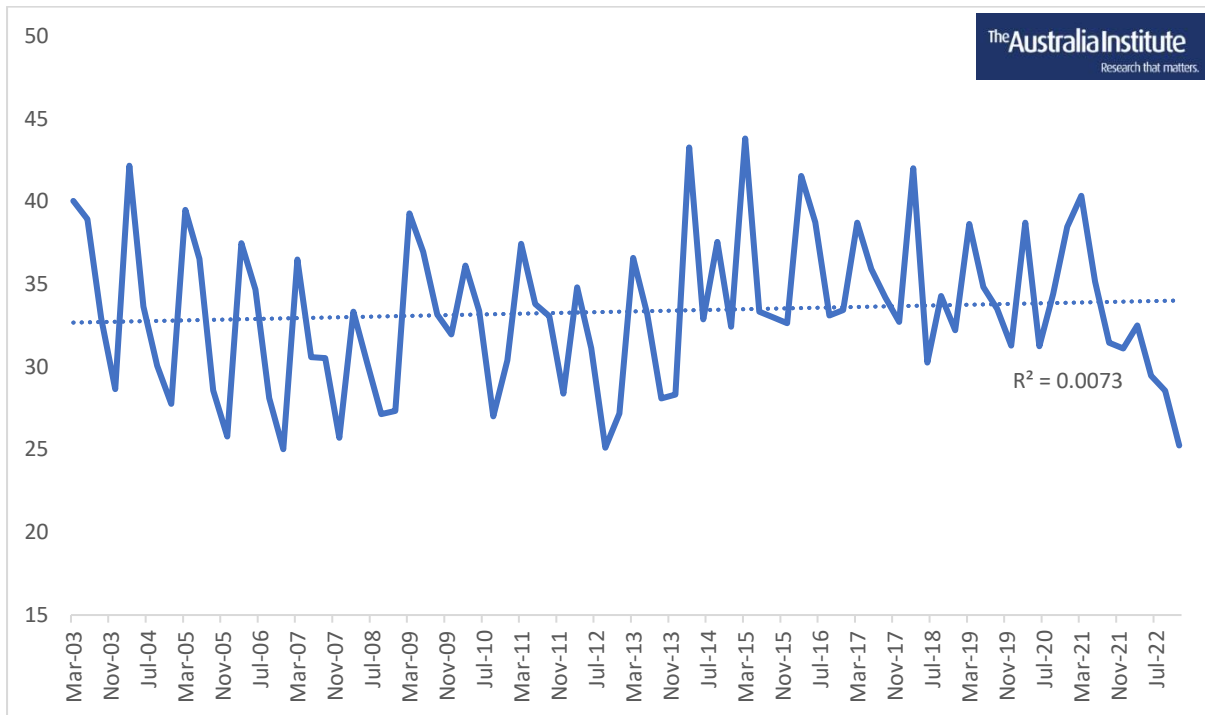


Source: ABS (2023) Labour force, Australia.

Figures 4 and 5 show that the data is relatively volatile and displays a slow but steady increase in people exiting employment into the NILF category rather than the unemployment category. That trend is shown by the dotted line in Figure 4. We will comment further on these observations below.

In addition to examining the flows of people exiting employment, we can also examine flows into employment to see where they come from. These figures are illustrated in Figure 7 and Figure 8.

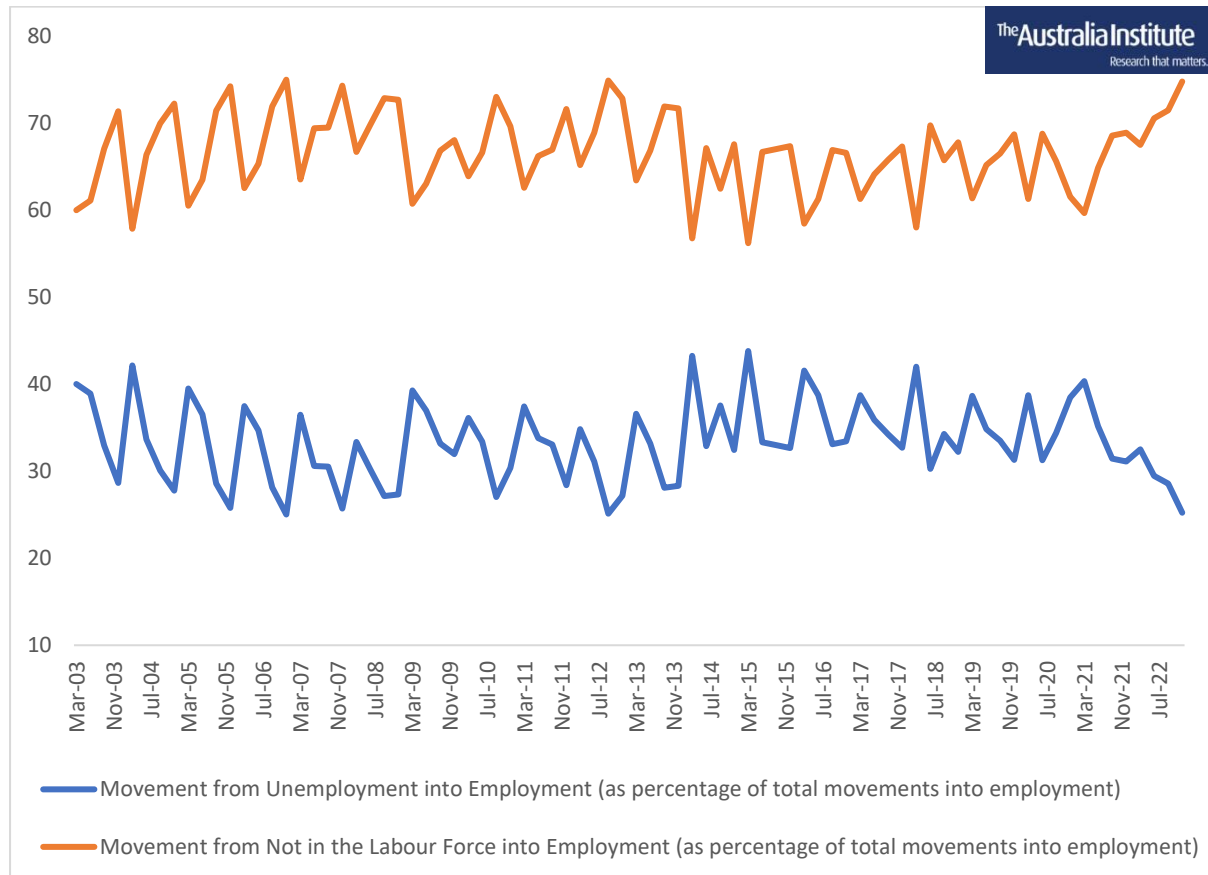
Figure 7: Movement from unemployment to employment as a share of all movements into employment, %



Source: ABS (2023) Labour force, Australia.

Figure 8 adds to Figure 7 by including the movements from NILF into employment on the same graph.

Figure 8: Movement into employment from unemployment and NILF as a share of all movements into employment %



Source: ABS (2023) Labour force, Australia.

Figures 7 and 8 complement the earlier graphs and show that movements into employment from NILF dominate movements into employment from unemployment. For most of the period shown, two thirds of the movement into employment came from NILF, outside the labour market as officially defined.

Again, the data suggests that unemployment data are not showing what they purport to show. When people enter employment, around two thirds tend to come from NILF rather than from unemployment directly. Movement from unemployment to employment, in comparison, accounts for only one third of this total flow. These figures indicate that official unemployment accounts for only 25–35 per cent of the actual number of willing workers who are not working.

Furthermore, trends in the movement between labour categories indicates that the systemic underestimation of unemployment may be worsening over time. Flows from employment to unemployment have been dropping as a share of all movements from employment since the series began in 2003. Over this time there has been a commensurate rise in the proportional movement of employed into the NILF category. One reason why movements from employment into NILF as a proportion of all movements from

employment is that the ABS's definition of unemployment is worsening as an indicator of real unemployment. We discuss why this might be the case in the next section, but whatever the reason, the fact remains that the unemployment category is too rigid and as a result, there are increasingly large numbers of unemployed Australians hiding in the NILF category.

Discussing the results

If the official measure of unemployment was a good measure of unemployment, we would expect that the bulk of month-to-month movements would be from employment to unemployment and back again. However, that is not the case. The vast majority of movements into employment are from NILF and exits from employment go to NILF. That suggests that a large number of the NILF category should instead be treated as a genuine part of the labour force.

Not only is the official definition of unemployment a poor indicator of the true level of unemployment, it seems to be getting worse. The share of movements into and out of NILF are both volatile, but in the case of movements out of employment, there is a steady trend upward over the last two decades. These features of the data mean that we cannot rely on movements in official unemployment as at least indicating the direction in which the real level of unemployment might be moving.

It was mentioned above that the definition of unemployment was adopted over 60 years ago when the labour market looked very different. Men were generally the primary breadwinners and could expect to be employed full-time rather than in part-time, casual, or precarious gig economy work.⁵⁴ Therefore, the one-hour work threshold was unlikely to materially affect the numbers in each category; working at least one hour in a week most likely meant working full-time.

Women, meanwhile, did not tend to work when the definitions were introduced. This low rate of participation was often because they were full-time carers for children or was due to gendered expectations around work. It wasn't until 1966, for example, that a woman in the Commonwealth Public Service could keep her job after marriage.⁵⁵ Women were often dependent upon those in the labour force for a family income. As a result, there was less ambiguity in the NILF category.

In the decades since, the number of women in the workforce has increased steadily: to around 30% in the 1960s,⁵⁶ 38.6 per cent in 1970,⁵⁷ almost half the paid workforce in

⁵⁴ ABS (2021) "Changing female employment over time" <https://www.abs.gov.au/articles/changing-female-employment-over-time>. See also Cassidy N and Parsons S (2017) "The Rising Share of Part-time Employment" <https://www.rba.gov.au/publications/bulletin/2017/sep/pdf/bu-0917-3-the-rising-share-of-part-time-employment.pdf>

⁵⁵ ABS (2012) *Australia Yearbook 2012*.

⁵⁶ Ibid.

⁵⁷ ABS (1974) *Australia Yearbook 1974*.

Australia today. In January 2023, the participation rate was 62.1 per cent for women, compared to 71.3 per cent for men.⁵⁸

This means that when we look at the unemployment figures over a long span of time, we cannot assume that those figures mean much the same thing over that time. A particular rate of unemployment does not mean the same thing as it did 60 years ago, because the way that rate is calculated fails to reflect the structural, behavioural and regulatory changes that have taken place in the intervening years. Nevertheless, the RBA Board has referenced the historically low official unemployment rate in making recent interest rate decisions, noting that the “unemployment rate remained around a 50-year low”.⁵⁹

The failings of the definitions used by the ABS—definitions that have remained unchanged for over half a century—also mean that today, policymakers who reference the unemployment rate are only taking into account a small portion of those looking for work. This, in turn, means that the RBA is looking to increase unemployment based on the belief that unemployment currently rests around 3.5%, when the actual rate is almost certainly a fairly large multiple of the official figure.

The underestimation of real unemployment in the official figures represents a major critique of the numbers themselves, and also of their use as an indicator of labour market tightness. Because they fail to capture the real extent of unemployment, ABS definitions of unemployment are a poor indicator of labour market demand and therefore of the wage pressure exerted by employees on employers.

⁵⁸ ABS (2023) *Labour force, Australia*.

⁵⁹ RBA (2023) *Minutes of the Monetary Policy Meeting of the Reserve Bank Board*, 7 March.

Conclusions

At any one time there are a large number of people who have just left employment or are about to enter employment. If those people are not presently employed, we would expect that they would be recorded as unemployed because, clearly, the bulk of them are seeking to continue working.

Instead, many such people are not recorded as being unemployed, but are instead deemed to be not part of the labour force. If people are filling the functions we associate with unemployment but are not recorded as unemployed, then clearly our categories are wrong. To put it in crude Phillips Curve analysis, the number of potential workers putting downward pressure on wages are being seriously underestimated.

This all suggests that unemployment is a very poor indicator of labour market tightness for policy purposes—let alone as a basis for measuring unobservable and hypothesised variables such as the NAIRU. The fact that the labour market has changed beyond recognition in the decades since the ABS began using its current definitions, but those definitions have remained essentially the same, means that comparing unemployment rates across those decades can be misleading. Suggesting that the unemployment rate is at levels not seen in 50 years may not be actually saying much about labour market conditions then or now—and formulating policy on that basis is a folly that continues to have catastrophic real-life results for Australians seeking work.

We recommend that the Australian Bureau of Statistics do more work on identifying and quantifying those who move in and out of NILF and the workforce. This would help to provide a fuller picture of the extent and composition of unemployment in Australia. For now, any organisations who use the official figure for unemployment should understand that it is just the tip of the iceberg.