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## Foreword

### *ANZRSAI 45<sup>th</sup> Annual Conference 2022*

The 2022 ANZRSAI Conference (i.e. Our 45th annual conference) was held at Charles Sturt University in Wagga Wagga over two days, 01-02 December. The conference theme was "*Data Science in Regional Policy: Housing and Workforce Dynamics*".

It was a hybrid conference, with opportunities for physical or on-line presentations. Two Best Paper Awards were presented at the conference, that were sponsored by the Department of Infrastructure, Transport, Regional Development, Communications, and the Arts.

Our this year conference aimed to promote research collaborations and exchange ideas between regional research scientists and professionals, data modellers, applied statisticians and social scientists who will detail the latest innovations in research to gather and disseminate information from small to big data settings, and from policy analysts who will describe how they use existing information from increasing big data environments and indicate areas in which there need to be methodological and technological developments. Another objective was to establish connections between researchers at tertiary institutions and working in industry in Australia and overseas.

The main feature of the 45th conference was that it received a more than 30 good quality submissions (covering a wide range of topics including housing taxation, predicting extreme rainfall, social agile versus resilient regional communities, cultural distance analysis, COVID-19, AI techniques, spatiotemporal analysis, data science, public policy and agricultural modelling and policy) from 12 different countries across the globe. A truly international mix of HDR students to expert researchers in academia, government office and industry were attending the 2022 conference.

The keynote sessions involved in *De-risking Australian agricultural sector through supply chain mapping tool to action for more ethical data science in regional policy* targeting for precision level local policy. It also included a range of invited sessions and panel discussion which were specially focusing on industry's research issues and modelling opportunities using contemporary data science methodologies tools and techniques.

In addition to the refereed abstracts book, our 2022 event leads to publish selected full papers as a Special Issue in the "Australian Journal of Regional Studies (AJRS)" a high-quality journal and flagship publication by the ANZRSAI. Selected full papers are currently in a thorough peer review process for the journal publications.

Finally, this year conference has received very good feedback from the participants. The conference organising committee sincerely thank all authors and participants who have contributed to this year event and help in all initiatives.

Our 46th annual conference will be hosted in November or December 2023 by the RMIT University in Melbourne. Further details will be provided early next year.

*The Nobel prize in economics 2022*



III. Niklas Elmehed © Nobel  
Prize Outreach  
**Ben S. Bernanke**  
Prize share: 1/3



III. Niklas Elmehed © Nobel  
Prize Outreach  
**Douglas W.  
Diamond**  
Prize share: 1/3



III. Niklas Elmehed © Nobel  
Prize Outreach  
**Philip H. Dybvig**  
Prize share: 1/3

[Source [www.nobelprize.org](http://www.nobelprize.org)]

“The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2022 (also called as the Nobel Prize in Economics)” has been awarded to Ben Bernanke (The Brookings Institution, USA), Douglas Diamond (University of Chicago, USA) and Philip Dybvig (Washington University, USA). Each person received the one-third of the award for their distinctive research contributions to understand the role of banks in the economy, particularly during financial crises. These economists have provided us with new insights and perceptions on two significant questions:

- a) what is the role of banks in the economy and society? and
- b) what happens if they collapse?

The foundations of modern banking research were laid by Ben Bernanke, Douglas Diamond and Philip Dybvig in the early 1980s. Through statistical analysis and historical source research, Bernanke demonstrated how failing banks played a decisive role in the global depression of the 1930s. Bernanke’s research shows that bank crises can potentially have catastrophic consequences. This insight illustrates the importance of well-functioning bank regulation.

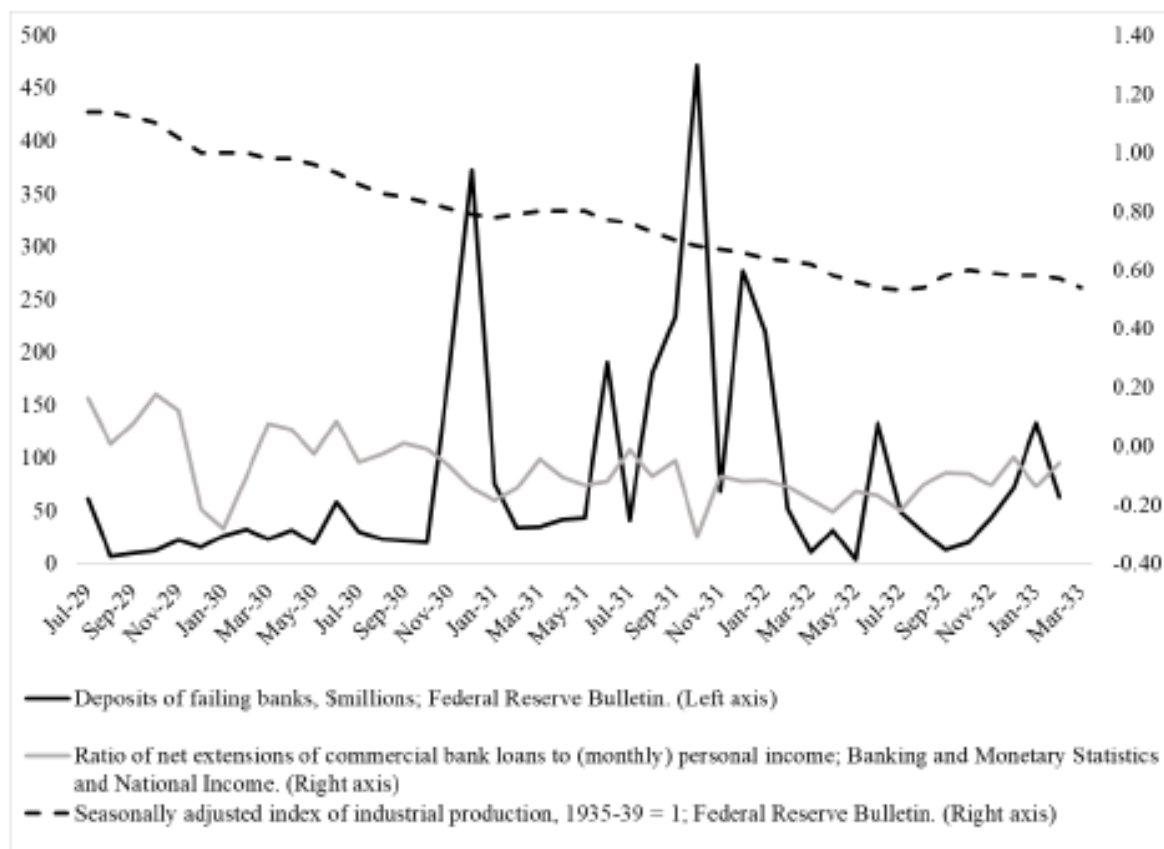
Financial intermediaries such as traditional banks and other bank-like institutions facilitate loans between lenders and borrowers, and thereby play a key role for the allocation of capital. They enable households to get a mortgage to buy a home, farms to get a loan to buy a harvesting machine, and firms to get a loan to build a new factory.

However, financial intermediaries also play a key role during times of significant economic distress. For example, during the Great Depression in the 1930s, a large number of banks failed, and the credit supply contracted significantly, further deepening and prolonging the recession. Another example is the 2007-2009 Global Financial Crisis, which arguably started in the financial sector, and financial intermediaries were at the core as the crisis unfolded. This crisis led to a long recession, sometimes called the Great Recession. The fact that banks and other financial intermediaries perform important functions but at the same time can be associated with devastating crises poses a critical challenge to policymakers.

Two parallel research projects that originated in the early 1980s, both motivated by the experiences of the banking sector during the Great Depression, have significantly advanced our understanding of the role banks play in the economy. Douglas Diamond and Philip Dybvig developed theoretical models to explore the role banks play in the economy and why they are vulnerable to bank runs. Specifically, Diamond and Dybvig (1983) presented a theory of maturity transformation and showed that an institution using demand deposits to finance long-term projects is the most efficient arrangement, but that, at the same time, this arrangement has an inherent vulnerability: bank runs may arise.

Diamond (1984) developed a theory of a bank's provision of delegated monitoring services and showed that banks can ensure that projects with high (but risky) long-run returns obtain funding by monitoring borrowers on behalf of lenders. This was an entirely new approach to understanding banks; earlier researchers had taken the functions of banks as given and had not attempted to explain their fundamental role in society.

The empirical research by Ben Bernanke addressed the same questions. His study object was the Great Depression: the deepest and longest economic downturn in recorded history, one that began in the U.S. but also became global. Motivated by a combination of theoretical arguments, he provided historical documentary evidence and empirical data to uncover the importance of the credit channel for the propagation of the depression. In a particular example, he demonstrated the impact of financial panics on output (see, Fig. 4).



**Figure 4: Selected macroeconomic data, July 1928 to March 1933. (Figure based on Table 1, Bernanke, 1983, p. 262.)**

Statistics revealed that bank failures were accompanied by a large contraction of credit and by a dramatic reduction in industrial output, which 35 dropped by 46% between January 1930 and March 1933. The financial panic ended in early March 1933, when the government (led by the newly elected president Franklin D. Roosevelt) forced all banks to close their businesses for one week to stop the panic (the so-called National Banking Holiday). Later that year, Congress passed the National Banking Act of 1933, which among other measures introduced federal deposit insurance for U.S. banks.

Moreover, Bernanke (1983) showed, in particular, that the downturn became so deep and so protracted in large part because bank failures destroyed valuable banking relationships, and the resulting credit supply contraction left significant scars in the real economy. These were new insights; earlier economic historians had viewed bank failures merely as a consequence of the downturn, or mattering to the rest of the economy only by contracting the money supply, rather than directly damaging investments through severed credit arrangements. Thus, Bernanke's work was not only relevant for understanding the Great Depression, but also more generally for providing evidence on the critical role of banks in the economy.

The theoretical and empirical findings of Bernanke, Diamond, and Dybvig thus reinforce each other. Together they offer important insights into the beneficial role that banks play in the economy, but also into how their vulnerabilities can lead to devastating financial crises. The findings have proven extremely valuable for policymakers: the actions taken by central banks and financial regulators around the world in confronting two recent major crises – the Great Recession and the economic downturn that was generated by the COVID-19 pandemic – were in large part motivated by the laureates' research.

A detailed information about their outstanding body of works and how that impacted our societies can be explored here:

<https://www.nobelprize.org/uploads/2022/10/advanced-economicsscienceprize2022-2.pdf>

<https://www.nobelprize.org/prizes/economic-sciences/2022/press-release/>

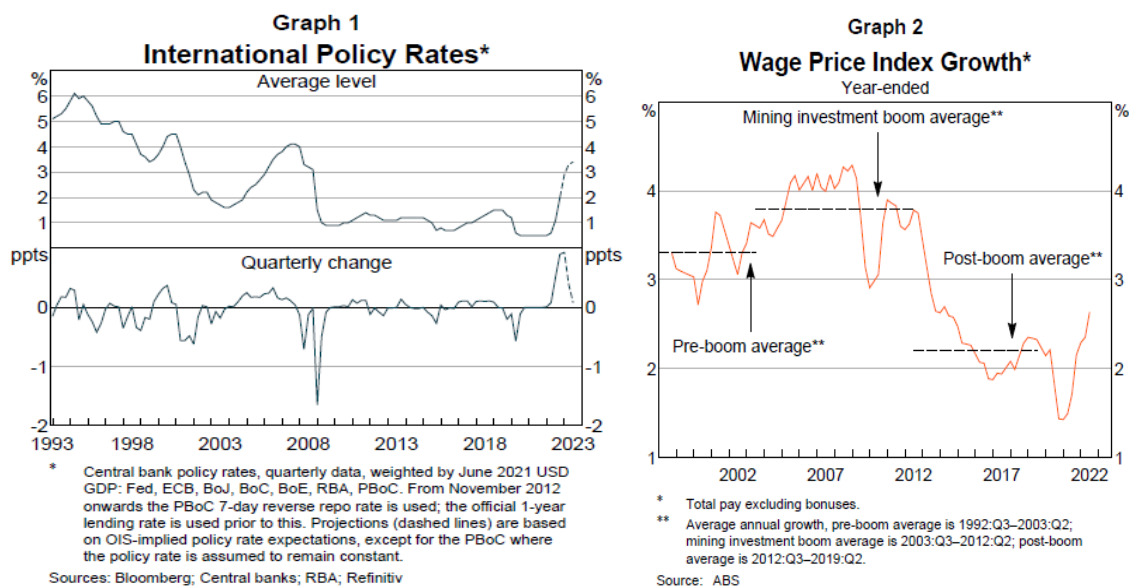
### *Exchange rates and inflationary pressures*

[An RBA speech by Christopher Kent, Assistant Governor (Financial Markets)]

Inflation is too high in most economies. This reflects disruptions to supply coupled with strong demand. There has been an unprecedented monetary response in terms of the size of policy rate increases, across a wide range of central banks in a short span of time. Graph 1 (in the next page) shows the average of policy rates across a selection of central banks covering about 70 per cent of the global economy. If market expectations for policy rates pan out, then by the first part of next year the average policy rate will have increased by an amount comparable to the rise seen through the mid-2000s – but while that increase occurred over four years, this increase will have taken just four quarters.

The increase in the Reserve Bank's cash rate target has also been sizeable and rapid. After raising rates by 25 basis point in May, the Board then raised rates by 50 basis points in each of the four meetings between June and September. At its October meeting, the Board raised rates by 25 basis points. The Board expects to increase interest rates further in the period ahead, given the need to

establish a more sustainable balance of demand and supply and in the face of a very tight labour market. While wages growth has picked up in Australia from the low levels of recent years, it remains lower than in many other advanced economies. Indeed, wages growth is well above levels consistent with inflation targets in a number of these economies.



The size and timing of rate increases in Australia will depend on incoming data – including the response of household spending to the tightening in financial conditions that is still working its way through the system. Rate increases will also depend on the outlook for inflation and the labour market.

In my presentation today I will consider some issues related to inflationary pressures with a focus on the behaviour of exchange rates, both real and nominal.

- **The real exchange rate and wages**

Wages growth and inflation in Australia had been low over a number of years prior to the COVID-19 pandemic. Looking at the growth of one measure – the Wage Price Index (WPI) – annual wages growth of around 2 per cent had become normal, while 3–4 per cent growth was the norm in the 15 years or so prior to the end of the mining investment boom (Graph 2).

For many years over the past decade or so, actual wages growth was much weaker than the Bank had forecast. The Bank has discussed a range of reasons for that unexpected weakness, including rising participation rates, heightened global competition, changes in bargaining arrangements and technology advancements.

Another factor that contributed to the spare capacity in the labour market and affected wages growth was the long shadow cast by the end of the mining investment boom. On the back of a boom in commodity prices, mining and mining-related investment rose from around 2 per cent of GDP prior to the boom to a peak of around 9 per cent in 2012. This massive expansion in productive capacity underpinned a sizeable and prolonged increase in the demand for Australian labour. But once the new infrastructure was in place, and coincidentally the terms of trade began to decline, the demand for labour eased noticeably.

Further interesting points with explanatory information can be found at:

<https://www.rba.gov.au/speeches/2022/sp-ag-2022-10-24.html#fn0>



## Commentary

From the Regional Australia Institute

### *Regionalisation Ambition 2032*

Regional people have said for years that they don't want to be told; they want to be heard. They want a long-term plan, to contribute and collectively build a stronger Australia and ensure a healthy and prosperous future for their children. We also want this and it's our role to help achieve this through developing a lasting legacy that we can all be proud of.

Regional, rural and remote Australia (regional Australia) is home to over 9.5 million Australians, projected to increase to just under 10.5 million by 2032, based on the most recent combined State and Territory growth projections. Through our continued dedication to regional Australia, the Regional Australia Institute (RAI) has highlighted the boundless potential of our regions which, if unlocked, would lead to a stronger regional Australia and a stronger, more balanced nation.

According to the research report, 90% of those surveyed in our regionalisation consultation survey agree that Australia needs a long-term ambition for strengthening our regional communities.

We (i.e. RAI researchers) know that regional Australia is calling for a long-term ambition for regions – we simply need to come together as government, industry, not-for-profit and community leaders to lead the way. We at the RAI wish to champion this shift in mindset that places regional Australia solidly at the heart of policy, planning, investment and decision-making.

Today, Australia is one of the most urbanised nations in the OECD, with just under two thirds of Australia's population living in our handful of major capitals. Historically this has not always been the case – at Federation just over one third of Australians lived in Australia's capitals, and two thirds in our regions. Whilst this trend reflects global shifts towards increasing urbanisation and expansion of city-based service industries, Australia's unique pattern of urban primacy is unsustainable, and we believe it's time to shift this trajectory.

This report poses a bold ambition to rebalance the nation and seeks to challenge the current trajectory of Australia's growth with an ambitious alternative, building a more prosperous, inclusive and balanced Australia.

This is, however, only the beginning of this journey. The RAI is issuing a call for collaborative action and change in each of the pillars spotlighted in the Framework, over the next decade. This Framework sets out a multifaceted suite of aspirations, targets and corresponding actions, that seek to achieve impactful shifts in a complex system of stakeholders and relationships. Achieving our ambition will require collaboration, engagement, and action across each of the targets set out in the Framework, by all parties.

Every one of us will have the power to make regionalisation a reality. Every one of us must play a part in creating or supporting action that ensures we build a more prosperous, inclusive, and balanced future for Australia.

This research report has also highlighted a range of case studies on significant topics.

Detailed information can be found at: <https://rebalancethenation.com.au/RF/RF/Regionalisation-Framework/Regionalisation-Ambition-2032.aspx?hkey=6bf6319e-6d74-4df1-9c1d-e4fc02a3abc0>

***Regional Australia's Jobs Problem Needs More Than a Jobs Solution***

The Regional Australia Institute (RAI) has highlighted the need for a multi-faceted and long-term approach to solving the jobs and skills crisis in regional Australia in their recent submission to Treasury's Employment White Paper.

Regional Australia is currently experiencing its toughest recruitment market on record, with advertised vacancies reaching a peak of 94,100 in October 2022. Professional roles are highest in demand meaning many regional areas are competing with metro areas for talent.

According to RAI CEO, Liz Ritchie, solving the jobs and skills challenge for regional Australia isn't as simple as moving people from cities into regional roles.

"We are grateful that we can contribute our research and insights to Treasury's Employment White Paper process because we believe we are at a critical juncture for changing the fate of regional Australia and Australia's overall prosperity," she said.

"More people than ever before want to live in the regions, but this doesn't mean we can keep people living in the regions or we will necessarily see people move from cities to fill regional roles.

"Despite record jobs on offer, a lot in industries of the future like agriculture, renewable energy, and critical infrastructure, many regions can't accommodate the demand because of lack of housing options, essential services and access to skills and training.

"This is why our 10-year regionalisation framework, a set of targets to improve life in regional Australia, acknowledges that jobs targets need to be interlinked with targets and challenges in other areas like housing, like access to health services," Ms Ritchie said.

The RAI launched its Regionalisation Ambition 2032 – A Framework to Rebalance the Nation in September 2022. The Ambition outlines 20 targets across five interlinked pillars including population, jobs and skills, productivity and innovation, liveability and sustainability and resilience. The goal of the Ambition is for more than 11 million Australians to be living prosperously in the regions by 2032, an increase on current projections.

A number of the Ambition's targets have been called out in the RAI's Employment White Paper submission.

"Addressing the regional jobs challenge, over the long-term, needs targets and attention placed on both retaining people in the regions by increasing skills and career paths and attracting new people.

"One of the strategies we highlight is a long-term target to increase the percentage of new migrants settling in regional areas to help address job shortages. Today, only 20% of migrants are settling in regional areas. We have set a target to double this over the next 10 years."

Further information can be found at the links:

<https://regionalaustralia.org.au>

<https://regionalaustralia.org.au/common/Uploaded%20files/Files/Policy%20Submissions/2022/Employment%20White%20Paper%20301122.pdf>



*From Brookings*

*Introducing the Smart Growth Cities tool*

Greg Wright, Ian Seyal and Carlos Daboin Contreras (October 2022)

Economic and workforce development are two of the leading priorities for policymakers at the local level, but they are notoriously difficult to get right. The cities and regions that do find success in generating both economic growth and an upwardly mobile workforce typically achieve this success by building on their local capabilities. These capabilities may include a specialized workforce, unique geographic amenities, legacy industries that serve as the foundation for new business attraction, or other local advantages. But in practice, identifying the capabilities that should be targeted as building blocks for local growth can be a challenge, as can understanding the trade-offs that arise when prioritizing certain choices over others.

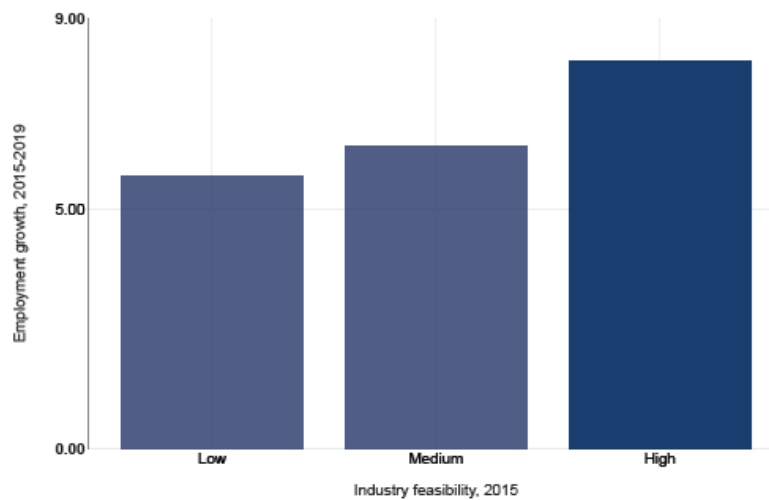
The Workforce of the Future initiative's new Smart Growth Cities tool tackles these challenges via an interactive guide for economic and workforce planning at the U.S. Metropolitan Statistical Area (MSA) and Economic Development District (EDD) levels. The tool first uncovers the industry strategies that are most feasible for each of these areas; in other words, the strategies that best leverage an area's underlying capabilities. Next, the tool allows planners to explore the trade-offs that are implied by each industry strategy in terms of economic growth, good job creation, and equitable job creation. And finally, a workforce plan for meeting the strategy is presented. The resulting industry and workforce plans can then be saved and shared with colleagues.

The notion of industry "feasibility" is central to the process of guiding users toward the best strategy. As noted, a region's underlying capabilities determine how feasible a given industry strategy will be. And while the entire range of local capabilities would be difficult to identify and measure, they can be inferred from historical production patterns and summarized in a feasibility measure using methods introduced by Hidalgo and Hausmann (2009) at Harvard's Center for International Development. In short, the tool calculates the feasibility of every industry for each location by noting that if two industries historically tend to locate in the same areas then they must require similar local capabilities. Extending this idea to all combinations of industry pairs allows us to use a location's existing industry base to generate a measure of the likelihood that any industry will be successful in that area.

It turns out that this insight is a powerful one, as this feasibility measure is highly predictive of the industries that will thrive in a location. Across all MSAs and industries, total future job creation is highly, positively correlated with an industry's initial feasibility. Comparing the least feasible industry with the most feasible industry over a five-year period, around 90 more jobs are created in the most feasible industry. We can also focus more narrowly on "new" industries—those with low initial presence that planners might want to direct attention toward. Figure 1 (in the next page) shows that the most feasible new industries subsequently grew more than two percentage points faster than the least feasible ones. As an example, in the Nashville, Tennessee MSA (one of the fastest growing regions from 2015 to 2019), three of the most feasible industries in 2015 were Satellite Telecommunications, Semiconductor Manufacturing, and Support Activities for Rail Transportation. Over the next five years employment growth in these industries averaged over 323 percent.

**Figure 1. Industry feasibility and future employment growth**

Among initially low-presence industries



Source: *Smart Growth Cities tool*

Every region faces unique challenges while benefiting from unique advantages, which is part of what makes successful economic and workforce development planning so difficult, as there is no one-size-fits-all approach. The Smart Growth Cities tool recognizes this and provides a powerful, location-specific guide that applies research insights and detailed data sources to help planners along this difficult road to achieving economic and workforce outcomes that align with local priorities.

The overall findings of these research may have implications for addressing our regional growth cities in Australia. ANZRSAI stakeholders might be interested to develop a similar tool for linking the economic and workforce development policy for regional cities in Australia.

Read the whole research findings here at: <https://www.brookings.edu/research/introducing-the-smart-growth-cities-tool/>

### **From the Australia Rural and Regional News**

#### ***Naracoorte on the Political Map***

Michael Waite (23 December 2022)

In his capacity as a volunteer, Naracoorte's Lachlan Haynes was recently elected as the Liberal Party of SA's second vice-president.

As part of that role, he hopes to help guide his political counterparts into Government at the next State election in 2026. That means helping to develop the best policies possible.

"It is also very humbling to be elected for a third year on the Liberal Party State executive," Mr Haynes said.

The executive is the party's board of management, and his position comes after two years of chairing the Rural and Regional Council, which has more than 300 members Statewide.

As vice-president Mr Haynes also chairs the party's State Council Policy Committee. It is charged with preparing all of the member's policies raised for the State and Federal divisions.

"Many will go on to become party policies," said Mr Haynes who explained policy development was his passion – particularly if it was rural or regionally focused.

Growing up on a farm near Naracoorte, he aims to "always advocate for the rural and regional residents of the State to have as much equality as possible (compared with) our city cousins".

His passion for rural and regional people and his position as State vice-president have put Naracoorte firmly on the political map.

"I am fourth generation, born in Naracoorte," Mr Haynes said.

"My great grandfather moved to Naracoorte and established a butcher shop in the town – Pinkerton-Haynes Butchers, where Attwood Shoes now resides, and worked a farm at Koppamurra.

"My great grandmother was a Pinkerton from the Commercial Hotel family."

Mr Haynes attended school in Naracoorte and completed Years 11 and 12 in Hamilton.

"After school I was employed in a number of agricultural roles including two years at Balaklava and a year at Vivco IAMA selling rural merchandise," he said.

Returning in the 1990s to manage the family farm, he also married Sarah Crawford, of Lucindale.

Selling the farm in 2017, Mr Haynes is now a vineyard manager at Joanna for Tapanappa Wines.

"I have been a party member for many years and decided to become far more active on the encouragement of Tony Pasin MP, Nicolle Flint (former) MP and Senator Alex Antic," Mr Haynes said.

While it is easy not to be involved in politics or help shape a better future, Mr Haynes decided ignorance or apathy wasn't for him.

"Drawn to the party's conservative values of the freedom of the individual, small government and free enterprise, I threw myself into volunteering," he said.

"The future is determined by those who turn up."

"Turning up", making a difference and working within the party to try and put forward good ideas from the ground up has been part of life for Mr Haynes over many years.

He has taken on positions such as the Liberal Party's Naracoorte branch president, MacKillop State Electorate Committee president for four years, along with Barker Federal Electorate Committee secretary for six years.

"In recent years I have travelled much of the State in my volunteer roles," he said.

Further details are available at:

<https://arr.news/2022/12/23/naracoorte-on-the-political-map/>

*Albanese and King – throwing rural communities down the drain – literally*

Kookaburra, ARR.News (26 October 2022)

For rural and regional communities, especially those crying out for dams for flood and drought mitigation for decades, Budget Paper Number 2 from the Commonwealth 2022-2023 Budget makes depressing reading.

Here is the portion to do with dams:

“As a result of its Spending Audit, the Government will achieve savings of \$4.6 billion over 12 years from 2022–23. Savings include:

- not proceeding with funding of \$5.4 billion for the Hells Gates Dam project in Queensland
- deferring funding of \$899.5 million over 4 years from the Dungowan Dam and Pipeline, Emu Swamp Dam and Pipeline, Hughenden Irrigation Scheme and Wyangala Dam Wall Raising projects, to be reconsidered once business cases are completed and viable pathways to delivery are determined and assessed
- returning funding of \$173.5 million over 4 years from unallocated and uncontracted funding within the National Water Grid Fund.

The Government will retain \$1.0 billion over 8 years from 2026–27 in the National Water Grid Fund to support future projects.

The savings from this measure will be partially redirected to fund other Government priorities.

This measure was identified as part of the Spending Audit, which has focused on the quality of spending, uncommitted funding, duplicative measures and reprioritising existing funding towards higher priority initiatives and budget repair.“

In other words: ‘Be damned on dams country folk! We are throwing money at city voters’.

The reader may well ask – what is the National Water Grid Fund? Good question, here is how the fund is described on its website:

“The National Water Grid Fund will support the development and delivery of nationally important water infrastructure projects that support primary industries and unlock potential, promote growth and sustainability of regional economies, and build resilience.”

High sounding aims – all ignored by the ALP – at both state and federal levels – especially the ‘build resilience’ element, which anyone with an ounce of integrity or compassion would see has been sadly lacking in recent years through a failure to mitigate the impacts of floods – not least of all by building dams.

Budget Paper Number 2 makes the words of Minister Catherine King spoken today in her Regional Budget Statement ring rather hollow:

“Which is why we are delivering on our election commitments to restore and protect rivers and streams across the country, as well as continuing investments in our most important river system – The Murray-Darling Basin – and investing in dams that stack up across the country through the National Water Grid Fund.

At the same time, we well understand the threat that flooding, and disasters pose – our thoughts remain with those in crisis now.”

So, we know about the dams which the ALP is NOT funding. Which ones are they funding, those that ‘stack up through the National Water Grid Fund’?

Kookaburra took a look through the current National Water Grid Fund agreements with each of the states and with the Northern Territory, searching for new dam projects. Here is what was found:

- New South Wales – none
- Victoria – none
- Queensland – two, sort of:

Big Rocks (near Charters Towers) weir and saddle dam – \$30 million Commonwealth contribution – total project estimated to cost \$60 million. 13-metre-high wall. 10,000 megalitres.

Paradise Dam Improvement Project (not a new dam) – the project will restore the Paradise Dam to its full 300GL capacity.

- South Australia – none
- Western Australia – none
- Tasmania – none new – Lake Leake dam life extension project, with a Commonwealth contribution of \$1.5 million.
- Northern Territory – none



River Murray wetlands in time of drought. (Source: <https://arr.news/>)

So, one new weir. Lots to be spent on urban rail and road, however.

Actions, not words, Minister. Actions, not words.

Relevant further details are available at:

<https://arr.news/2022/10/26/albanese-and-king-throwing-rural-communities-down-the-drain-literally/>

From the Gulbali Institute of Agriculture, Water and Environment (CSU)

*Deploying Microscopic Organisms to Increase Horticulture Yields*

Hort Innovation (22 November 2022)

Scientists are investigating whether root systems packed with certain combinations of tiny living things – or microbiomes – result in a more productive plant with the aim of developing new products to increase yield.

The \$1.4M, four-year project is being delivered through Hort Innovation and led by Murdoch University with co-investment from the CRC for Future Food Systems.

Using advanced computer technology, the researchers will identify a range of microbes associated with healthier, higher-yielding plants to select combinations that exhibit higher tolerances to stresses and develop these into new products that increase crop yield and therefore profitability of annual and perennial Australian horticultural crops.

Once collections of beneficial microbes are developed based on a sequence data-driven approach, they will be demonstrated at field sites, allowing for extension and training activities with growers.

Hort Innovation chief executive officer Brett Fifield said developing new microbiome-based products could bring immediate and widespread benefit to horticulture growers across the country.

“Making the growing of fruit, vegetables and nuts more efficient for growers is a priority for a lot of horticulture industries,” he said.

“By applying microbiome-based products, growers can produce more from fewer plants, resulting in a greater per-hectare yield and reduced inputs. Ultimately the aim is to limit costs for Australian growers while producing more quality produce for consumers here and overseas.”

“Arming growers with effective microbiome-based products will also see the environment benefit as growers could produce more with less.”

David Doepel, co-custodian of Melville Park, who grow a range of vegetables, said that having more options available to grow healthier plants in an environmentally sensitive way is great news for the horticulture sector.

“Microbiome-based products that could increase yield would be a fantastic addition to the grower’s toolbox. Managing input costs through harnessing natural systems have never been more important.”

Murdoch University Associate Professor Kirsty Bayliss said the investment represents the first phase of what they anticipate will be a long-term partnership with the horticulture sector.

“This first phase is designed to demonstrate that assessing the plant microbiome with advanced technology is a valid method for discovering microbiomes and developing microbiome-based products. Beyond this phase, we will transfer the technology to a broader range of horticultural crops and focus on making an effective product available to growers.”

This project is being delivered through Hort Innovation’s Hort Frontiers strategic partnership initiative. Hort Frontiers facilitates collaborative, transformational research and development to support horticulture to 2030, and beyond.



**From CEDA**

*Australia's Future Migration System*

Jarrold Ball (CEDA, 19 December 2022)

Australia's migration program has delivered significant economic and social benefits over recent decades. Despite these benefits, the COVID-19 pandemic has highlighted the gradual deterioration of the system's performance and the need for modernisation.

This will be critical to the continuing success of both the migration program and the economy. Australia faces growing skills demands at the same time as the population is ageing. But as our analysis shows, we are not alone and will face growing competition for the best global talent from a range of countries. The migration policy review is therefore timely to address current shortcomings and set the foundation for continuous improvement of the system.

In the past, migration has often been politicised, with benefits downplayed and risks magnified to drive a divisive debate. This has led to a revolving door of reviews and ad hoc changes.

CEDA would like this review to mark a change from this pattern, by giving governments a blueprint to sensibly pursue continuous improvement of the migration system. This also means strengthening community support for the program – being direct about its benefits and importance, but also managing its impacts beyond the border through effective planning, settlement and labour-market policies.

CEDA's seven recommendations centre on improvements to the skilled-migration program, along with additional actions to improve the governance of the system. We have prioritised actions to get the system operating more effectively in the short term, which also offer ways to test new approaches for the longer term.

To facilitate efficient skilled-migration flows, we propose a temporary skilled-migration program that is focused on three risk-based streams: a low-risk, high-wage stream through intra-company transfers; an enhanced temporary-skill-shortage mainstream; and an essential skills visa. This should be complemented by policies that get the most out of our permanent skilled-migration program – reducing skills mismatch through a skills-matching register and policy changes such as reducing the newly arrived residents' waiting period.

Greater benefits can also come from family migration over time. The initial focus should be on reducing applicant costs and delays. Australia should also assess the viability of a family-skilled visa. The United States and other jurisdictions have demonstrated that these family links often provide a strong foundation for rapid and effective entry into the labour market.

Australia will also need to better manage the interaction between the temporary- and permanent-migration systems, to provide the consistent pathways to permanent residency that all stakeholders agree are necessary. This requires stronger action on temporary-migrant exploitation, along with greater transparency when setting the permanent-migration program each year. CEDA also believes that temporary migrants who have been in Australia for a decade or more should be offered a path to permanent migration as a matter of course.

This review should not be a case of "one and done". The Federal Government should legislate for an eminent panel to undertake a strategic review of the migration system every five years, formulating a

strategy that prioritises and guides reform and improvement in the system for that five-year period. This would bring a coherent strategy to more detailed policy reviews and institutionalise continuous improvement across political cycles. CEDA also makes recommendations to improve visa processing, including benchmarking and reporting against KPIs for visa-processing times.

In response to the Discussion Paper for the Federal Government’s migration policy review released in November 2022, CEDA’s paper outlined future trends that Australia’s migration system will confront, the principles that should guide the future system and policy recommendations in line with these principles.

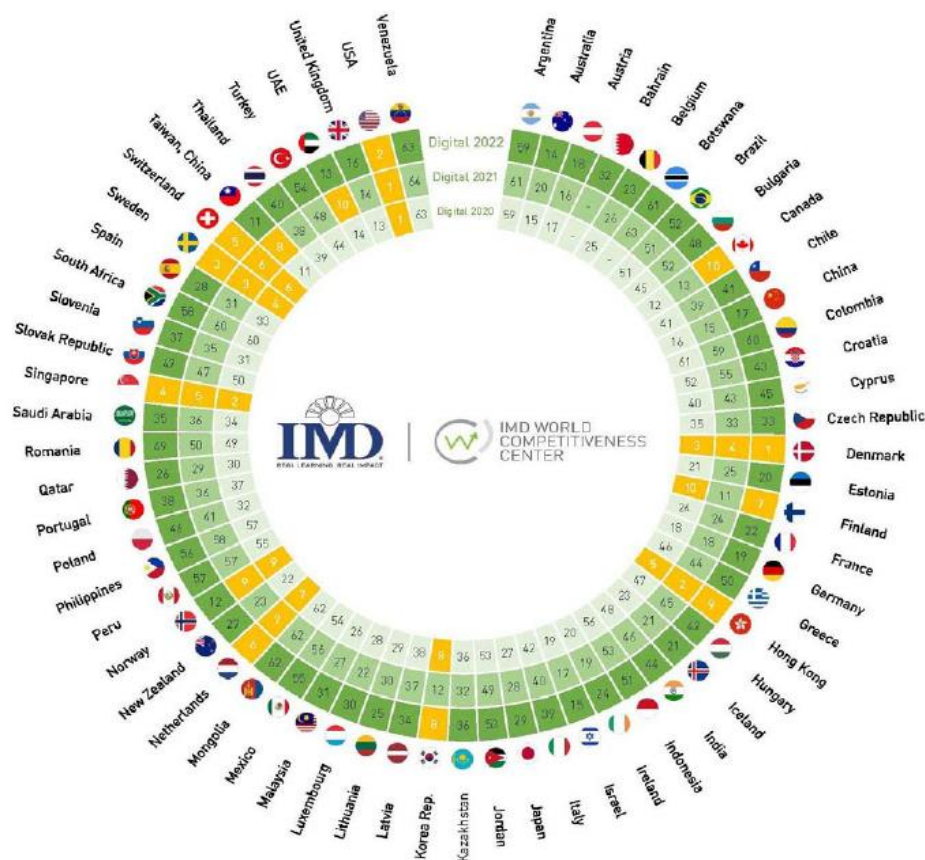
Access the full report here:

<https://www.ceda.com.au/ResearchAndPolicies/Research/Population/Australia-s-future-migration-system>

### *World Digital Competitiveness Ranking 2022 – Australia’s Rise*

Australia’s digital competitiveness significantly improved in the last 12 months – rising six places in a ranking of the digital competitiveness of 63 countries released today. Australia recorded the second largest year-on-year improvement in the rankings, behind only Croatia.

Australia rose to 14 in the IMD World Digital Competitiveness Ranking (WDCR), with key strengths being investment in telecommunications, internet retailing and software piracy.



Source: <https://www.ceda.com.au/>

“Australia has regained the ground lost during the COVID-19 pandemic,” says CEDA Chief Economist Jarrod Ball.

“Yet Australia’s Achilles heel is its future readiness which underpins a country’s ability to take advantage of emerging technologies, sustaining its digital competitiveness over time to keep pace with the most digitally competitive nations.

“Our future readiness is held back in the rankings by factors such as business agility, entrepreneurial risk-taking and cyber security preparedness.

“More broadly, the rankings show that Australia must invest in training and international talent to improve digital knowledge across the economy.

“It is clear from these results that with the right ambition and capacity building, Australia can realise greater economic opportunities from digital technology to underpin future economic development.

“This must be a consistent and enduring focus across all sectors of the economy to overcome the barriers to greater competitiveness called out in these rankings.”

The WDCR report shows Australia has several key strengths, including its regulatory framework to support starting a business, software piracy controls and take-up of internet retailing.

However, Australia ranked just 52 for graduates in sciences, 49 in international experience and 44 in employee training.

Australia is also ranked 31 for cyber security and 38 in terms of government cyber security capacity.

Denmark took the top position in the digital rankings and the United States fell to second place (it has previously held on to the number one place for the four years prior). Denmark rose to first place due to its outstanding performance in future readiness – or its preparedness to exploit digital transformation – coming first in business agility and IT integration.

Further interesting results with access to the full report is available here:

<https://www.ceda.com.au/ResearchAndPolicies/Research/Technology-Innovation/World-Digital-Competitiveness-Ranking-2022>

### **From the Productivity Commission**

#### ***People at Heart of Productivity***

The Productivity Commission (October 2022)

The Productivity Commission’s sixth interim report in its 5-year Productivity Inquiry investigates how workers can boost the nation’s productivity.

“This report explores how we might make our business environment more adaptable and flexible, no matter what the future of work looks like or what skills composition we might need,” Productivity Commission Deputy Chair, Dr Alex Robson said.

“The focus needs to be on matching the right people with the right job, and improving and increasing our pool of skills,” he said.

There are also barriers that prevent or delay matching skills to labour market needs. For example, there are highly skilled occupations where people still have to apply for a new licence if they want to work in another state and it can be unnecessarily difficult for skilled migrants to have their qualifications recognised.

“The composition of Australia’s skilled migration intake is a key determinant of productivity growth. Employers should have greater capacity to directly employ migrants with high level skills,” Commissioner Lisa Gropp said.

The emergence of the gig economy has been a major disruptor to traditional employment models. Platform-based business models present a number of positive contributions to productivity, including new and more efficiently delivered services.

“Trying to force platform work into existing categories of employment, could put those benefits at risk. At the same time, we have to make sure workers and consumers are protected,” Dr Robson said.

“We have relied on some key policies to manage and grow the productivity of our workforce and the question is whether they are still fit for purpose or whether there are reforms that would bring about substantial gains,” he said.

The report examines whether we can effectively reduce the complexity of our workplace relations system and remove barriers and red tape that slow down innovation and prevent full utilisation of skills.

“Simplifying the Award and enterprise bargaining systems could benefit all Australians. Enterprise Agreements and the bargaining process are often not focused on making genuine productivity improvements — as the system was originally intended. The need to revisit enterprise bargaining is highlighted by the fact that 56 per cent of employees covered by an agreement are on an expired EA,” Commissioner Lisa Gropp said.

### **Key snapshots:**

A well-functioning labour market is critical to productivity growth and social wellbeing. At a conceptual level, this relationship is simple: the more easily firms are able to meet their skill needs, the more easily they can respond to commercial opportunities and improve asset utilisation. And the more firms compete for productive workers, the more people can find work, move jobs, upskill, and receive better pay and conditions.

But the reality of achieving these objectives — particularly in an advanced and dynamic economy — is much more complicated. Labour market policy involves a unique set of economic, ethical and social challenges. It exists within the context of a unique regulatory framework — a product of evolution as much as design. Policy must also reflect prevailing conditions. Full employment is a welcome development but will present challenges in the immediate term. It highlights the importance of having people in jobs that make best use of their skills and expertise, at a time when people are changing jobs less often.

The right reforms could provide broad and enduring gains within a challenging and volatile landscape.

*The supply of human capital — skilled and experienced workers — will be key.* While it is strongly influenced by education and training (discussed in Interim Report 5 of the Productivity Inquiry, From learning to growth) several other policy levers play a critical role.

- Migration allows the inflow of skills, ideas, and innovation into the labour market. The composition of the migrant intake will have a significant bearing on productivity — Australia will need to compete to attract workers whose skills meet local demands and who bring valuable knowledge and experience.
- Barriers and rigidities in the labour market can prevent the matching of valued skills to labour market needs. Unnecessary restrictions can arise with regard to occupational licensing where regulatory settings are mismatched with workforce skill needs.

Improving workplace relations can benefit all parties, and the economy. Despite its at times adversarial nature, the workplace relations system could be improved in ways that provide lasting benefits for all involved.

- Making modern awards simpler and easier to use would reduce compliance costs and the scope for non-compliance. This may require improvements to the awards themselves, and the processes for making and varying them.
- Enterprise bargaining remains complex and inefficient. Removing barriers to effective agreement-making may generate productivity gains through efficient resource allocation and innovation. At the same time, terms within enterprise agreements can affect the rate of adoption of innovation.
- Platform-based business models can make positive contributions to productivity growth, including through new and more efficiently delivered services. Regulation should evolve to meet the workplace relations challenge of innovative new business models, without stymying their potential contributions to productivity.

The Commission invites stakeholders to respond to all issues raised in this interim report. As an interim report, it reflects our early findings

Access the full paper here:

<https://www.pc.gov.au/inquiries/current/productivity/interim6-labour/productivity-interim6-labour.pdf>

### **From the Business Insider Australia**

#### ***Video Shows a Monstrous Mosquito Swarm in Australia***

Matthew Loh (21 November 2023)

A video shows a monstrous mosquito swarm in Australia that's so thick farmers could barely see across their porch

A surging mosquito population has descended upon farms and towns in New South Wales, as eastern Australia is devastated by floods.

One local farmer shared a video of a mosquito swarm outside her house that was so thick her family could barely see past their porch.



Farmer and wool classer Nicole Fragar told Insider that her mother opened the door in the late evening to let the family cat out when she realized how many mosquitoes had gathered.



The mosquito population in New South Wales surged after the state was devastated by a series of floods. (Source: <https://www.businessinsider.com/>)

The video was taken on October 31, Fragar said.

"This does happen after flooding events, but my dad has lived here for around 30 years and he said he's never seen mosquitoes quite like this," Fragar said.

Heavy rains and floods tend to create fertile soil for long grass, which in turn create ripe conditions for mosquito breeding grounds, she said.

Fragar said floods have been gushing through her family farm — around 37 miles from the town of Tottenham — for several months.

"We've had about four inches of rain for four days," she said. "Once the rain stopped, all the mozzies came out with a vengeance."

The morning after the video was taken, Fragar's porch was littered with "piles of mozzies" — the ones that had died the night before, she said.

The swarms have thinned since last month, but still often appear as the region continues to flood, Fragar said. To keep the insects at bay, she dons thick jeans and long-sleeved shirts while outside. Her brother, who keeps his own beehives, often wears a beekeeping suit while riding around on his motorcycle, she said.



Her family's chief concern, however, is for the safety of their cattle, chickens, and dogs. Fragar said one of the farm's youngest calves has already died from the sheer number of mosquito bites it's received.

She's also seen kangaroos rolling on the ground as the swarms proliferate. "It's not often you see a kangaroo rolling around. I don't know if it's because they want the mud or because it helps with the itch," she said.

And even finding mosquito products proved a challenge. New South Wales' mosquito problem has swelled to a point where some towns in New South Wales are running out of repellents, post-bite gels, mosquito patches, and essential oils, The Guardian reported on Friday.

Fragar said her family had to visit three different stores before they found a can of repellent.

"We've had three really bad drought years and three really bad flood years. We're just wondering if we can have one where we get to remember what normal feels like," she said.

As of Monday Sydney time, the state's emergency service has issued 101 flood warnings across New South Wales.

Further details are available at:

<https://www.businessinsider.com.au/regional-migration-leaves-pushes-regional-australians-out-of-housing-market>

<https://www.theguardian.com/australia-news/2022/nov/18/mozzies-like-a-cloud-repellant-runs-out-in-flood-hit-towns-amid-mosquito-boom>

## THE CONVERSATION

### *COVID on the rise again - Socialise Safely During the Holidays*

Misha Ketchell (20 December 2022)

With COVID on the rise again, here are some simple steps to help us socialise safely during the holidays.

New Zealand's third wave of COVID infections will likely reach its peak during the holiday period and stretch well into 2023.

The risk of infection is now the highest since June 2022 and continues to rise, driven by new, immune-evasive variants and the social mixing that comes with reduced pandemic controls, end-of-year events and holidays.

Reported cases have risen almost five-fold from a low point of about 1,300 a day in September to more than 6,000 a day now. Because of declining testing and reporting, the true number of infections is likely two to three times higher. Hospitalisations are also at their highest level since August and are rising quickly.

The risk of being exposed to the virus has increased markedly in all social settings. For example, in a small gathering of ten people, the probability that one or more of the people attending has the virus has increased from 2-3% to more like 15% currently and is likely to peak at around 20%.

For large gatherings of 100 people, this risk has risen from about 20% to more than 70%.

The main message is that multiple meetings with different people add up to a lot of potential exposure to this virus, and the risk rises with the number of people and the prevalence of infection (as illustrated by this infographic). This combination is making the pre-Christmas period particularly high risk for New Zealanders.

○ **Risk management**

The good news is that despite widespread COVID infection there are simple ways you can protect yourself and others. A good first step is to recognise that all of us are vulnerable, even if we have been infected previously.

We estimate that more than half of current infections are reinfections, with the risk starting within a few weeks of each infection and increasing over time.

The most effective way to protect yourself from severe illness is being up to date with vaccines and boosters. A large number of eligible New Zealanders have still not had their third and fourth doses.

Anyone who has not been infected in the past three months should check whether they are eligible for a booster.

After that, it is important to recognise that COVID transmits most effectively in crowded, close contact, confined indoor environments. Try to avoid these situations. But if you are in packed shopping malls, on buses or planes, wear a respirator style mask (N95, KN95, P2, FFP2).

Such masks provide good protection for the wearer and those around them. They can reduce the risk of transmission by more than 200-fold if both you and the people you are interacting with are wearing them.

When organising events or gatherings, remember that good ventilation is key to preventing transmission. Outdoors is best, but indoors can be relatively safe if well ventilated and not crowded. To add an extra layer of protection, especially when meeting vulnerable people, everyone can take a Rapid Antigen Test (RAT) before attending.

If you do get sick, it is vital to self-isolate and not go to work and social events for a minimum of seven days. RATs are still free, widely available and useful for showing when you are infectious.

It can take a few days after the start of an infection to test positive on a RAT so continue to test after developing symptoms, or after a possible exposure event, even if you initially test negative.

It is also valuable to test at the end of the seven-day isolation period to check that you are no longer positive and potentially infectious to those around you.

Risk management is a partnership between individuals, their families, employers, venue operators, businesses and other organisations. The other partner is the government, which has a vital role in coordinating and guiding the public health response.

○ **The future**

After three years, COVID remains a pandemic. It has not yet transitioned to being a predictable endemic infection.

Genomic surveillance shows a succession of new subvariants replacing those that came before because of their improved ability to evade our immunity. In the last week, BA.5, which has been dominant for more than six months, has been replaced by a collection of BA.2.75 subvariants as the most common in New Zealand.

Ongoing viral evolution and waning immunity means people are being infected multiple times in a single year. Each infection carries a risk of serious illness and long COVID.

The World Health Organization suggests the pandemic may cease to be a public health emergency of international concern next year. Regardless of its designation, it is likely to continue as a major health threat.

It has become the second leading cause of death in New Zealand this year (after ischaemic heart disease). Potentially, its largest health impact may be as a cause of long-term illness and disability through long COVID. We still need measures to minimise both infections and severe outcomes.

Socialising with whānau, friends and colleagues is a highlight of the holiday season and vital for our health, wellbeing and enjoyment of life. At the same time, relatively small adjustments in how we do these things can help us enjoy the holiday period in relative safety.

Australians may learn from their cousins. Similar steps could also help many communities in Australia.

More on this story is available at: <https://theconversation.com/with-covid-on-the-rise-again-here-are-some-simple-steps-to-help-us-socialise-safely-during-the-holidays-196570>

## **CONFERENCES and STUDY OPPORTUNITIES**

### **ANZRSAL 2023 Conference**

The ANZRSAL 46<sup>th</sup> Annual Conference will be held in RMIT University, Melbourne Campus. Further details will be available in early 2023 on ANZRSAL website.

### **Regional Studies Blog**

Professor Paul Dalziel, Executive Officer, ANZRSAL has recommended the Regional Studies Association Blog, which has been running since 2010. Each post is an easy-to-read piece between 500 and 750 words on a topical issue in regional studies.

The link is [https://www.regionalstudies.org/category\\_news/rsa-blog/](https://www.regionalstudies.org/category_news/rsa-blog/). A recent contribution that is relevant to ANZRSAL as we plan for the new post-CoVID normal is the following item: [Moving towards a new conference model? The rocky road to virtual conferencing](#), by Daniela Carl and Alex Holmes. Ashleigh Weeden talks about the 'right to be rural' during the CoVID epidemic in a contribution entitled [COVID-19 and Cottage Country: Exploring place, power, and policy in the 'right to be rural'](#).

## **CURRENT RESEARCH ABSTRACTS**

### **ANZRSI Abstract Alerts**

To contribute to ANZRSI Abstract Alerts email the editors a title, abstract, and citation.

Yogi.Vidyattama

[Yogi.Vidyattama@canberra.edu.au](mailto:Yogi.Vidyattama@canberra.edu.au)

We would like to draw your attention to the abstracts from Australasian Journal of Regional Studies and a YouTube Channel 'Professor Joseph Drew's World of Local Government'

For the latter it can be found in:

<https://www.youtube.com/channel/UCXn5CI2x5h1cgEsaT8nLK9g/videos>

The whole purpose of the channel is to help local government help other people. So, please consider subscribing and sending the link on to colleagues.

In a few weeks' time Prof. Joseph Drew will start uploading videos by some of his colleagues from around the world which will provide people with new global insights into what can be done to make LG even stronger.

### ***Better together: Untapped potentials in Central Europe***

Andrea Caragliu

*Abstract:* Borders prevent the optimal exploitation of socio-economic and environmental resources. A relevant obstacle due to missed integration is associated with legal and administrative barriers, which cause the emergence of untapped potentials. This paper exploits the case study of the Interreg Central Europe programme. Removing borders among countries in the area enhances scale economies due to a large market for inputs and goods, both within regions and across Central European area regions. This paper identifies untapped potentials by looking at the missed

regional GDP growth due to the inefficient exploitation of regional growth assets. Results hint at a complex and heterogeneous spatial distribution of untapped potentials, involving several growth factors.

### ***The impact of preemptive investment on natural disasters***

Jhorland Ayala-García, Sandy Dall'Erba

*Abstract:* This paper studies the impact of preemptive investment against natural disasters on the future occurrence of landslides and the losses associated with it. Based on a panel of 746 Colombian municipalities with medium and high risk of landslides and an instrumental variable approach, we find that preemptive public investment can reduce the number of landslides, the number of people who die, are injured, or missing after a landslide, as well as the number of people affected. However, we do not find it has any effect on the number of houses destroyed. The results reveal that local governments focus their preventive measures on saving the lives and the physical integrity of their citizens, but they pay less attention to the direct market losses of natural disasters. These results are relevant in the presence of imperfect private insurance markets and increased informal settlements.

### ***Direct and indirect effects of universities on European regional productivity***

Emanuela Marrocu, Raffaele Paci, Stefano Usai

*Abstract:* Universities are fundamental in driving economic performance as they generate human capital, research and knowledge diffusion. We propose a novel analysis by investigating their effects on European regions' total factor productivity (TFP) over the period 2000–2016. We distinguish between direct effects, due to universities societal role ("third mission"), and indirect ones originating from human and

technological capital creation. Our contribution is threefold. First and foremost, we provide evidence that the presence of universities has a sizeable impact on regional TFP. Second, this impact spreads across regional boundaries. Third, universities effectively drive human and technological capital growth, thus indirectly fostering productivity enhancements.

***Do agglomeration economies affect firms' returns to training? Evidence based on French industrial firms***

Yoann Morin, Lionel Védrine

*Abstract:* This paper examines empirically the economic relationship between local labour market size and firm returns to training. Anchoring in the literature of micro-foundation of agglomeration economies, we suspect that this relation is driven by two mechanisms: (i) labour pooling which should positively influence the returns to training through matching and learning effects and (ii) the risk of labour poaching, which tends to reduce the returns to training in larger labour markets. Our estimates, based on a large sample of French industrial firms, reveal that returns to training are increasing with the labour market size, suggesting that labour pooling dominates labour poaching effects. On average, returns to training lie between 6.7 and 7.7%, more in line with the microeconomic literature on education than previous studies focusing on training.

***A matter of life and death? Knowledge intensity of FDI activities and domestic enterprise***

Piers Thompson, Wenyu Zang

*Abstract:* There is no overall agreement on the relationship between foreign direct investment (FDI) and domestic enterprise, this may reflect different effects from various types of FDI. A panel data regression approach is adopted to examine the impact of knowledge intensive

FDI on both new firm formation and the deaths of enterprises. Jobs created by FDI are found to not influence firm births, but influence domestic enterprise through deaths. Renewal knowledge intensive activities reduce firm deaths, but routine or compliance knowledge intensive activities increase the death rate. This means policy seeking to attract FDI must distinguish even within different types of knowledge intensive activities.

***An amenity-based approach to excellent returning scientists' location choice in China***

Jinliao He, Yanjiao Song, Xianjin Huang, Jingxia Lin

*Abstract:* The rapid increase in the number of returning Chinese scientists in past years has fostered an uneven geography of academic capital in China. Yet, this noteworthy issue has scarcely been discussed in recent literature. This paper attempts to testify whether there is an effect of urban amenities on the location choice of the returning scientists listed by China's Youth Scholar Thousand Talent Plan (YSTTP). Applying a city-level conditional logit model of skilled migration, it is suggested that YSTTP scientists were substantially driven by urban amenities, such as the scientific environment, and public infrastructures and services for elite residence. In particular, considerable attention was paid to high-level academic institutions, public transports, healthcare, income, and R&D capability. In contrast, YSTTP scientists were less sensitive to natural amenities and cost of living. Meanwhile, there is evident heterogeneity in the significance of urban amenities among different social groups in terms of their gender, age, whether they choose to work in Alma mater, and where they return from. This study contributes to bridging the current literature of scientific mobility with the amenity-based approach, and ultimately provides a critical reference for the brain gain policy in China.

*Locating a facility to simultaneously address access and coverage goals*

Jiwon Baik, Alan T. Murray

*Abstract:* This paper introduces a bi-objective strategic location problem to address access and coverage. While previous research in continuous location modelling considered access coverage independently, none has approached such a problem in an integrated fashion. In this paper, a new mathematical formulation considering access and coverage is derived, and a solution algorithm to find the entire set of optimal tradeoff solutions is developed. Application findings are reported for several case studies, varying in problem size. The developed approach is shown to provide critical insights for real-time decision-making, facilitating planning, management and policy development.

*A new proposal to model regional input–output structures using location quotients. An application to Korean and Spanish regions*

José Daniel Buendía Azorín, Rubén Martínez Alpañez, Maria del Mar Sánchez de la Vega

*Abstract:* This paper is based on the use of Flegg's location quotients (FLQ) and proposes a novel procedure for the estimation of the unknown parameter  $\delta$  in regions with and without input–output frame availability. Applied to data for the Korean regions for the year 2015, firstly the determination of the optimal  $\delta$  is addressed by solving a general optimization problem and, secondly, a regression equation is proposed to estimate the value of  $\delta$  from the explanatory variables of interregional road freight transport (IRFT) and imports from the rest of the world (IROW). The results obtained show a lower bias in regard to the true values of the regional inputs coefficients in relation to other methods based on location quotients.

**Regional Studies**

Vol. 56, Issue 12, 2022

*Food system transformation for sustainable city-regions: exploring the potential of circular economies*

John Lever & Roberta Sonnino

Pages 2019-2031

<https://doi.org/10.1080/00343404.2021.2021168>

*Abstract:* Calls for food system transformation to strengthen synergies between socio-economic and environmental goals have been growing in recent years. As yet, however, insights from theoretical debates have not been tested against the actions and perceptions of food system actors. To add empirical weight to this debate, we focus on a region in the north of England where the Covid-19 crisis has challenged the embeddedness of linear thinking and siloed policy approaches. Based on an exploration of the potential of ‘circular food economies’, the analysis provides insights into the capacity of ‘city-regions’ to reorientate food system dynamics towards sustainability objectives.

*Engaging for the love of place? The role of place attachment in academics’ regional engagement efforts*

Kwadwo Atta-Owusu & Rune Dahl Fitjar

Pages 2074-2085

<https://doi.org/10.1080/00343404.2022.2034778>

*Abstract:* The third mission of universities is often conceived as a regional one, encompassing contributions to regional development and engagement with regional actors. Yet, universities are increasingly global institutions with internationally mobile faculty. This raises the question of how the embeddedness of academics in their regions shapes engagement at the regional scale. Using survey data of 625 faculty members at seven universities, we investigate the role of place



attachment and informal social networks in shaping academics' regional engagement efforts. The findings indicate that academics with a strong sense of local attachment and extensive social networks engage more with local partners.

### **The Review of Regional Studies**

Vol. 52, Issue 2, 2022

#### ***No Place Like Home: Place-Based Attachments and Regional Science***

John V. Winters

Pages 159–175

<https://doi.org/10.52324/001c.37967>

*Abstract:* Place-based attachments are important but often overlooked. Place-based attachments can be beneficial but often harm individuals tied to struggling areas. In this address, I discuss my own education and migration experiences and then more generally discuss sense of belonging as a friction to migration. I also present descriptive statistics related to place-based attachments. Most persons born in the U.S. live in their birth state as adults. Birth-state residence has increased over time, especially among the highly educated. I also present evidence that college graduates who reside in their birth state experience a wage penalty that is increasing over time.

#### ***State Economic Impacts of Industrial Park Development: Evidence from Virginia's Tobacco Region Megasite Program***

Terance J. Rephann

Pages 249–273

<https://doi.org/10.52324/001c.37971>

*Abstract:* Industrial Park development is commonly advocated by state and local economic developers to aid in business attraction efforts. However, there is limited evidence of its effectiveness in promoting

economic growth, particularly in rural and lagging regions in comparison to other economic development tools. This paper examines the literature on the relationship between business site availability and economic development and the rationale for public sector industrial land development assistance. Results from a survey of local economic developers in Virginia are used to characterize industrial park absorption and occupant attributes. Using this information, ex-ante state economic and tax revenue impact analyses are performed for a state-funded industrial park development program serving a rural region of Virginia, the Tobacco Region Megasite Program. The paper examines conditions that affect the economic and tax revenue impact potential of industrial parks and highlights remaining information gaps.

### **Regional Science Policy and Practice**

Volume 14, Issue S2 (November 2022)

#### ***Economic coordination development from the perspective of cross-regional urban agglomerations in China***

Shengxia Xu, Qiang Liu, Huihui Sun

Pages: 36-59

<https://doi.org/10.1111/rsp3.12554>

*Abstract:* The construction of urban agglomeration systems is of great significance for China to implement an innovation-driven strategy and promote regional coordinated development. Taking panel data of 61 counties or municipal cities in the Beijing-Tianjin-Hebei urban agglomeration and the Yangtze River Delta urban agglomeration as the research object in this paper, the gravitational model is improved to measure cross-regional economic linkages, and a threshold model is conducted to reveal the nonlinear influencing mechanism within the variable of advanced industrial structure, economic tie, and vitality

of consumption on economic-coordinated development severally. Moreover, the influence mechanism model is proposed by considering the urban-group effect, and its effect is tested in the bootstrap cross-validation procedure. The empirical results show that the coordinated development of regional economy depends to a large extent on the closeness of economic linkages rather than geographic location, while the ability of economic coordination development from the aspect of cross-regional urban agglomerations has been affected by the nonlinear effects of economic tie and the vitality of consumption, and more dependent on the setting of the advanced industrial structure's level. In addition, the ability of regional economic coordinated development of the two urban agglomerations has an obvious city-group effect, while economic tie, advanced industrial structure, education level, population density, and public goods and services have a non-negligible effect.

***Does urban shrinkage lower labor productivity? The role of spatial expansion***

Zhuqing Yang, Yuanyuan Zhu, Yulin Zhang

Pages: 106-117

<https://doi.org/10.1111/rsp3.12275>

*Abstract:* Urban shrinkage in China displays a unique pattern to other contexts. Cities experiencing continuous population loss along with spatial expansion trigger a paradox in Chinese urbanization. This paper applies data from the national population census and city statistical yearbook in 2000 and 2010 for all 255 prefectural level cities to examine the relationship between the spatial expansion in shrinking cities and urban labour productivity. We find that this paradox over population loss with spatial expansion impedes the improvement of local labour productivity. To deal with the potential endogeneity problem, we also adopt the instrumental variable approach as robustness check. By using the historical population size and density in China

as the instruments for our targeted variable, our main findings in OLS regressions still hold.

**Papers in Regional Science**

Volume 101, Issue 5 (October 2022)

***Direct and indirect effects of universities on European regional productivity***

Emanuela Marrocu, Raffaele Paci & Stefano Usai

Pages: 1105-1133

<https://doi.org/10.1111/pirs.12698>

*Abstract:* Universities are fundamental in driving economic performance as they generate human capital, research and knowledge diffusion. We propose a novel analysis by investigating their effects on European regions' total factor productivity (TFP) over the period 2000–2016. We distinguish between direct effects, due to universities societal role (“third mission”), and indirect ones originating from human and technological capital creation. Our contribution is threefold. First and foremost, we provide evidence that the presence of universities has a sizeable impact on regional TFP. Second, this impact spreads across regional boundaries. Third, universities effectively drive human and technological capital growth, thus indirectly fostering productivity enhancements.

***Do agglomeration economies affect firms' returns to training? Evidence based on French industrial firms***

Yoann Morin & Lionel Védérine

Pages: 1135-1156

<https://doi.org/10.1111/pirs.12691>

*Abstract:* This paper examines empirically the economic relationship between local labour market size and firm returns to training. Anchoring in the literature of micro-

foundation of agglomeration economies, we suspect that this relation is driven by two mechanisms: (i) labour pooling which should positively influence the returns to training through matching and learning effects and (ii) the risk of labour poaching, which tends to reduce the returns to training in larger labour markets. Our estimates, based on a large sample of French industrial firms, reveal that returns to training are increasing with the labour market size, suggesting that labour pooling dominates labour poaching effects. On average, returns to training lie between 6.7 and 7.7%, more in line with the microeconomic literature on education than previous studies focusing on training.

**Australasian Journal of Regional Studies**  
Vol. 28, No. 1, 2022 (December)

***THE VALUE OF SPECIALIST ACADEMIC JOURNALS AND THEIR ADAPTION INTO A CHANGED ENVIRONMENT***

Mike Hefferan & Bruce Wilson

*Abstract:* This short paper is presented by the retiring editors of the Australasian Journal of Regional Studies (AJRS). Its objective is to recognise the continued importance of such specialist, academic publications but, at the same time, to identify a number of existential threats to their ongoing viability. Based on the authors' experience, the paper suggests some realignment and strategies seen as essential if such journals are to remain important and relevant in a demonstrably different environment. Without such actions, however, the current alarming loss of a number of such journals will almost certainly continue. For any journal, once publication ceases, the chances of any resurrection seem remote. Academic or 'scholarly' journals form an integral part of the research and higher education environment. They, together with their parent associations, colleges, conferences and other forms of conclave, form a well-recognised mechanism for the transfer of

reliable, contemporary knowledge across groups with common interests and beyond.

***GEOGRAPHIC EQUITY IN VOCATIONAL EDUCATION AND TRAINING MARKETS: INTENTIONAL FAILURE OR BENIGN NEGLECT?***

Don Zoellner

*Abstract:* This article explores outcomes resulting from three decades of national competition and new public management policies favouring increased user choice in vocational education and training markets. Large data sets describing system-wide numbers of enrolments, the number of enrolments in the top 20 training packages, the various fields of education, level of relative remoteness/access to services, Indigenous status and level of relative socio-economic disadvantage are interrogated. If the introduction of contestable markets has delivered the anticipated benefits in access, equity and choice, it would be expected that a larger number of students from each equity group and region would show improvements in the measures described. Unfortunately, detailed results from three states identify an inability of the marketised national training system to produce a nation of lifelong learners who experience equitable access by exercising a wide variety of choices as originally anticipated; calling into question 30 years of bi-partisan commitment to vocational education and training reform.

***CUMULATIVE CAUSATION REVISITED IN THE CONTEXT OF CONTEMPORARY SOUTHEAST QUEENSLAND ECONOMIC REGIONAL DEVELOPMENT: CONGRUENCE OR DIVERGENCE?***

Andrew Fern, Michael Hefferan & Olav Muurlink

*Abstract:* The Swedish economist, Gunnar Myrdal, first postulated his Cumulative Causation Theory (CCT) in the mid-1950s. It

presented a multi-cause explanation for differential growth and regional development patterns. Within any such region, it predicted the likely emergence of one activity node that would dominate the long-term economic, political and community character of the entire area. In the intervening period, the theory has been widely adopted as a reasonable explanation of growth and development patterns across many western countries. However, given the scale and compounding nature of contemporary change, it is reasonable to reconsider its current relevance and impact. This paper forms part of a wider, continuing study into the development of Australian regions and businesses within rapidly changing environments. That reflects on both Cumulative Causation Theory (CCT) and on the appropriate role of government in such matters into the future. The paper draws on examples from sub-regions within Southeast Queensland. Although these sub-regions are diverse in physical characteristics and economic structures, this paper observes that key elements of CCT still resonate. It is hoped that this research will assist government in the formation of better targeted regional support into the future.

***EVALUATION OF A NEW SIMPLIFIED POPULATION PROJECTION MODEL: A CASE STUDY OF LOCAL GOVERNMENT AREA PROJECTIONS IN TASMANIA***

Tom Wilson & Irina Grossman

*Abstract:* Preparing local area population projections with state-of-the-art demographic models can be a challenging, time-consuming and costly task. Alternative simpler models can produce projections quickly and easily, but at the cost of less output detail, less flexibility in creating scenarios, and sometimes lower accuracy. This paper presents an evaluation of a new modelling approach which blends the conceptual sophistication of state-of-the-art cohort-component models with the low data requirements of simple models. A key feature is that no locally-specific fertility, mortality, or

migration input data is necessary. The new model is tested by producing ‘projections’ of local government area populations by age and sex in Tasmania over recent periods, with the results then compared to actual populations. The model is shown to produce reasonably accurate projections, and out-perform a simple benchmark model. The strengths and weaknesses of the new approach are discussed.

***MANAGING EXOGENOUS AND ENDOGENOUS RISKS IN AUSTRALIA’S AGRICULTURAL SUPPLY CHAINS***

Delwar Akbar, Trang Thi Thuy Nguyen, Azad Rahman, John Rolfe, Susan Kinnear, Surya Bhattarai

*Abstract:* Previous research suggests that collaboration among supply chain actors can help mitigate uncertainties and risks. However, little attention has been paid to risks which occur within the chain collaboration itself. This study examines how supply chain actors’ agency contributes to effective risk management in agricultural supply chain collaboration (ASCC). Data were obtained from a multi-stakeholder workshop discussion focused on ASCC in regional Australia. An analysis of the stakeholders’ positions suggests that internal agency (single chain member’s autonomy), collaborative agency (shared goals and interests), and integral agency (connection with internal and external chain entities) performed by chain actors are critical to ensure that the supply chain’s risk management plans are put into action. Implications for managing collaboration risks associated with each form of the agency are identified, both for supply chains in general as well as for agricultural supply chains in particular.

***REGIONAL EMPLOYMENT RESILIENCE CAPACITY DURING AUSTRALIA’S EARLY COVID-19 PUBLIC HEALTH RESPONSE: AN ANALYSIS OF THE PAYROLL JOBS INDEX DATA SERIES***

Scott Baum & William Mitchell

*Abstract:* The COVID-19 pandemic has had significant impacts on regional economies and, in particular, has been reflected in the ability of some regions to perform better in the face of an economic downturn than others. Set in the context of regional economic resilience and resistance, this paper presents an exploratory analysis of the impact of a national COVID-related shut-down in Australia on employment resilience across regions. Using data on the changes in payroll jobs, the paper identifies clusters of areas that can be differentiated according to their resilience during this period. The paper explores a range of possible determinants of regional resilience differences and suggests an agenda for a more extensive research endeavour.

Rolf Gerritsen,  
Azizur Rahman &  
Vincent Mangioni

[Sustaining Regions](#) - Azizur Rahman & Paul McPhee

[Accounts](#) – Greg Jones

## **ABOUT ANZRSAI**

### **ANZRSAI Council Notes**

Council has planned for the 2023 conference in Melbourne at RMIT University and improving access to and ranking of AJRS via Open Access publication option with big publishers and the website. Conference participants gain access to support, encouragement, and relevant experience. AJRS offers an opportunity for publication. Council acknowledges Gregory Jones's contributions to ANZRSAI and proposes his name for the services Awards of ANZRSAI.

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