

Contents

FORWARD

ANZRS AI 45 th Annual Conference 2022	2
Lost in the Noise: The neglect of regional Australia	3
The Proposed University Accord – Where will it take us?	6
Key outcomes from the Jobs and Skills Summit	9

COMMENTARY

From the Regional Australia Institute	
Regional target of 11 million people by 2032	11
From Brookings	
Afghanistan’s lessons for the Sustainable Development Goals	14
A German Gas Crises Will Cause Jitters Across Europe	16
From the Australia Rural and Regional News	
Innovative ‘co-farming’ model earns prestigious business award	18
Coalition Senators move to remove the nuclear ban	20
From the Gulbali Institute of Agriculture, Water and Environment	
What difference does animal breeding make?	21
From CEDA	
Harnessing science X technology to drive Australian growth	24
From the Productivity Commission	
The nuisance cost of tariffs	26
From the Business Insider Australia	
The housing markets could crash in countries including Australia	27
From The Conversation	
First Nations people in rural NSW lived with more anxiety	29

CONFERENCES and STUDY OPPORTUNITIES

ANZRS AI 45 th Annual Conference 2022	30
2022 RSA Winter Conference	30
Regional Studies Blog	31

CURRENT RESEARCH ABSTRACTS

ANZRS AI Abstract Alert	32
Regional Studies 56(4)	34
The Review of Regional Studies 52(1)	35
Economic System Research 34(1)	36
Regional Science Policy and Practice 14(4)	38
Papers in Regional Science 101(4)	39
Australasian Journal of Regional Studies 27(3)	40

ABOUT ANZRS AI

ANZRS AI Council Notes	42
Roles of Council Members	42
ANZRS AI Council 2022	43

Foreword

ANZRSAI 45th Annual Conference 2022

For more than forty years, the Australia and New Zealand Regional Science Association has brought together researchers across academic and policy fields to explore the cutting edge of regional development and regional analysis in Australia, New Zealand and around the world. If your work involves regions, join us at our 45th Annual Conference CSU, WAGGA WAGGA, 1-2 DECEMBER 2022. It would be a hybrid conference, with opportunities for physical or on-line presentations. Two Best Paper Awards sponsored by the Department of Infrastructure, Transport, Regional Development and Communications and the Arts will be presented at the conference.

2022 Conference Theme: “DATA SCIENCE IN REGIONAL POLICY: HOUSING AND WORKFORCE DYNAMIC”

ANZRSAI welcomes proposals for contributed papers, for themed panels, or for special sessions, on any topic related to regions.

This year’s conference is convened by Associate Professor Azizur Rahman and hosted by the Data Science Research Unit (DSRU) at the Charles Sturt University. To register, and for more information on the conference, visit the ANZRSAI website at: www.anzrsai.org

To submit an abstract or the full paper, please go to the following website:
<https://easychair.org/cfp/The2022ANZRSAIConference>

TIMETABLE	Actions
31 October 2022	<ul style="list-style-type: none">• Final date for submission of abstracts and proposals.• Final date for early bird registration
07 November 2022	<ul style="list-style-type: none">• Final date for submission of full paper by authors wanting their contribution to be peer reviewed for the conference proceedings or considered for the best paper Awards• Draft conference program on website
16 November 2022	<ul style="list-style-type: none">• Final date for conference registration for paper presenters, for their paper to be confirmed in the programme.• Final program published on the conference website.
1 December 2022	Conference opens at 9am on Thursday

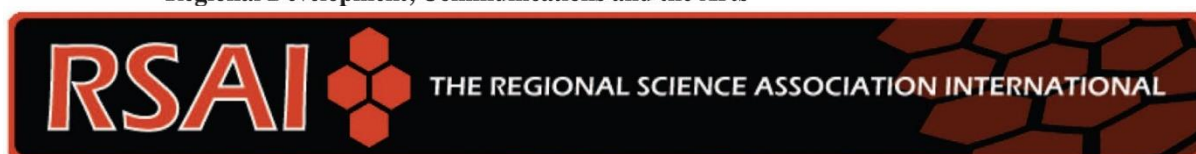
Conference sponsors/supporters:



Australian Government
Department of Infrastructure, Transport,
Regional Development, Communications and the Arts



Charles Sturt
University



Lost in the Noise: The neglect of regional Australia

For several decades now, as Australia's economy has grown, rural and regional Australians have been further and further shut out from prosperity. Australia has developed a two-speed economy, with vastly different economies developing in metropolitan and regional Australia. Regional Australians are already experiencing significantly higher levels of insecurity and inequality when compared to people living in metropolitan areas. This has been true for at least several decades and is only worsening. Regional Australia is being left behind and there have been very few concerted efforts to arrest the trend. In fact, it appears as if opportunities to reverse the rural/urban divide are being deliberately ignored or squandered when they are identified. Workers and their families in regional Australia are being treated like second-class citizens and glaring geographic inequality is being ignored by the government. This submission will explore the extent to which regional Australia has been locked out of economic growth, examine how this has occurred and recommend a number of common-sense solutions. The current situation is often treated like a consequence of natural forces, immutable and irresistible, but the reality is that the where we find ourselves today is the result of ongoing and deliberate policy choices. If we don't act now to rebuild industry in regional areas, we are damning millions of Australians to an insecure and unstable economic future. To this end the ACTU commends both the recommendations in this submission as well as those contained in the submissions made by our affiliated unions.

Two-speed Australia: Those Australians living in the capital cities are largely unaware of the different country in which regional and remote Australians live. Despite sharing the same borders as metropolitan Australia, rural Australia has a markedly different economy. This is the reality of 'two-speed' Australia. Regional Australia is behind in terms of employment, income and job growth and is, if anything, falling further and further behind. The causes of, and solution to, this reality will be discussed later in the submission. This section will focus on illustrating the extent of the problem.

The shifting locations of work: Traditional perceptions of Australia and Australian life focus on the outback, beaches and the small regional town. This was, at one point in time, true. In 1901, one in three Australian workers was employed in agriculture, forestry, fishery or mining. In 1906, 50% of Australia's population lived on rural properties or in a small town of fewer than 3000 people. By 1966, this had already changed dramatically - 3 in 5 Australians then lived in a city with a population greater than 100,000 and by 2008, 2 in 3 Australians lived in a capital city. According to the ABS, the figure has remained fairly steady since the late 1970s.

Figure 1: Economic activity in Australia is concentrated in and near cities
80-20 distribution of economic activity, 2011-12

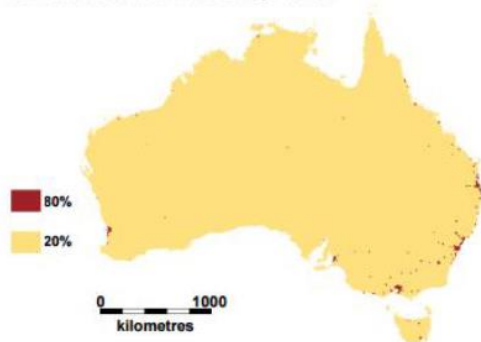
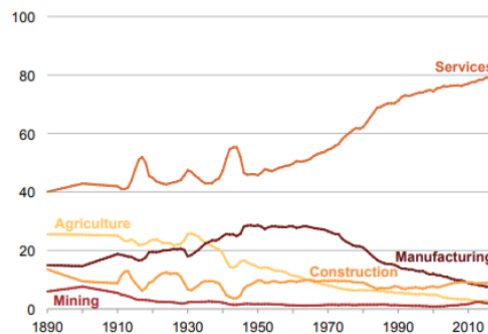


Figure 3: share of workforce by sector



Source: Regional patterns of Australia's economy and population John Daley, Danielle Wood and Carmela Chivers

What has continued to occur is the steady shift of productive work to the cities and away from rural and regional areas. Agriculture and manufacturing, two industries that drove the economy in the 20th century, both required the less expensive and abundant land that regional and sub-urban areas offered. The decline of these industries has seen a steady shift towards the city as the dominant economic force in Australia. As Figure 1 shows, 80% of economic activity in 2011-12 occurred in or near our major cities, with the remaining 20% occurring in every other part of Australia. As can be seen, this activity was particularly concentrated around the large cities on the east coast and in Perth.

Despite the mining boom, at its height in 2011, very few regional areas are included in the 80% proportion. The five largest cities in Australia make up, in each case, the majority of their state's economy. Sydney is 73% of NSW, Melbourne 81% of Victoria and Adelaide is 79% of South Australia. Perth and Brisbane are less dominant, but still make up 64% and 52% of their states respectively.

Service industries tend to be more labour intensive than other types; they don't require significant amounts of land or capital intense machinery and many, such as retail and food/accommodation, benefit greatly from concentrated populations. High-skilled service jobs have increased relative to high-skill manufacturing which has concentrated investment and wealth into the centres of capital cities.

This shift of economic activity to the cities has been accompanied by a significant lag in infrastructure investment in rural and regional areas – particularly digital infrastructure. For example, regional Australians tend to have much lower rates of internet access at home - 87.9% of those living in major cities have internet access at home, 82.7% in inner regional, 80.7% in outer regional and 77.1% in remote areas, largely due to poor access and higher costs. This is even true of mobile phones with about 43% of farms have no or little mobile phone coverage, with 14% having no access at all.

The way forward: All the issues facing regional Australia outlined above, the loss of jobs and industries, unemployment (in all its facets) and underemployment, and significant wealth/income inequality, will continue to accelerate and worsen over the next several decades unless meaningful action is taken now. The only way to address the disparity between regional and metropolitan Australia is for government to genuinely develop and implement policies designed to create new job opportunities, provide energy certainty, rebuild TAFE and address indigenous disadvantage. Government must show that it is serious about ensuring that regional Australians no longer are left to stand and watch as their communities are slowly destroyed by economic forces the government has shown no inclination to oppose. Below are a number of policies that the ACTU strongly encourages the government to consider.

- The Government must work in co-operation with industry and private investors to provide support when this failure in finance markets occurs. Private investment, with outcomes specified by government, can be facilitated through low interest loans, loan guarantees and direct investment. A multi-industry agency should be established to help support investment in strategic industries where private investment has failed.
- Develop a sound national energy policy that supports local industry. Australia is lucky to have large amounts of natural resources (including fossil fuel, solar, wind and water) that can provide comparative advantages to local industry through low cost energy. Unfortunately, this comparative advantage is being wasted through ineffective energy policy. We need policy settings that encourage investments to enhance the capacity of local suppliers of solar, wind, biomass and other renewable energy. This will have the added benefit of helping to lower the costs of

transition to low carbon energy system, as well as maximising the benefits for workers in the transition. A national interest test is also needed to ensure domestic producers have access to the energy they need. An energy policy which delivers for Australians is one which creates good quality jobs in the creation and establishment of energy infrastructure and the development of related industries, while also providing competitive power pricing to wider industry (and consumers).

- Government investment in large scale projects, industry assistance, strategic infrastructure development, public sector jobs, education, health and the social safety should be used to help stimulate economic growth and employment opportunities.
- Detailed identification and assessment of regionally-located high-potential export sectors, recognising that opportunities are not fixed, but influenced through investment and industry assistance. Once identified, specific strategies to grow investment, production and exports for these key sectors needs to be conducted as part of broader industry development plans.
- Rebuilding TAFE and enabling it to regain its role of supporting regional areas through reviewing the privatisation of TAFE and VET programs, stabilising core funding for TAFEs (including a role for employer contributions), capping the share of total VET funding contestable by private providers, and re-establishing tripartite structures for governance of the VET system.
- Using government procurement of goods and services from private suppliers to leverage more and better Australian jobs, particularly in regional Australia. The job-creating potential of public procurement must be maximised through adoption of a Buy Australia policy (as proposed by the ACTU and being implemented by a number of governments at a state level), supplemented by measures like stronger Australian Industry Participation rules, better reporting of domestic content in public contracts for both services and infrastructure and long-run supply and purchasing planning (coordinated where relevant with state and municipal governments) to nurture Australian suppliers for more public purchases.
- Expanding targeted public investments in key areas – such as public transit, renewable energy, utility upgrades, and others – to reinforce the expansion of capital spending and accelerate the transition to a higher technology and lower-carbon economy.
- Facilitating increased engagement by super funds in strategic infrastructure investment through new methods and models.
- Australia urgently needs the Federal Government to create an Energy Transition Authority responsible for navigating Australia's energy transition to a clean-energy economy. As a minimum the Transition Authority needs the requisite powers and resources to plan for, establish and oversee the orderly management of power station transitions, network augmentation and generator closures in order to mitigate the severity of surrounding structural adjustments to workers, their families and communities. The Authority would be responsible for;
 - The research, consultation and policy development required to develop and implement effective transition plans including developing plans for regional communities that support economic diversification and encourage new investments in alternative industries;
 - Overseeing industry-wide multi-employer pooling and retrenchment schemes that facilitate worker transitions including enabling retrenched workers to transfer to roles either in remaining fossil fuel, renewable or low emissions generators or to other industries;
 - Developing and implementing strong labour adjustment packages.

- The Authority would also implement the broader “Just Transition” initiatives needed to identify jobs and industries likely to be affected by future climate change policies and other environmental initiatives, develop a timetable of labour market impacts, and implement a long term strategy, working with State and Local Governments to coordinate assistance packages for businesses, workers and communities that focus on creating new, secure jobs and the skills required to access these jobs.
- The racist Community Development Programme must be scrapped and replaced with a program that empowers indigenous communities to control how government money is spent and which is genuinely aimed at the creation of economic activity in regional communities centred around good, secure jobs for indigenous people.
- An independent inquiry into the economic impact of deregulation / self-regulation policies on regional Australia.
- The Committee should consider examining transition processes in other countries and jurisdictions such as Germany, Spain, Canada and New York.

For more detail on these measures and a comprehensive plan for the development of a stronger economy for all Australians, please see the ACTU Jobs Policy. Finally, while we note that plans for hearings have not yet been published, the ACTU would be greatly disappointed if the Committee was not intending to conduct a comprehensive series of hearings in regional areas across Australia. Any attempt to determine a plan for the development of regional Australia without input from workers and business living in the regions can only be a failure.

The submission 49 on Jobs for the Future in Regional Areas with some other significant data can be explored here at the following links:

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjvPuJ_b6AhX04DgGHSfbD0oQFnoECAoQAQ&url=https%3A%2F%2Fwww.aph.gov.au%2FDocumentStore.ashx%3Fid%3Df9bac689-ff9b-4674-818d-14fde7a9147c%26subId%3D669574&usg=AOvVaw1-C9cmenszBsTJ_Z5vl2OI

https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=0CAQQw7AJahcKEwiw-ajV_b6AhUAAAAAHQAAAAAQAg&url=https%3A%2F%2Fwww.aph.gov.au%2FDocumentStore.ashx%3Fid%3Df9bac689-ff9b-4674-818d-14fde7a9147c%26subId%3D669574&psig=AOvVaw1dzOYtywTCZvmEnMcSd_eO&ust=1664436982438227

The Proposed University Accord – Where will it take us?

Whilst higher education issues were not prominent in the recent Federal election campaign, the new Albanese Federal Labor Government has promised a University Accord and this discussion-awareness article explores what this may mean for universities, their staff, and students in relation to identified issues. It is structured as a composite summary of three articles being published by Dan Himbrechts (in the Conversation, 1/6/22), Gavin Moodle (acgr.edu.au, June 2022), and Mike Head (World Socialist Website, 28/7/22).

Collectively these articles identify three main areas in need of urgent repair being: (1) between university staff and many of their managements that are regarded as exploitative (2) between students

and universities that are viewed as driven to maximise “profits” (3) between communities, government and universities which are considered as self-serving. However, the existing budget deficit constrains the speed at which this can be done. The tensions arising in these three areas arise from long-term, and widespread changes in higher education, its relations with work, its globalisation, the transforming role of research, broader economic and social change and their management by universities and governments.

Previous shadow education minister Tanya Plibersek suggested that “the accord would be a partnership between universities and staff, unions and business, students, and parents; Labor and liberal to specify what is expected from universities (August 2021). [1] She stated its aim was to build consensus on key policy issues, with the process led by the Federal Minister as advised by a small group of eminent Australians from across the political and ideological spectrum. No aspect of the higher education would be ignored.[2]

Albanese has since promised to seek common purpose and promote unity, in a consensus style like that of the Hawke Government’s Wages and Income Accord, despite criticising this style as being a sell-out and too compromising in his Young Labor years. Whilst the Wages and Income Accord, involved unions and wage earners trading of pay rises for “social-wage” increases which included items such as Medicare, pensions, unemployment benefits and superannuation, we have yet to hear of the proposed University Accord compromises and how they will be implemented.

Plibersek has anticipated the University Accord would address issues about the structure and funding of higher education. [3] So that it can offer affordable high-quality teaching and produce world class research, so that knowledge translates to prosperity and jobs. It will also need to consider the funding arrangements across the desired balance of subdivisions. For example, public universities currently offer 82% of higher education, TAFE and VET 10%, non-university higher education 6% and private universities 2%. [4]

Some suggest that education expansion was fuelled by human capital theory, the idea that education increases productivity and in-turn incomes. [5] However, concerns now persist that Australia has too many graduates that are un-matched to job and employer requirements and some blame this on training expenditure cuts by employers, whilst others suggest that a higher education degree is not job-ready enough. [6] Hence the Morrison Government’s job-ready, job-specific funding programs with funding being aligned with student outcomes and specified TESA compliance requirements. Others argue that international education has become so embedded within Australia that it finances other core activities such as research. [7]

Furthermore, HECS income contingent loans as introduced by the Hawke government, seem to have financed the transition from elite to mass higher education and therefore universal access which exacerbates the funding argument as mass participation increases. [8]

Prior to the Dawkins initiated changes of 1985, Australia had three separate tiers of post high school education. The first two were TAFE, which offered trade training apprenticeships, certificate, and technician level training; and Colleges of Advanced Education (CAE), which offered VET type courses that required a little more theory than most but not quite the level of a more theoretical degree. Examples of CAE courses were the ‘Bachelor of Professional Accounting’ or ‘Bachelor of Business’ with limited majors or specialisations, a primary or high school teaching diploma or degree and perhaps nursing training. CAEs were funded for teaching only and used secondary school type teaching approaches. The third institution was the University which offered more theoretical

bachelor's degree with more majors and specialisations and perhaps a research component. Examples were the more theoretically or mathematically based 'Bachelor of Commerce' or 'Bachelor of Economics' degree. These institutions catered for the elite using a lecture-tutorial method of teaching and were funded for academic research and offered higher research degrees, such as Master's and PhDs.

Pathways between the different tiers always existed. For example, a person completing a TAFE level 'Certificate in Industrial Metallurgy', 'Associate Diploma in Geology Techniques', or 'Certificate in Biological-Pathology Laboratory Techniques' could always gain entry to the university bachelor's degree with perhaps nearly three semesters credit. With such pathways, perhaps the system was never really broken?

However, the Morrison government in assuming that many skills shortages lay in the science and engineering professions, made these courses less expensive compared to the arts, business, and commerce-based courses. Since this, the Federal Labor government has increased the number of fully subsidised TAFE positions, many of which will be in the more technically focussed engineering-based trades and engineering VET courses. However, whilst the so called 'Dawkins Reforms' of 1985 narrowed the distinction between these institutions and indeed converted the CAEs into universities, mass participation has seen TAFEs offering vocational and less theoretical bachelor's degree courses, and no doubt many of these may become fully funded.

Other issues are also in the mix. [9] These include the various views on the balance between collegial and managerial governance of universities, wage theft, high reliance on casual employment and failure to transfer long term casuals to permanent full-timers, and other exploitative employment practices. For example, the growth of insecure work exceeds that of secure work and reflects general liberalisation of employment regulation, suggesting perhaps the need for more comprehensive protections against insecure employment throughout the economy.

It will be difficult to address all these issues so perhaps we need to examine the evidence to date. At the Universities Australia 2022 gala Dinner (6/7/22), Minister Clare expressed the Labor Government's intent to further transform universities to service the needs of big business and national security. [10] He expressed the view that it would bring education unions into partnership with corporate chiefs, university managements and government representatives to "build a long-term plan for universities". There was no comment on their record or exploitation of the COVID-19 pandemic over the past two years to destroy tens of thousands of jobs, when many of such universities achieved larger surpluses than in previous years. In some universities, further casualisation of the workforce has increased class sizes and workloads, whilst some universities send their international students to other institutions then downsize at the expense of these students and the staff. [11]

At this function he praised University of Sydney VC mark Scott, a highly paid and leading proponent of pro-business restructuring, for talking about universities being "in the solutions business for government". [12] Instead, he proposed the idea of "working together" to integrate universities more closely, both in teaching and research, with business and industry. Nothing wrong with this but what about the wage theft and excessive casualisation? Should not these be addressed, or will these issues be resolved within the "close working together" that he refers to?

Clare also spoke of universities in purely profit generating, job-training and nationalist terms. [13] They were "an incredible" "national asset" that had to do more "to turn Australian ideas and discoveries into Australian jobs". Clare stressed the need for universities to restore the \$40B in

revenues they generated before the pandemic with international student fees. [14] Since the Hawke government introduced fees for international students in 1986, all successive governments have increasingly reduced university funding, forcing them to rely more heavily on international student fees. [15] He also suggested that universities could train international students to satisfy employer's need and skills and that international students could do this, stay in the country and fill this economic gap. [16]

In the Conversation "Politics with Michelle Grattan" (6/7/22) Clare proposed the Bradley report (2008) as a "template" and "blueprint" to be updated, and this included competing for domestic and international students. [17] NTEU national president Alison Barnes (12/7/22) embraced this plan saying that universities have a fundamental role in solving labour shortages and building the tomorrow's workforce. [18] However, it is argued that Labor's "education revolution" continued by the coalition has increased the destructive profit-driven assault on university staff and students. [19] Labor voted for this year's federal budget, handed down by the Coalition government in April and cut government funding per student by 5.4% in real terms for 2022-23 and 3.6% for the following two years, thereby reducing university expenditure from by \$3B from 2017/18 to 2025/26. [20]

However, when the pandemic hit in 2020, the NTEU volunteered wage cuts of up to 15% and job cuts up to 18,000 including forced redundancies, triggering widespread disgust and opposition from university staff with loss of NTEU membership. [21] On June 24, the NTEU asked its membership to join a 2-day selected delegation to Canberra (with transport, meals and accommodation paid) to demand secure jobs. Possibly part of the process rather than wanting real job security. [22]

In concluding we may ask, where does the University Accord take us? So far, we have heard of the need for closer collaboration between university management, university staff, university students, governments, and industry to solve skills shortages and present job-ready graduates. However, resolving the identified issues such as an appropriate funding model, reducing casualisation, outsourcing, privatisation and wage theft have not yet featured substantially in the discussion, nor have workable solutions been proposed. While NTEU branches struggle to negotiate solutions using Enterprise Bargaining at their own campuses, others propose legislative changes at the national or state level. Perhaps the funding model needs to be conditional on university managements complying with behavioural change on their part. It is still early days, as we await a satisfactory outcome to the many identified issues.

Further information can be found at:

[1- 9]: Dan Himbrechts / AAP – The Conversation. Labor's promised universities accord could be a turning point for higher education in Australia (1 June, 2022).

[10-22]: Mike Head / World Socialist Website (wsws.org) Australian Government prepares pro-business university 'Accord' Labor's promised universities accord could be a turning point for higher education in Australia (28 July, 2022).

Gavin Moodie (June, 2022), Adjunct Professor, Centre for the Study of Canadian and International Higher Education, University of Toronto, Australian Council of Graduate Research (acgr.edu.au.).

Key outcomes from the Jobs and Skills Summit

The Albanese government has proposed thirty-six immediate initiatives from the National Jobs and Skills Summit held 1st and 2nd September 2022. *James Brickwood* (2/9/22) of the *Australian Financial Review* list the key ones as:

1. An additional \$1 billion in joint federal-state funding for fee-free TAFE in 2023 and accelerated delivery of 465,000 fee-free TAFE places.
2. A one-off income credit so that age pensioners who want to work can earn an additional \$4,000 over this financial year without losing any of their pension.
3. More flexibility to utilise \$575 million in the National Housing Infrastructure Facility to invest in social and affordable housing and attract financing from superannuation funds and other sources of private capital.
4. Modernising Australia's workplace relations laws, including making bargaining accessible for all workers and businesses.
5. Amending the Fair Work Act to strengthen access to flexible working arrangements, make unpaid parental leave more flexible and strengthen protection for workers against discrimination and harassment,
6. Improving access to jobs and training pathways for women, First Nations people, regional Australians and culturally and linguistically diverse people, including equity targets for training places, 1000 digital apprenticeships in the Australian Public Service, and other measures to reduce barriers to employment.
7. An increase in the permanent migration program ceiling to 195,000 in 2022-23 to help ease widespread, critical workforce shortages; and e on international students to strengthen the supply of skilled labour and provide additional funding to resolve the visa backlog.

Legal firm *Clayton Utz* (claytonutz.com) reports a general view that the current enterprise bargaining process is considered inadequate whilst suggesting there is consensus lacking on what parts should be reformed. Simultaneously, the *Australian Industry Group*, *Australian Chamber of Commerce and Industry*, and the *Business Council of Australia* sought further clarification on the proposed legislative approach, including that relating to multi-employer bargaining across whole industries or sectors in concern for whole of sector disputes.

In response, the Government has announced a softening of the 'Better of Overall Test (BOOT)' test to allow a more flexible interpretation by the Fair Work Commission (FWC) when approving enterprise agreements. *Clayton Utz* suggests that this change may benefit employers, especially those finding the current test too legalistic and complex to prove when negotiating enterprise agreements. However, no guidance has been provided about how this will be achieved.

In addition, better access to flexible work arrangements and unpaid parental leave are flagged changes to the Fair Work Act 2009. Further proposed reforms include amendments to protect employees against adverse action, harassment, and discrimination.

In increasing workforce participation *Clayton Utz* note that incentives (beyond the discussion scope of this article), will be used to achieve this for women, First Nations people, and those living with disabilities. There are flagged changes to support skilled migration and funding for additional TAFE training support.

Clayton Utz lawyers list a series of proposed amendments to the Fair Work Act by end of 2022 to:

1. Include improved access to enterprise bargaining, especially for under-represented groups such as small businesses, women, care and community services sector workers and First Nations' persons.
2. Ensure unnecessary limitations on access to single and multi-employer agreements are removed to create more flexibility for those wanting to be covered by them.

3. Continue to foster enterprise bargaining negotiations at the enterprise-level.
4. Improve the bargaining process by allowing the FWC to be more proactively involved during bargaining, providing “proper support” to employer bargaining representatives and union delegates, and simplifying the BOOT.
5. Ensure the process for agreement terminations is fit for purpose and fair, and sunsets so-called zombie agreements.
6. Improve access to flexible working arrangements and unpaid parental leave so families can share work and caring responsibilities; and
7. Provide stronger protection for workers against adverse action, discrimination, and harassment.

A detailed ‘Outcomes Paper’ as released by Federal Treasury can be found under the Treasury website. It considers and discusses ideas and policies in more detail and will be converted into a White Paper on employment with its expected date of release yet to be announced. Some discussion from this white paper may be included as a feature in a future Sustaining Regions edition, with where possible, regional implications being discussed. Watch this space for further details.

Note: Information for this article was sourced from the [Australian Financial Review](#) and the [Clayton Utz](#) websites.

Commentary

From the Regional Australia Institute

Regional target of 11 million people by 2032

The Regional Australia Institute (RAI) has set a target of 11 million people living prosperously outside the capital cities by 2032, a key goal announced as part the Regionalisation Ambition 2032 launched at its National Summit in Canberra today.

Achieving this target will see an extra 500,000 people living in the regions, above the estimated prediction of 10.5 million.

RAI CEO Liz Ritchie said the Regionalisation Ambition 2032 – a Framework to Rebalance the Nation, was a national first. It places 20 key targets at the centre of strengthening our regions which will close the divide between life in the city and the country.

It focusses on regional housing, education, health, jobs and skills, digital inclusion, transport, childcare, community participation, migration, climate, innovation and the resilience of regional communities – as well as population.

“Today marks an historic day, and the start of a collective national movement to see a more productive and liveable Australia,” Ms Ritchie said.

The Regionalisation Ambition 2032 sets out the goals and targets under 5 key pillars - Jobs and Skills, Liveability, Population, Productivity and Innovation and Sustainability and Resilience.

After 11 years of research, these are the areas the RAI says are holding regions back. The Regionalisation Ambition 2032 aims to put regional Australians on a ‘level playing field’.

“Regionalisation is about delivering on the potential of regional Australia and rebalancing our nation,” Ms Ritchie said.

We’ve seen more than a 100 percent jump in job vacancies in the last 2.5 years. More than 3.7 million regional Australians live in a ‘childcare desert’. Regional home building approvals have declined in five out of the last 10 years. Remote students do half as well as their metropolitan counterparts in NAPLAN.

“These issues are all interlinked, complex and equally as important, so the development of a holistic and integrated framework is a momentous step forward to achieving better outcomes for all,” Ms Ritchie said.

“We know that you can’t solve the jobs crisis without addressing housing. We know you can’t solve the skills deficit, without improving education standards. Healthcare can’t be improved without focussing on digital connectivity.

“But achieving the targets we have set for 2032 is a challenge not just for the RAI, or even government. For regionalisation to be truly realised, it needs to be a collective effort, a national effort to rebalance the nation - and all Australians have a part to play,” Ms Ritchie said.

Economic modelling commissioned by the RAI also shows when regional Australia reaches 11 million people, national output will reach \$2.3 trillion by 2032.

“This is \$13.8 billion more than under a ‘business as usual’ scenario,” Ms Ritchie said.

“People are voting with their feet and looking for a different life beyond our capitals. Move to More is now more apparent than ever before. But we can’t shift the population dial further if the critical issues facing regions aren’t addressed,” Ms Ritchie said.

At Federation, just under two thirds of Australia’s population lived in the regions. Now, just under two thirds of Australia’s population is living in the capitals, and the cities of Sydney and Melbourne on a trajectory to ‘megacity’ status – more than 10 million – by the middle of this century.

“Our research tells us that a megacity future isn’t the right outcome for Australia. We know as a nation we will be happier, more sustainable and more productive if we alter the path we are on,” Ms Ritchie said.

The Framework was developed in conjunction with RAI’s members: leading Australian businesses, local governments and other regional changemakers.

“Today, we also launch the pledges our members have made to bring the ambition to life. During the past 12 months, we have been working with these key players, to show the country what is possible when collective action is undertaken to help achieve the goals set out in the Regionalisation Ambition 2032.

Each year, the RAI will release a progress report outlining an update of pledges and the collective actions undertaken to reach each target by 2032.

The Regionalisation Ambition 2032 will be launched at the RAI’s National Summit - Regionalisation – Rebalancing the Nation at Hotel Realm in Canberra. The Hon. Catherine King, Minister for Infrastructure, Transport, Regional Development and Local Government will open the Summit at 8:00am Tuesday 13 September.

Key promises in the report:

Key Domains	Targets
Jobs and Skills	<ol style="list-style-type: none"> 1. Reduce the recruitment difficulty rate in regional Australia to below 40% 2. Increase the share of skilled workers employed in regional Australia to 80% of the regional workforce. 3. Increase the school attainment rate of young people in regional Australia to 75% or above. 4. Boost post-school qualification completion in regional Australia to 65% or above.
Liveability	<ol style="list-style-type: none"> 1. Continue to increase the life satisfaction and wellbeing score of Australians living in regional communities to a score of 75, according to the Regional Wellbeing Survey. 2. Increase regional Australia's Digital Inclusion Index score to 73 or above, equal to metropolitan Australia. 3. Improve access to transport services in and between regional communities. 4. Increase rental vacancy rates in regional areas to above 3%, and ensure annual building approvals keep pace with population growth. 5. Lift the access to medical practitioners in regional Australia by over 100 FTE per 100,000 population. 6. Halve the population classified as living in a regional childcare desert (to below 2 million). 7. Increase the percentage of students in regional Australia who achieve at or above the minimum standard in NAPLAN testing, equal to metropolitan students, across each year level. 8. Strengthen access and opportunities for engagement in arts, cultural, community, and recreational experiences in Regional Australia.
Population	<ol style="list-style-type: none"> 1. Over 11 million Australians living prosperously in the regions by 2032. 2. Increase regional Australia's younger population share (aged 15-39 years) to 35% by 2032. 3. Double the proportion of new migrants settling in regional Australia by 2032.
Productivity and Innovation	<ol style="list-style-type: none"> 1. Increase regional Australia's contribution to national output, boosting Australia's GDP by an additional \$13.8 billion by 2032. 2. Increase workforce participation in regional Australia to 68% or higher. 3. Increase new business and innovation in regional Australia.
Sustainability and Resilience	<ol style="list-style-type: none"> 1. Regional Australia is trending towards net zero emissions by 2050, unlocking new jobs and industry opportunities. 2. 90% or more of regional Australia has a moderate to high capacity for disaster resilience.

Detailed information can be found at:

<https://rebalancethenation.com/common/Uploaded%20files/Rebalance-the-Nation/Rebalance-the-Nation-Report-2022.pdf>

<https://www.regionalaustralia.org.au/EventDetail?EventKey=2022SUMMIT&hkey=20f204ef-a788-45e8-a521-c3546920382f>

From Brookings

Afghanistan's lessons for the Sustainable Development Goals

Naheed Sarabi and John W. McArthur (September 2022)

John McArthur (JM): Many people are describing the SDGs as having stalled since the onset of COVID-19. Were the SDGs gaining much traction in Afghanistan prior to 2020? How would you describe their local implementation?

Naheed Sarabi (NS): Afghanistan's progress with regard to the SDGs was mixed before the outbreak of the pandemic. Some good progress was achieved at the strategic level despite political uncertainty and insecurity. Afghanistan had developed a set of national targets and one single institution, the Ministry of Economy, was appointed as a lead agency to champion SDG work in the country. An Executive Committee on SDGs was established under the Council of Ministers to coordinate the efforts and implementation. In 2016, Afghanistan developed its second national development strategy, the Afghanistan National Peace and Development Framework (ANPDF). The framework was envisioned to bring reforms and strengthen institutions toward achieving economic self-reliance and SDGs through service delivery. Efforts were being made to align national processes like national budget, development programming, and local planning to SDGs.

The Sustainable Development Solutions Network's SDG Index ranking showed recent improvement for Afghanistan. For instance, in 2019 Afghanistan's SDG ranking was 153/162, and in the 2022 report it went up to 147/163. However, in macro-development terms, the situation was rather alarming. In 2016, Afghanistan witnessed hundreds of thousands of documented and undocumented refugees returning from Pakistan and Iran, joining over one million displaced people in the country due to conflict and natural disasters. Afghanistan was hit by drought in 2017 and 2018 resulting in more people becoming food insecure. When Afghanistan submitted its first Voluntary National Review (VNR) in 2017, the poverty rate had risen to 54 percent from 39 percent in 2014. These figures demonstrated a fallback in achieving SDGs 1 and 2. Before August 2021, 75 percent of Afghanistan's public expenditure was financed by aid, one of the prominent cases of high-level aid dependency. In 2018, the Ministry of Finance data showed a 46 percent decline in aid from its peak 2011 level. This declining trend in aid was a predicament for development planning. Thus, the government had to make trade-offs between investing in basic services versus long-term plans that could bring financial self-reliance.

Although efforts to nationalize SDGs had gained some ground, local implementation needed to gain momentum. The government's provincial development plans were not entirely absorbed in the national budget. The plans also did not reflect the resource realities of the government. Thus, more work needed to be done to align those plans with SDG targets and available resources.

JM: What do we know about Afghanistan's SDG trajectories since the fall of the previous government in August 2021? What are the best objective data sources for tracking the situation?

NS: Unfortunately, Afghanistan has not only been unable to sustain the development gains of the last twenty years, but a lot has also been lost. The Taliban takeover of Afghanistan in August 2021 exerted

an economic shock on the country. The World Bank estimated a 34 percent decline in the GDP per capita by the end of 2022 under the current scenario. This shock has been exacerbated by the financial crisis; around \$ 9.2 billion of Afghanistan's foreign reserves have been frozen which amounted to foreign and Afghan currency shortages and has caused a liquidity crunch. International banks have stopped their operations due to risks of anti-money laundering and combating the financing of terrorism AML/CFT functions, and correspondent banking for international payments has been severely disrupted. This has exerted immense pressure not only on the private sector but has also limited the channelling of aid to and within the country. Staggering levels of poverty and food insecurity have turned Afghanistan into the worst humanitarian crisis of its time.

While the international community is just focused on delivering humanitarian aid, development has taken a back seat, and progress toward SDGs seems to have stagnated. The absence of a legitimate government has not only stalled strategic level discussions on development but also access to credible data has been a challenge. We are talking about achieving SDGs in an environment where potentially 97 percent of the population could soon be in poverty, nearly half of the population is acutely food insecure, the Taliban has put a ban on girl's secondary education, and disruption in salary payments and employee lay-offs in the public and private sector are affecting purchasing power. The Taliban released their first annual budget in May 2022, however, no details are available on investments in the basic services. The global rise in energy and food prices has not only exerted pressure on basic needs but also increased the cost of delivering humanitarian aid to people in dire need. These are imminent peril to individual SDGs but also challenge the interactive results in all other goals.

As I said before, the absence of national credible sources and legitimate institutions has made access to data a challenge. The Taliban needs to publish data on the revenue and expenditure and how services are being provided to the people. They need to adhere to the principles of human rights and women's rights and bring back professionals in the machinery of the administration so some of the economic and development hurdles can be offset. However, in the meantime, there are still streams of hope. Afghanistan has a history of strong community-level institutions and civil society organizations. Investing in and strengthening the communities in Afghanistan in form of community development councils (CDCs) have been one of the success stories of the past decades. It is important that these institutions are being sustained not only for means of service delivery to achieve the SDGs but also for gathering data at grassroots levels. At the national level, the United Nations is the only interlocutor for humanitarian and development activities in Afghanistan at the moment. The U.N. agencies must maintain the systems that house country-level data and engage with civil society organizations and private institutions in this effort. We do not want to lose the history of development and start from zero once a legitimate government takes over, that is based on an elected democracy, inclusivity, fundamental rights, and human rights of women and minorities.

JM: You have lived many complexities at the interface of global development systems and a low-income country with fragile institutional structures. Is there one thing you would like to see multilateral actors do more of? And one thing you'd like to see them do less?

NS: I believe one should reflect on why institutions and systems become fragile in the first place, and how some interventions inadvertently create fragility. I had the honour to be part of the g7+ discussion when I served as deputy minister of finance in Afghanistan. My experience of coordinating aid at the national level as well as the voices of many countries represented in the g7+ converged on low-income countries having the ownership of processes and activities related to aid. Once this principle is enhanced, other actions like reforms, capacity building, and institution building follow. I often get the question of how such a principle could be followed in Afghanistan in absence

of a legitimate government. In such circumstances, multilateral actors' role remains stronger and can protect the systems, institutional memory, and human capital that can be forceful agents in times of normalcy. Amid a time of global economic strain, actors should strive to bring the most value out of assistance to low-income countries. Thus, I strongly emphasize the principle of no-duplication for development interventions. Multi-lateral actors should aim to avoid any forms of creating parallel institutions, and funding duplicate development interventions.

JM: There are widespread concerns that international actors are not doing enough to support low-income countries that have been grappling with intense overlapping crises in recent months—food prices, fuel prices, debt problems, and more. Do you see clear options on what could be done differently? Do you see any bright spots in how the world is responding?

NS: Alarming, is an underestimation to describe the outlook in low-income countries. The recent natural disaster in South Asia has exacerbated the situation and will be pushing more people to poverty and food insecurity. The World Bank Group will make emergency aid available to countries at risk, and G7 nations have made some pledges which still need to be realized. However, countries need a quick response. The World Food Program warns of 50 million people in 45 countries are on the edge of famine. And famine cannot wait. The countries mostly hit by climate change are the ones who had no share in creating it, and it is still time to act:

First, international actors should coordinate efforts in support of comprehensive social safety net programs that are quick and reach the majority. Second, countries with a debt burden need more incentives to apply for relief, and it seems the process has rather been slow and burdensome. Third, there is an open spot for more regional engagement and diplomacy. For example, more countries in Asia need to step up regionally to avert the looming crisis that may also impact other countries in the future. High-income countries can set up a bridge fund with sufficient resources to offset the energy and food costs for poor countries that would prevent a fall off from SDG achievement. The cost for countries that are the biggest contributors to climate change is not significant; the cost for low-income countries will be generational. Last but not the least, Multilateral actors need to rethink the approach to their interventions—more investment in environmental protection and early warning systems, more emphasis on the right reforms, and sound public investment management systems.

Read the whole interview here at: <https://www.brookings.edu/blog/future-development/2022/09/09/afghanistans-lessons-for-the-sustainable-development-goals-interview-with-naheed-sarabi/>.

A German Gas Crises Will Cause Jitters Across Europe?

Constanze Stelzenmüller (July 2022)

Editor's Note: "Cheap Russian energy used to be a key source of [Germany's] global competitive advantage. Now Russia is making Europe and Germany pay the price for Putin's war." An EU-wide energy security strategy is needed, argues Constanze Stelzenmüller. This article originally appeared in the Financial Times.

"We just don't know. Everything is possible." This was German Economics Minister Robert Habeck's succinct response to the question currently consuming his country's government, industry

and public: When the 10-day scheduled maintenance to the Nord Stream 1 pipeline ends on July 21, will the Russian state-controlled gas exporter Gazprom resume deliveries? Or will Vladimir Putin perform a gasectomy on Germany?

A graph in the Federal Network Agency's latest supply status report shows how much gas is currently flowing in at three connector points for Russian gas on Germany's eastern border: none. "The situation," says the agency, "is tense and a worsening of the situation cannot be ruled out."

That is a bit of an understatement. Nord Stream 1 supplies 58% of Germany's annual gas needs. The benchmark European TTF gas price has already risen by more than 130% since the beginning of Russia's invasion of Ukraine on February 24, to more than €170 per megawatt hour. In late June, after Russia reduced supplies by 60%, Berlin triggered the second stage of its national gas emergency plan — one step away from gas rationing.

Germany also receives gas from Norway, the Netherlands, and Belgium. But Russia could have redirected its gas via alternate routes such as Yamal or the Ukrainian transit pipeline, and it has not. So Germany is falling behind on filling up its gas storage facilities to create reserves for winter.

At the beginning of July, Germany's three-decade-long trade surplus flipped into a deficit, driven by the rise in gas prices; the country's wealth is created mostly by energy-intensive industries, whose import costs have soared. Inflation is at a record high, a recession looms and the euro is at parity with the dollar for the first time since 2002. Cheap Russian energy used to be a key source of the country's global competitive advantage. Now Russia is making Europe and Germany pay the price for Putin's war.

Germany's options are few, imperfect, and unpleasant. Habeck is bringing dirty coal plants back online, and telling people to take shorter showers. He is streamlining procurement and loosening environmental restrictions to build fixed liquefied natural gas terminals; meanwhile, he is renting floating terminals. And he has wooed authoritarian Gulf leaders in search of alternative LNG supplies. These are painful concessions for a Green politician. But Habeck is in a hurry and has a strong pragmatic streak.

It gets worse. Germany's energy emergency law privileges private households over industry — but some companies say that gas rationing or shutdowns could force them to shutter their operations permanently. The government has just passed a law that allows it to bail out firms hit by the energy shock; the gas importer Uniper has already raised its hand. Consumer gas prices might triple.

This dire prospect is causing the liberal Free Democrats (who are in the government) and the opposition conservative Christian Democrats to loudly criticize Berlin's decision to shutter Germany's last three nuclear power plants by the end of the year.

Ironically, it was Angela Merkel's conservative-liberal coalition that decided in 2011 to phase out nuclear power after the Fukushima power plant disaster in Japan. Since then, Germany has stopped investing in civilian nuclear power technology and expertise. The three plants are at the end of their safely viable lifetimes. They would cover only 6% of the country's electricity needs; and industry needs process heat, not electricity. In sum: the cost and risk of an extension outweigh the benefit.

Given how much of this pain is self-inflicted, the Schadenfreude in other parts of Europe was foreseeable. Being asked for solidarity by Germany after seeing it ignore criticism and steadfastly pursue its national economic interest for years may be a step too far for many.

Yet a gas crisis in the European Union's economic powerhouse will cause jitters across the continent. Uniper may be Germany's biggest gas supplier; its main shareholder is the Finnish state-owned energy company Fortum. And Russia has fully or partially cut off gas supplies to almost a dozen EU countries. However, there is no European gas-sharing arrangement, only a handful of hastily concluded bilateral "solidarity" agreements. Countries that receive large quantities of non-Russian gas — France, the Netherlands, Spain, Belgium — have not joined.

What is needed now is an EU-wide energy security strategy. Putin is using the threat of a gas cut-off to break Germany's societal resilience and political will. But he means all of Europe.

Read the whole article here at: <https://www.brookings.edu/blog/order-from-chaos/2022/07/18/a-german-gas-crisis-will-cause-jitters-across-europe/>

From the Australia Rural and Regional News

Innovative 'co-farming' model earns prestigious business award

Media Release, 23 September 2022

Years of drought in northern New South Wales led Gunnedah region's Sam Conway to establish an innovative 'co-farming' business model to reduce production risk for small to mid-sized broadacre farmers.

This month, Mr Conway's impressive business plan for the new enterprise, which outlines a comprehensive strategy to take the business to its next level, earned the progressive young producer this year's Rabobank 'Dr John Morris' Business Development Prize – a prestigious trans-Tasman business prize awarded annually as part of the Rabobank Executive Development Program (EDP).

Mr Conway, CEO of Boolah Farms – an integrated farm management, grain-handling and broadacre contracting business – established the collaborative farming model (known as 'Co-Farming') in 2020, along with his wife Molly and Stuart and Lyndall Tighe.

This followed three years of drought in northern NSW, with the aim to "reduce production risks by giving smaller landholders access to scale and geographic spread".

"During those years of drought, we noticed there were some properties that did receive rain and had quite good production seasons where others did not have any production, purely due to where the storms fell," Mr Conway said. "The goal of Co-Farming is to flatline the peaks and troughs of production in a cropping-focused business."

The Co-Farm model revolves around small to mid-sized "passive" landholders contributing their land into a joint venture, where operating expenses and profits are shared on a percentage basis.

This percentage basis is determined by taking the market value of their contributed land divided by the total market value of all land in the joint venture. These properties are then all operated as one.

Boolah has a team of 30 full-time employees, carrying out overall management, contracting and grain-handling for the Co-Farm group.

Malt barley is the “pillar crop” for the enterprise, focusing on provenance-based, transparent, direct-to-customer marketing. Other crops grown are cotton, sorghum, durum wheat, canola and chickpeas.

The business currently consists of nine landholders and has operational cells in two regions, Gunnedah and Moree, with a third region kicking off at the start of 2023 at Belatta, also in northern NSW.

Mr Conway, 30, one of the 19 participants in the 24th Rabobank’s Executive Development program, was presented with his prize at the program’s graduation lunch in Sydney earlier this month.

Tailored to assist progressive Australian and New Zealand farmers seeking to take their enterprises to the next level, the EDP is designed to develop and enhance participants’ business management skills.

Run over two one-week residential modules – held over consecutive years – the program covers all aspects of business management including strategic business planning, negotiation, financial management, risk management, communication and innovation.

To date, more than 800 primary producers having graduated from the EDP since the program’s inception in 1999.

On the horizon: With the Boolah Farms Co-Farming structure currently operating within just a 300-kilometre radius, Mr Conway said he had used the learnings from the EDP to assess the business’s current position and develop a five-year plan to establish more farming cells in different geographic areas to provide further risk spreading to the group.

“Every year somewhere in Australia’s grain-growing regions, there is a drought, flood, hail storm, mouse plague, disease or some event that is out of the grower’s control that heavily reduces the return of that farm for that year. These events are always at random – but are most commonly isolated to a region or state,” he said.

“Currently the Co-Farming business is isolated in northern NSW and to be able to achieve our goals to flatline the peaks and troughs of production in a cropping focused business, we are aiming to establish land bases and operational cells into two new geographic regions. The regions will be replications of our current regional cells. Our initial target is 10,000 hectares in each additional region, established by 2025 and 2027 respectively.

“We have developed what we believe is the ultimate model and the business is operating, but on reflection of where we are today, we must bed down some important aspects within our business to allow us to progress towards ‘horizon two’ of farming in different regions.”

This includes increasing the amount of land contributed long-term to the joint venture by landholders (rather than short-term by lessors) to more than 80 per cent by 2024, without reducing scale. This will reduce the risk of land exiting the operation and provide more security to landholders in the joint venture, Mr Conway said.

Further details are available at:

<https://arr.news/2022/09/26/innovative-co-farming-model-earns-northern-nsw-farmer-prestigious-business-award-rabobank/>

Coalition Senators move to remove the nuclear ban

The Hon. Matthew Canavan, Senator for Queensland, The Hon. David Fawcett, Senator for South Australia, The Hon. Richard Colbeck, Senator for Tasmania, The Hon. Gerard Rennick, Senator for Queensland, The Hon. David Van, Senator for South Australia, The Hon. Ross Cadell, Senator for New South Wales, The Hon. Alex Antic, Senator for South Australia, The Hon. Jacinta Nampijinpa Price, Senator for The Northern Territory, The Hon. Matthew O'Sullivan, Senator for Western Australia, Joint Media Release, 28 September 2022

Nine Coalition Senators have moved today to remove the ban on nuclear power in Australia by introducing a Private Senators Bill.

Australia is unique among large, developed nations with a legislative ban on nuclear power. Australia only ended up with a ban because the Howard Government needed to trade it off to get Parliamentary support in 1998 for the construction of a new, nuclear reactor for medical purposes at Lucas Heights.

“Australia’s unusual legislative ban against nuclear power was moved and debated with less than 30 minutes of debate in the Senate. But the nuclear ban may cause decades of pain if we continue to deny our country reliable power alternatives.

“Australia has made it almost illegal to build baseload coal or gas power stations. We cannot continue to deny our country all reliable power options, including nuclear” said Senator Canavan.

The legislation moved by the Coalition Senators will not immediately lead to the construction of a nuclear power station in Australia. A nuclear power station would require a licence under the Australian Radiation Protection and Nuclear Safety Act 1998 and a permit under the Nuclear Non Proliferation (Safeguards) Act 1987. Any plant would also need to comply with other state or territory laws.

“Our bill does not remove the nuclear trigger from the Environment Protection and Biodiversity Conservation Act so any proposal would require the Environment Minister’s approval. However, removing the legal ban on nuclear power would be an important first step in declaring that Australia is ready to have a fact-based analysis of nuclear energy options.

“The world is turning back to nuclear power and there are game changing developments in small modular reactor technology. With the world’s largest uranium reserves, Australia cannot afford to be left out of global nuclear progress” said Senator Canavan.

Senator Fawcett said “The 2022 OECD NEA report on meeting emissions targets highlights that wind and solar will not get us to net zero and will send us broke trying. The report highlights recent facts that show nuclear power is the most affordable long term-option, reliable, safe and can be installed in a timely manner.

Over the past year, Germany and California have delayed the closure of nuclear power stations, the United Kingdom and France have announced ambitious plans to build a fleet of new, nuclear power stations and Japan is accelerating the reopening of nuclear plants.

Senator Price said “If we truly as a nation want the cleanest and most reliable energy source there is available, then nuclear power is the logical option. The cost of doing business will only continue to rise, which will result in rising cost of living for already struggling Australians.”

Senator Cadel said “We need to have a fact-based discussion considering all the energy options available. When families flick the switch we need to ensure the lights come on.

“This legislation is a step to ensuring that we do just that.”

Senator Van added “This is a simple change to legislation that allows Australia to discuss how we transition our energy grid.”

“We need to be having the discussion on nuclear, we export it to the rest of the world for their energy, it’s time we started using it here to secure our own energy grid and ensure that we have reliable power into the future.” Senator Rennick said.

There are a range of benefits for Australia that make nuclear power important to at least consider:

- Nuclear power is safe. Nuclear energy has resulted in far fewer deaths than that from dam failures, oil rig explosions and even, on some measures, the number of people that fall when installing solar panels.
- Nuclear does less damage to the natural environment than other energy options. Wind energy takes up 250 times more land than nuclear power and solar takes up 150 times more land.
- Between 1965 and 2018 the world spent \$2 trillion on nuclear compared to \$2.3 trillion for solar and wind, yet nuclear today produces around double the electricity than that of solar and wind.

Further details are available at: <https://arr.news/2022/09/28/coalition-senators-move-to-remove-the-nuclear-ban/>

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

What difference does animal breeding make?

[By Nadine Chapman in August 2022]

A breeding program for *Apis mellifera carnica* has been ongoing in Germany since the 1970s, expanding into surrounding countries. From 1970-1989 the program increased honey production by 0.11% and gentleness by 0.01% per annum (Table 1).

Trait	1970-1989	2014-2018
Honey production	0.11%	1.67%
Gentleness	0.01%	1.45%
Calmness		1.45%
Swarming		1.26%
Varroa index		1.47%

Table 1. Rate of genetic improvement per year before (1970-1989) and after (2014-2018) implementation of modern animal breeding techniques (EBVs).

In the mid 1990s the program implemented the use of modern animal breeding techniques – computer based Best Linear Unbiased Predictions (BLUP) which take information on traits, genetics (pedigree or genetic testing), and environment (i.e. which animals are kept together in the same environment) to produce Estimated Breeding Values (EBVs). EBVs assign a number to each individual that represents its genetic merit. Individuals with the most favourable EBVs are chosen for breeding.

In 2014-2018 the rate of genetic improvement of honey increased by 15 times to 1.67% per annum. The rate of improvement in gentleness increased 145-fold to 1.45%. Similar progress was also seen in traits added during this time.

These figures out of Germany are based on real data. They too have fluctuations in resource availability. Some years less honey is produced, but it is more than would be produced if these selection methods were not being used.

What does this mean for you?

Say you produce on average 50 kg of honey per colony per year, and the price of honey is \$5.00. This means each hive is worth on average \$250 for honey. Using current practices that means that next year you can expect to produce 50.055 kg of honey, or \$250.28 per hive.

If you were using EBVs, however, you could expect to produce 50.835 kg of honey, or \$254.18 per hive.

At the end of 15 years using current methods your colonies would be producing 50.83 kg due to selection, while using EBVs you'd be producing 64.10 kg (Figure 1).

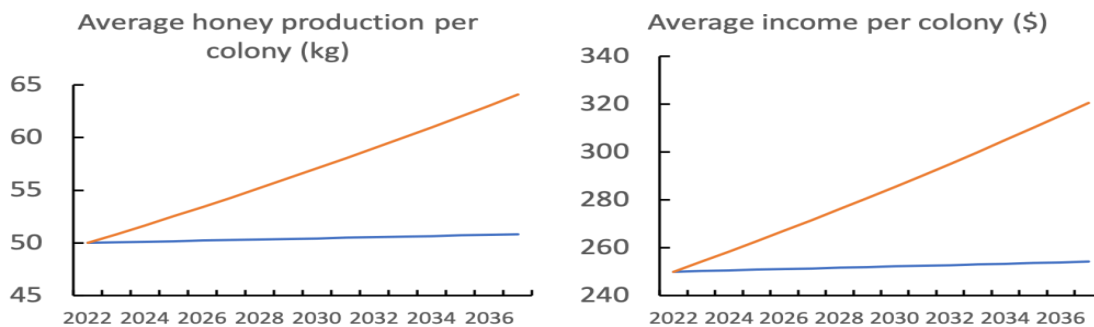


Figure 1. Increase in average honey production and average income per colony using current breeding techniques (blue) and modern animal breeding techniques (EBVs) (orange)

Over that 15-year period using current techniques you will have increased the total value of honey production by \$33.17 per colony – that's the sum of the extra honey produced by selection over 15 years. Using EBVs you could increase the total value of honey produced over the 15 years by \$542.25 per colony.

Multiply that by how many colonies you have, or by all the colonies in Australia and you can see the impact that modern animal breeding techniques can have on the Australian beekeeping industry. In fact, Banks and Boerner (2015) calculated that over 25 years EBVs would generate an extra \$41 million in honey across the industry.

Further details are available at: https://em.agrifutures.com.au/NjQzLU5PRy0zMDAAAAGG2Vd-baCBVIC5sd5jooC_HSLiBsA0Mvw4gPKt66P2eElXHHKqLT1Pr2M7jZfZspFMc0Zzgu4=

RFQ Carbon Farming Capacity Building Needs

The NSW Treasury Office of Energy and Climate Change is seeking a service provider to assist with undertaking a market scan of: existing attitudes to carbon farming in NSW; opportunities, gaps and future direction/needs of capacity building, learning, training and guidance materials for NSW farmers in relation to carbon farming, land-based carbon abatement and sequestration activities; and if this recognises and supports consideration of carbon farming co-benefits e.g. nature-positive farming, indigenous and cultural outcomes.

This project contributes to the NSW Primary Industries Productivity & Abatement Program - Focus Area 2, Action 5 – Capacity Building. This market scan project is focused solely on the agriculture sector.

Full details of the project requirements are in the attached statement of requirements for a request for quote for research in relation to carbon farming capacity building needs in NSW. This work is for the NSW Government’s Primary Industry Productivity and Abatement Program (PIPAP).

A report has been recently released “Growing NSW’s primary industries and land sector in a low carbon world” by NSW Department of Planning and Environment (March 2022). A quick summary follows.

The NSW Government is leading the way in the race towards net zero emissions. Its Net Zero Plan Stage 1: 2020-2030 (the Plan)¹ sets out the State’s ambitious agenda to reduce emissions by 50% by 2030 on 2005 levels and achieve net zero by 2050. The Primary Industries Productivity and Abatement program (the program) is an integral element of the Plan. It focuses on major opportunities to reduce emissions across the NSW primary industries and land sector.

As the world decarbonises, the primary industries and land sector is facing a unique combination of factors:

- Increasing concern about environmental, social and governance (ESG) performance across the supply chain, by the investment community and from consumers;
- Significant appetite from within the sector to act on climate change and benefit from abatement opportunities; and
- Growing interest from the finance sector to pursue nature-positive, low emissions practices that improve returns and reduce risk.

The sector is well positioned to meet changing market demand and seize the opportunities presented through improved productivity, access to finance and the generation of new revenue streams through carbon markets. At the same time, there is growing recognition of the high rate of depletion of natural capital, and the impact that this will have not just on our natural world, but on our economic future.

The NSW Government will invest \$125 million to support land managers in taking on-ground action, to develop data, metrics and environmental markets, and to help producers meet the growing interests in ESG performance from consumers, the supply chain and the investor community.

This will ensure the sector can thrive in a low carbon world, while also enhancing NSW’s natural capital. The program has 3 focus areas:

- **Developing market and industry foundations** – \$52 million to develop trusted and transparent data, metrics and frameworks to underpin strong market activity;

- **Building critical mass and capacity** – \$72 million to incentivise land managers to take early action on high priority areas and build carbon management and emissions abatement capacity and expertise; and
- **Accelerating finance for natural capital and low carbon farming** – \$1 million to initiate work with the financial sector to help finance nature-positive and low emissions practices by farmers and land managers.

The first focus area lays a strong foundation, providing the evidence for action and investment. The second focus area builds confidence and skills, demonstrating how to take real on-ground action. The third focus area aims to unlock finance, linking strong environmental performance to good economic sense. Together these investments will support farmers and land managers to reduce emissions and access environmental markets while optimising productivity and seizing new market opportunities.

For more information please read at:

https://www.energysaver.nsw.gov.au/sites/default/files/2022-05/Growing_NSWs_primary_industries_and_land_sector_in_a_low_carbon_world_May_2022.pdf

From CEDA

Harnessing science X technology to drive Australian innovation and growth

Australia's long history of economic success and broader prosperity has been shaped by our ingenuity and particularly by our ability to leverage science and technology to enable new opportunities and competitiveness. There are plenty of well recognised examples; from ultrasound, to Wi-Fi, cochlear implants, polymer bank notes, the cervical cancer vaccine and the space industry opportunities that trace to remote automation in our resources sector.

Similarly, the success of companies like Atlassian, Canva and Afterpay is increasingly being woven into our national narrative.

While our ability to harness both science and technology has always been important, arguably the centrality of this to future prosperity has never been greater. Further, the fields of science and technology are separate, yet highly complementary. Imagine if we were able to better combine them to power innovation - for the multiplying effect of Science x Technology.

Against the backdrop of rapid digitisation and technological advance, the ability to genuinely and consistently innovate, to translate insights and ideas to valued, sustainable products and services is of course central to competitiveness and economic growth. The significant challenges and opportunities facing Australia – population ageing, climate change, geopolitical instability – against the backdrop of COVID legacies, further underscores the critical role of our science and technology capabilities and our ability to leverage these.

All of this serves to remind of the importance of ensuring that our science, technology and innovation efforts are delivering all that they can. There is certainly a lot of energy behind many initiatives, and many successes. However, there is a strong sense that more could and should be achieved across all sectors and the country, and that we need to move beyond replaying well-rehearsed problems and narratives. More fundamentally, there is a desire among many to ignite greater ambition, excitement

and imagination around our science and tech possibilities as drivers of future prosperity, and to bring business, academia and government together in this pursuit.

Imagine it's 2050, and Australia is widely recognised for its world leading research and innovation, the sophistication and diversity of its businesses and exports, and its ability to use science and technology (SxT) to create new industries, skills and jobs, and improve environmental sustainability and wellbeing. The foundations for these achievements were established in the aftermath of the COVID-19 pandemic, when business, academia, government and community sectors worked together to develop an ambitious and explicit approach to guide decision-making and investment to better leverage science and technology to capture emerging opportunities.

In mid-2022, CEDA convened a series of workshops and one-on-one discussions with leaders from Australian industry, government and academia on how our nation might better harness Australia's science and technology potential to drive innovation and economic growth.

This question is a complex one. Sitting beneath it are many different stakeholders, perspectives and objectives. This diversity, in the absence of clear, overarching ambitions and frameworks to connect disparate perspectives, priorities and programs is in fact the key challenge for policy, industry and academic leaders seeking to enable and harness the full potential of Australia's science and technology capabilities.

Over recent decades there have been many efforts to advance this ambition, under the guise of national innovation policies or strategies. Speaking frankly, many who have been involved in previous efforts will remark on the repetitive consistency of the issues raised and narratives that have cycled from the broad to specific and back again.

In an effort to drive overarching thinking and frameworks, some have identified that past efforts have sought to 'boil the ocean', with the result that recommendations were too high level or unwieldy, and difficult to implement much less communicate in a way that garnered community interest, excitement and support.

In response to an inability to progress broader agendas, stakeholders have alternatively focused on 'innovation' in the context of their narrower objectives and areas of expertise, which has resulted in an often disjointed debate where many are seemingly having the same conversation but speaking different languages.

With this report, CEDA has sought to employ its convening power and independence to curate a distilled, cross-sector view of Australia's innovation opportunity as it stands today.

This paper does not attempt to provide detailed answers. But based on what we learned and heard in these discussions, we have generated some clear insights and recommendations for a path forward. CEDA offers these insights to the national conversation as a contribution and base for further work by us and others.

There is significant momentum and opportunity building in Australia around this topic. The government's National Reconstruction Fund, the recent Jobs and Skills Summit and the emerging discussions on how to fund more ambitious social and economic investments in Australia.

Further information about this report is available at:

<https://cedakenticomedia.blob.core.windows.net/cedamediacontainer/kentico/media/attachments/science-x-technology-paper1.pdf>

From the Productivity Commission

The nuisance cost of tariffs

This report argues that the costs of the Australian tariff system arise mainly from its complexity. In Australia's low tariff-rate environment, the costs of the tariffs arise primarily from the complexity of the system rather than from distortions to the economy.

Simplifying the tariff system will lead to cost savings for businesses that will eventually flow through lower prices to Australian consumers. The main savings are likely to be achieved by reducing the costs associated with concessions and preferences — or by simplifying the entire tariff system. Some savings are also likely to arise from trade facilitation initiatives, such as the Simplifying Trade System initiative already underway.

Tariffs are only applied to a small number of imports with nearly 90 per cent of imports entering Australia duty-free. A tariff of 5 per cent is paid on about 10 per cent of imports, raising about \$1.5 billion in revenue (this represents about 0.3 per cent of revenues collected by the Australian Government).

The Government incurs costs to administer the tariff system. Those that could be estimated amount to between \$11 million and \$20 million. To the extent that agencies use cost recovery mechanisms, the costs are borne by businesses, and eventually, consumers — otherwise, administrative costs are borne by taxpayers.

Now that they are so small, both in level and coverage, tariffs protect very few Australian producers. Distortions from reallocating labour and capital toward relatively inefficient businesses are much smaller compared to when tariffs were more prevalent: some tariffs are applied to imports that do not compete with domestic products, the tariff rate is low (five per cent), and tariffs are applied to a small number of imports.

The main effect of the current tariff system is to increase the cost of inputs to businesses that use imports and eventually increase consumer prices. Aside from the cost of the tariff itself, there are costs to businesses from complying with the system, such as identifying whether they qualify for any concessions or for a preference under a preferential trade agreement. In accessing a preference, businesses incur an average cost of 0.9–2.8 per cent of the value of the imports to which the preference was applied in order to avoid paying the tariff of five per cent of the value of imports. This includes the costs to foreign exporters of meeting the local content requirements necessary to qualify for the preference, which are largely passed through to Australian businesses and consumers. In some cases, businesses do not access a preference either because they are unaware of its existence or because the cost of accessing it is too high.

When applied to imports that do not compete with domestic producers, taxes on imports can be an efficient source of revenue compared to other sources of revenue — they are administratively easy to collect and result in small economy-wide distortions if the tariff rate is low. But the costs of collecting tariffs is also a function of the complexity of the system, which affects administrative and compliance costs. The costs of the system are estimated to be in the order of \$0.59 to \$1.57 per dollar of revenue raised (table 1).

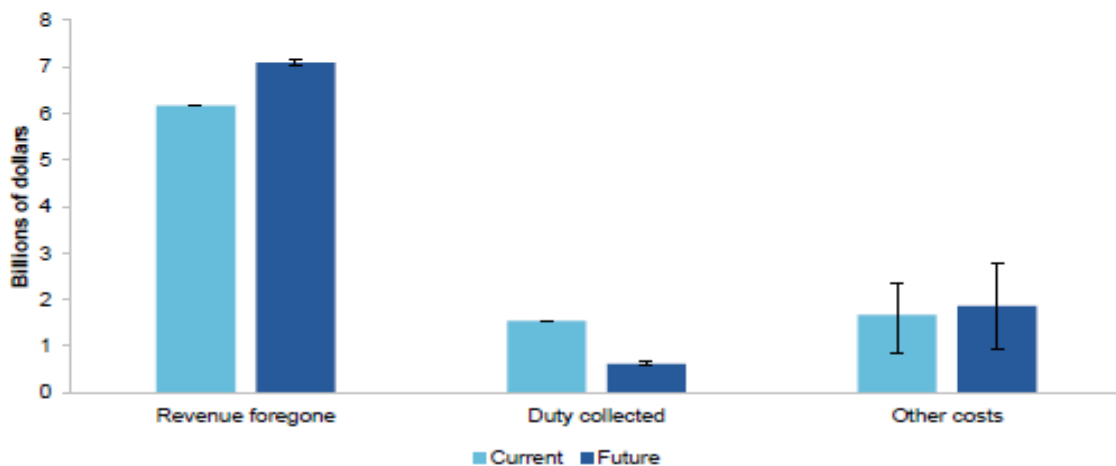
The cost-to-revenue ratio increases as costs increase and as revenues decrease. As the number of concessions and the number of PTAs increase, the costs of the system increase and the amount of

revenue decreases, making each dollar collected more expensive to collect. The implementation of agreements with the UK, India and the EU could reduce revenues from \$1.5 billion currently to \$579–664 million, raising system costs to \$1.41–4.81 per dollar of revenue collected (figure 1).

Table 1 – Cost of tariff system per dollar of revenue collected
Aggregate costs divided by aggregate tariff revenue (\$1.5 billion)

Costs per dollar of tariff collected (\$)	Notes
Administrative costs	Less than 0.02 Only partial accounting of costs — mainly staffing costs based on FTEs.
Compliance costs	0.49–1.45 Compliance with PTAs (includes costs of RoO) and concessions.
Distortions	0.10 GDP foregone due to distortions.
Total	0.59–1.57

Figure 1 – Revenue foregone and costs will rise and duty collected will fall once forthcoming PTAs are implemented^{a,b}



a. Future values are estimates following the implementation of trade agreements with UK, EU and India. b. Ranges: revenue foregone and duty collected – based on previous 3 years; other costs – 50 per cent above and below central estimate.

Access the full report here: <https://www.pc.gov.au/research/completed/nuisance-tariffs/nuisance-tariffs.pdf>

From the Business Insider Australia

The housing markets could crash in Canada, New Zealand, and Australia. They're 3 cautionary tales for the US

By Alcynna Lloyd (Business Insider)

- Global real estate markets have been in overdrive during the Covid-19 pandemic.
- But homebuyer activity has slowed in countries like Canada, New Zealand and Australia.
- The US housing market shares some of their problems, and it's a cautionary tale for us.

The United States is not the only country facing a housing downturn.

In countries across the globe, rapid home price growth fueled by lackluster housing supply and robust investor activity have distorted local housing ecosystems — especially in Canada, New Zealand and Australia.

According to a research note from multinational investment bank Goldman Sachs, each of these markets are poised for "sizable home price declines" throughout 2023. In Canada, residents are facing a 6% decline in home values, while the rate stands at 18% and 13% in New Zealand and Australia, respectively.

Although US prices are projected to fall by just 3%, these countries each have unique housing challenges, they all serve as a cautionary tale for the frosty US real estate market.

Canada lacks significant housing inventory: Canada and the US share a similar challenge: They don't have enough homes for all the people who want to buy.

In both countries, years of underbuilding and rampant investor activity have led to spiking prices and waning demand.

According to Canada's national housing agency CMHC, the country needs to build a whopping 5.8 million homes by 2030 to stunt its affordability crisis. The task may be hard considering the country — just like the United States — is facing a shortage of construction workers and exorbitant homebuilding costs.

"There are supply issues, labor shortages at the moment and the cost of financing is going up," Aled ab Iorwerth, the deputy chief economist of Canada Mortgage and Housing Corp, told CBC News.

While home sales and prices are now falling in Canada due to rising interest rates — much like what's happening in the US — the country's dearth of housing remains a hurdle to stabilizing its market. Although Prime Minister Justin Trudeau's government has attempted to boost supply by introducing a two-year ban on home purchases by foreign investors, housing experts say more will need to be done.

"I don't think prices are going to fall as a result, though I do think it takes away at least some of the competition in what is the most competitive market in Canadian housing history," Simeon Papailias, the founder of the real-estate investment firm REC Canada, told Bloomberg, adding that it's unlikely that a "two-year Band-Aid" would have an effect on a fundamental lack of homes.

Young buyers are priced-out of homeownership in New Zealand: New Zealand's housing market is an example of what could happen when a nation's young adults can no longer afford the dream of homeownership.

Home to some of the world's most expensive property markets, the country's affordability woes have been exacerbated by inflationary pressure and interest rate hikes. Many of New Zealand's would-be first time home buyers are priced out, and it's led to a severe housing downturn.

It sounds all too familiar. Just like in the United States, home prices in New Zealand spiked during the onset of the Covid-19 pandemic. Similarly to Canada and the US, the growth was stimulated by heavy real estate investor activity.

Its government attempted to fix the problem by introducing several billion-dollar measures, which included raising the amount of loan or grant money single buyers could receive from the government and increasing taxes for real estate investors.

But the provisions have not been enough to solve the country's housing disparities.

As New Zealand's housing crisis escalates, The Guardian reports that less and less of the nation's young buyers can afford home purchases. With the median home price sitting at \$741,000 as of June of this year, it's no surprise that so many of the nation's young adults are now priced out of homebuying. It's an echo of the US' crisis where the median home price is \$435,000 and as of 2019, an estimated 70% of millennials cannot afford to purchase.

Young buyers' absence in the New Zealand market has helped to push the country's homeownership rate to the lowest level in 70 years and intensified its housing downturn.

"The property crisis has implications right across the generation spectrum," one 29-year-old told the Guardian. "Under the current model, a lot of people are losing out and a select few are winning."

Economic volatility stunts buyer demand in Australia: Australia has not escaped the housing slowdown gripping global real estate markets. Much like the US and New Zealand, the fight against inflation has led to mortgage rates rising, which has given way to lower demand and home prices falling. As home buying activity falls in Australia, economists are fearful the country is bracing for a housing crash.

Data from CoreLogic shows that in August, in every Australian city but Darwin, home values experienced a decline. The company says the combined value of residential real estate in Australia fell to \$9.7 trillion in August, marking the steepest quarterly decline in home values since the 1980s.

"We're seeing housing values falling faster now than what we saw during the global financial crisis and also during the early 1990s and early 1980s recessions," Tim Lawless, a research director at Corelogic, told the Guardian.

Further details are available at: <https://www.businessinsider.com/global-housing-bubbles-crash-cautionary-tale-us-real-estate-market-2022-9>

THE CONVERSATION

First Nations people in rural NSW lived with more anxiety and fear about COVID-19 than non-First Nations people

Julaine Allan, Azizur Rahman, Jayne Lawrence Jodie Kleinschafer (CSU) and Mark Lock (UTS)

[Misha Ketchell, Editor, The Conversation]

At the beginning of the COVID-19 pandemic, the federal government's pandemic response struggled to include the country's most minoritised groups, including First Nations people.

Daily press conferences were broadcast, but the messages were not delivered or received equally across the country. Trust in the people delivering the messages and ability to follow health advice varies according to personal, social and cultural experiences.

Our study found First Nations people in rural NSW experienced significantly more anxiety and fear about COVID-19 than non-First Nations Australians.

Research limited with structurally marginalised communities: The research community responded rapidly to the need to investigate and inform responses to the pandemic. However, there was limited research about rural First Nations people's perceptions of COVID-19 risks, or their information or communication needs.

There was also limited attention to the community needs in NSW where the largest population of First Nations peoples live in Australia.

In our study we tested the links between age, sex, First Nations status, access to healthcare and family situation. We also asked how often First Nations people felt fearful about COVID-19, and how harmful they thought the virus was.

First Nations peoples felt afraid more often than non-First Nations people did. They also felt it was highly likely they would catch the virus, and that it would be very harmful to them and their community.

Nearly 60% of First Nations peoples thought there was nothing they could do about COVID-19, and only 11.6% of the rest of the sample agreed with this statement. This is interesting because when vaccines were first made available in Australia, First Nations people were identified as a high priority group.

Their fears were justified because the Delta variant of COVID-19 quickly took hold in small communities that have limited healthcare services. The availability of services needed to provide vaccinations was not taken into account in vaccine rollout plans.

Co-designed health communication necessary: There were no First Nations representatives in daily government press conferences delivering health advice even though there were frequent mentions of risks to First Nations communities.

Different populations require nuanced communications that address their fears and concerns. To overcome distrust of government and poor health care experiences, including First Nations Australians in health communication design and delivery is essential.

More on this story is available at: <https://theconversation.com/first-nations-people-in-rural-nsw-lived-with-more-anxiety-and-fear-about-covid-19-than-non-first-nations-people-186730>

CONFERENCES and STUDY OPPORTUNITIES

ANZRSAL 2022 Conference

The ANZRSAL 45th Annual Conference will be held in Charles Sturt University, Wagga Wagga Campus from 1-2 December 2022. Further details are available at the [ANZRSAL website](#).

2022 RSA Winter Conference

The Regional Studies Association Winter Conference 2022 offers a timely opportunity to discuss and debate important issues, to rethink the key theories, concepts and methods, and to explore futures for

regions and cities. The organisers seek papers and special sessions that critically evaluate any aspect of regions in transition, particularly those that:

- Break new ground by identifying new fields of enquiry
- Propose new concepts and methods
- Examine the consequences of and challenges to sustainability transitions (especially on the linkages between the three pillars of sustainability – economic, social and environmental)
- Propose new policy solutions for local and regional policy and planning practitioners
- Collaborative, comparative or interdisciplinary papers are especially welcome
- Session proposals experimenting with new formats for the debate and engagement of the audience are encouraged

Regions in Transition: Balancing Economic, Social and Environmental Sustainability in the Face of Uncertainty

Date & Location: London, UK, 10 Nov 2022 - 11 Nov 2022

More details are at <https://www.regionalstudies.org/events/2022-winter-conference/>

Regional Studies Blog

Professor Paul Dalziel, Executive Officer, ANZRSAI 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/. A recent contribution that is relevant to ANZRSAI 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

ANZRSAL Abstract Alerts

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

Joseph Drew:

Joseph.Drew@uts.edu.au

Yogi.Vidyattama

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.

Modeling infectious diseases dissemination through online role-playing games.

Balicer, R. D

Abstract: As mathematical modeling of infectious diseases becomes increasingly important for developing public health policies, a novel platform for such studies might be considered. Millions of people worldwide play interactive online role-playing games, forming complex and rich networks among their virtual characters. An unexpected outbreak of an infective communicable disease (unplanned by the game creators) recently occurred in this virtual world. This outbreak

holds surprising similarities to real-world epidemics. It is possible that these virtual environments could serve as a platform for studying the dissemination of infectious diseases, and as a testing ground for novel interventions to control emerging communicable diseases.

One quote that may be interesting is on the limitation of this study: "While the parallels with a real-world outbreak are striking, the artificial nature of the games limits them as models for the real world and might even lead to misleading conclusions about real infectious outbreaks. The mixing patterns and interactions among the game figures may be considerably different from those in real life and would depend heavily on the rules and goals of the game. The most obvious example would be the risk-taking behavior of virtual characters, which depends heavily on the penalties for death or illness and the availability of a "game saving" option."

A comparison of rural Australian First Nations and Non-First Nations survey responses to COVID-19 risks and impacts: implications for health communications

Julaine Allan, Jodie Kleinschafer, Teesta Saksena, Azizur Rahman, Jayne Lawrence & Mark Lock

Abstract: This study investigated differences between rural Australian First Nations and non-First Nations survey respondents' perceptions of COVID-19-related risks and analysed other variables that could predict an exacerbation of anxiety related to COVID-19 harms. A cross-sectional online and paper survey of rural residents from the western regions of NSW, Australia, was conducted. Descriptive and multivariate statistical analyses were used to assess links between First Nations status and demographic measures including postcode, age, gender, education, rural or town/village location, proximity to medical services and living situation. The analysis included five items related to

perceptions about COVID-19: perceived likelihood of contracting COVID-19 in the next 12 months, perceived harmfulness of the virus, how often people felt afraid, perception about respondents' ability to do something about the virus and perceived economic impacts of the pandemic. There were significant differences between First Nations (n=60) and non-First Nations (n= 639) respondents across all sociodemographic categories. The results reflect a significantly higher level of anxiety among the First Nations Australians in the sample: they felt afraid more often, felt it was highly likely they would catch the virus and if they did catch the virus perceived that it would be very harmful. Living with children under eighteen years of age and in small rural towns were key factors linked to feeling afraid of COVID-19 and First Nations status. Health risk communication in pandemic response should include an equitable focus on rural areas, recognising that First Nations Australians are a significant proportion of the rural population with different risk factors and concerns than those of non-First Nations Australians. This principle of First Nations-led design is critical to all health policy and planning. The Australian Government should include rural areas in planning pandemic responses, recognising that First Nations populations are a significant proportion of the rural population creating syndemic conditions.

DOI:

<https://doi.org/10.1186/s12889-022-13643-6>

Regional Studies

Vol. 56, Issue 9, 2022

Economic modelling to evaluate smart specialisation: an analysis of research and innovation targets in Southern Europe

Javier Barbero, Olga Diukanova, Carlo Gianelle, Simone Salotti & Artur Sanatoalha

56(9), 2022, p.1496-1509,

<https://doi.org/10.1080/00343404.2021.1926959>

Abstract: We make the case for a technology-enabled approach to Smart Specialisation policymaking aimed at increasing its effectiveness by assessing the general equilibrium effects of the European Cohesion Policy objectives contained in the regional Operational Programmes prepared by the regional policymakers. We simulate the impact of achieving the research and development personnel targets on gross domestic product and its components in a set of Southern European regions. We discuss the implications and challenges of the proposed methodology for future assessments of Smart Specialisation and for its implementation in the regions of the European Union.

Industrial waste, green taxes, and environmental policies in a regional perspective

Jaime Vallés-Giménez & Anabel Zárate-Marco

56(9), 2022, p.1510-1523, Online 22 Nov 2021.

<https://doi.org/10.1080/00343404.2021.1990251>

Abstract: This paper analyses the effectiveness of regional governments' environmental taxes and policies in reducing industrial waste. We propose a spatial and dynamic model for the Spanish regions during the period 1999–2017. The results suggest that there are spatial and dynamic components in the generation of industrial waste; and that the specific environmental tax policy applied to industrial waste is not very effective, although the induced effect of these taxes and other environmental policies reduces the waste generation. Our model also suggests a relative decoupling between growth and waste, although many regions are still far from the waste Kuznets curve (WKC) turning point.

Synergy and policy-making in German innovation systems: Smart Specialisation Strategies at national, regional, local levels?

Henriette Ruhrmann, Michael Fritsch & Loet Leydesdorff

<https://doi.org/10.1080/00343404.2021.1872780>

Abstract: Tools for Smart Specialisation Strategy (RIS3) development to assess at which territorial level innovation is concentrated and how innovation systems compare across regions and sectors remain scarce. The triple helix indicator is a data-driven tool that can serve in RIS3 development to assess synergy in innovation systems based on readily available data sets. For Germany, we find strong decentralization with innovation system synergy concentrated at regional and local levels. Innovation systems in manufacturing are less regionalized than in knowledge-intensive services. An East–West divide persists. RIS3 policy-making should account for decentralization by building capacity for region-specific RIS3 development at lower governance levels.

The non-linear effect of technological diversification on regional productivity: implications for growth and Smart Specialisation Strategies

Silvia Rocchetta, Raquel Ortega-Argiles & Dieter F. Kogler

<https://doi.org/10.1080/00343404.2021.1939292>

Abstract: With a sample of 268 European Union (EU) regions and multilevel modelling, we demonstrate that different technological diversification measures measured as coherence and entropy-variety have different non-linear effects on regional productivity growth. These non-linear effects work in opposite directions to each other. Our analysis shows that higher regional productivity returns can be found in regions investing both around

their existing technological capabilities as well as in more distant knowledge domains. Our findings have significant implications for understanding regional productivity growth processes and the implementation of Smart Specialisation Strategies.

The Review of Regional Studies

Vol. 52, Issue 2, 2022

Economic downturn, change in unemployment, and the Midwest: A quantile regression approach

Kathleen G. Arano & Arun K. Srinivasan

<http://dx.doi.org/10.52324/001c.11094>

Abstract: Although every area of the U.S. was hit by the Great Recession, the change in unemployment rates varied widely across locations. We use a quantile regression approach to examine the tales of the distribution of change in unemployment across all counties in the Midwest. We find consistent evidence that manufacturing was the largest contributor to the change in unemployment across the three conditional distributions examined, with the impact increasing as we move from the 25th quantile to the mean (OLS) and 75th quantile. Likewise, local labour mobility has amplifying effects on the change in unemployment rates, while educational attainment has a moderating effect. Our results suggest that human capital and location- and industry-targeted policies are important in promoting recession-resilient local economies

Regional resilience in China: the response of the provinces to the growth slowdown using the notion of regional economic resilience

Anping Chen & Nicolaas Groenewold

<https://doi.org/10.52324/001c.35253>

Abstract: This paper focuses on the province-led experience of China's growth slowdown using the notion of regional economic resilience. We first use standard resilience

measures based on growth rates and compute the correlation between these measures and a number of determinants. We then decompose growth into national and provincial components and argue that resilience ought to be based only on the former. This extension is important both for ranking provinces and for the correlation analysis. We find that provinces close to the coast with new – rather than old-industry structures were less resilient and suffered greater growth variability.

The social and economic factors underlying the incidence of COVID-19 cases and deaths in US counties during the initial outbreak phase

Nivedita Mukherji

<https://doi.org/10.52324,008>

Abstract: This paper uncovers the socioeconomic and health/lifestyle factors that can explain the differential impact of the coronavirus pandemic on different parts of the United States during the initial outbreak phase of the pandemic. Using a dynamic panel representation of an epidemiological model of disease spread, the paper develops a Vulnerability Index for US counties from the daily reported number of cases over a 20-day period of rapid disease growth. County-level economic, demographic, and health factors are used to explain the differences in the values of this index and thereby the transmission and concentration of the disease across the country. These factors are also used to examine the number of reported deaths. The paper finds that counties with high median income have a high incidence of cases but reported lower deaths. Income inequality, as measured by the Gini coefficient, is found to be associated with more deaths and more cases. The remarkable similarity in the distribution of cases across the country and the distribution of distance-weighted international passengers served by the top international airports is evidence of the spread of the virus by way of international travel. The distributions of age, race and health risk

factors such as obesity and diabetes are found to be particularly significant factors in explaining the differences in mortality across counties. Counties with better access to health care, as measured by the number of primary care physicians per capita, have lower deaths, and so do places with more health awareness as measured by flu vaccination prevalence. Environmental health conditions such as the amount of air pollution are found to be associated with counties with higher deaths from the virus. It is hoped that research such as these will help policymakers to develop risk factors for each region of the country to better contain the spread of infectious diseases in the future.

Economic System Research

Volume 34, Issue 1

Economic and environmental impacts of decarbonisation through a hybrid MRIO multiplier-accelerator model

Oscar Dejuan, Ferran Portella-Carbo & Mateo Ortiz

Pages 1-21,

<https://doi.org/10.1080/09535314.2020.1848808>

Abstract: This paper analyses the impacts of decarbonisation in three energy-intensive sectors/institutions (electricity generation, road transport, and household consumption) on four economic and environmental variables (value added, employment, energy consumption, and emissions). In our basic scenario, the EU is supposed to complete the decarbonisation of the selected sectors in 30 years, whereas in the rest of the world these sectors will be 30% decarbonised. We hypothesise that emissions and employment will fall once renewable sources of energy replace fossil fuels. Yet, in the meanwhile, massive investments are needed to build the required infrastructure. To compute the full impact, we apply a multiplier-accelerator model to a global multiregional hybrid input-output table derived from EXIOBASE3. In the EU, such a decarbonisation reduces yearly energy

consumption, CO₂ emissions, and employment by 22%, 19%, and 4%, respectively. Thus, additional measures are necessary to avoid global warming and absorb unemployment.

Linking multisectoral economic models and consumption surveys for the European Union

Ignacio Cazcarro, Antonio F. Amores, Inaki Arto & Kurt Kratena

Pages 22-40,
<https://doi.org/10.1080/09535314.2020.1856064>

Abstract: Multisectoral models usually have a single representative household. However, more diversity of household types is needed to analyse the effects of multiple phenomena (i.e. ageing, gender inequality, distributional income impact, etc.). Household consumption surveys' microdata is a rich data source for these types of analysis. However, feeding multisectoral models with this type of information is not simple and recent studies show how even slightly inaccurate procedures might result in significantly biased results. This paper presents the full procedure for feeding household consumption microdata into macroeconomic models and for the first time provides in a systematic way an estimation of the bridge matrices needed to link European Union Household Budget Surveys' microdata with the most popular multi-regional input-output frameworks (e.g. Eurostat, WIOD, EORA, OECD).

Tax reforms in Spain: efficiency levels and distributional patterns

Ana-Isabel Guerra, Laura Varela-Candamio & Jesus Lopez-Rodriguez

Pages 41-68,
<https://doi.org/10.1080/09535314.2020.1848806>

Abstract: This paper approximates the efficiency levels of the most relevant tax categories and their distributional patterns for a European country considering Spain as an illustrative example. This is done computing the 'marginal' excess burden of these taxes,

taking into account the structure of the Spanish tax system before and after the major tax reforms undertaken since 2010. In doing so we use a static applied general equilibrium model, which features heterogeneous households classified according to their taxable income. In addition, and in identical terms, another alternative tax reform is evaluated: a flat value-added tax system and a reduction in employers' social security contributions. Our results indicate that the alternative tax reform would have slightly improved the degree of efficiency of these taxes while implying a lower negative impact on aggregate income. Regarding distributive effects, we do not find significant differences between the actual and the alternative tax policies.

How will natural gas market reforms affect carbon marginal abatement costs?

Hong-Dian Jing, Mei-Mei Xue, Kang-Yin Dong & Qiao-Mei Liang

Pages 129-150,
<https://doi.org/10.1080/09535314.2020.1868410>

Abstract: Having recognised the significant role of natural gas in reducing carbon abatement costs, China is rapidly promoting its growth. However, obvious distortions exist in China's natural gas market, and it is unclear how these may affect abatement policies going forward. Therefore, to assess the effects of energy market distortions on the carbon marginal abatement costs (MACs) in China, this study proposes a computable general equilibrium model for China's natural gas sector, which considers the monopoly market structure, price regulation, and import restrictions. Results show that deregulation of gas prices will lead to an effective decrease in China's MACs. China's MACs are insensitive to liberalisation of the market monopoly or gas import restrictions. When all three distortions are fully deregulated, China's MACs show an obvious upward trend. Finally, this study uses China's carbon trading policies as an example to propose policy implications under different scenarios of natural gas market reform.

Structural components of income growth: an application to the evolution of the Spanish economy, 1980-2014

Julio Sanchez Choliz, Rosa Duarte & Sofia Jimenez

Pages 151-166,
<https://doi.org/10.1080/09535314.2021.1974353>

Abstract: This paper analyses the structural and technical changes in Spain since the 1980s, using annual input–output tables. Specifically, a differential structural decomposition analysis (SDA) is applied to shifts in value-added, revealing eight different components and allowing the estimation of the impacts of technical change on the process of economic transformation on a sector-by-sector basis. We conclude that growth in the Spanish economy in recent decades was a mix of technological modernization and general economic expansion, although with some heterogeneity among sectors over time. High-technology services played a key role in modernization in the late 1980s and 1990s. In fact, the growth of High-technology, Medium-high-technology, Energy and Construction sectors accelerated through the 2008 crisis. Labour compensation and returns from capital followed different trends both during expansions and recessions, intensifying income inequality in Spain.

How large is the corporate tax base erosion and profit shifting? A general equilibrium approach

Maria T. Alvarez-Martinez, Salvador Barrios, Diego d’Andria, Maria Gesualdo, Gaetan Nicodeme & Jonathan Pycroft

Pages 167-198,
<https://doi.org/10.1080/09535314.2020.1865882>

Abstract: The paper uses the computable general equilibrium model CORTAX to analyse the extent of base erosion and profit shifting (BEPS) in the EU, Japan and the US. Our approach estimates the direct fiscal losses of BEPS and accounts for the second-round

effects, in particular on the cost of capital and corporate investment. Our central estimates show that the net corporate tax revenue losses in the EU are €36.0 billion per year (7.7% of CIT revenues), €24.0 billion in Japan and €100.8 billion in the US (in both cases representing 10.7% of corporate tax revenues). Our estimates are comparable in size to the global tax revenue losses found using newly reported statistics on foreign affiliates. Our macroeconomic results suggest that eliminating profit shifting would slightly reduce investment and GDP and rise corporate tax revenues, which would positively affect welfare.

Regional Science Policy and Practice

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A new planning instrument for urban development in Hungary: The modern cities program

Dávid Fekete

Pages: 740-758
<https://doi.org/10.1111/rsp3.12422>

Abstract: Urban development has gained increasing momentum in governmental development policies of the past few decades throughout the Central and Eastern European region. Analyzing a new instrument of Hungarian spatial policy (Modern Cities Program), the paper shows a new initiative of a Central and Eastern European country in the field of urban development. The analysis shows the role of the program in European and domestic regional development policy, its impact on financing infrastructural developments in Hungarian urban areas, and the structure of the projects of the Modern Cities Program. Due to its sizable budget and philosophy, the Modern Cities Program is clearly unrivaled by development programs of the past century of Hungarian regional development. The program with its philosophical grounding in the still not defunct French étatist, dirigiste tradition typical of the

1960s shows a number of similarities to the latter in terms of its applied tools and methods, such as the system of planning contracts, centralized financing, and decision-making. Conversely, there is no evidence to support the interpretation of the program as a novel urban development regime, as underlined by the absence of widespread social involvement in the conceptualization of development objectives. Economic development is at the forefront of the program, with industrial and economic development-related measures affecting each participating city.

Rural area sustainable development strategies on the basis of a cluster approach

Rasul Gusmanov, Eugene Stovba, Alfiya Kuznetsova, Iskander Gusmanov, Timur Taipov, Gulnara Muhametshina & Liana Akhmetova

Pages 778-795

<https://doi.org/10.1111/rsp3.12475>

Abstract: The study purpose is scientific and methodological substantiation of the effective use of cluster technologies in the strategic planning of sustainable development of rural territorial structures. The conceptual novelty of the research is that it provides an algorithm for clustering the socioeconomic development of rural areas by the critical target indicators based on the evaluating features (30 features) to make homogeneous clusters (four clusters). Also, the study established methodical approaches and guidelines for the use of cluster technologies to assess the prospects for sustainable development of the zone-level system of rural areas as complex socioeconomic structures. The research used general scientific methods such as a monographic method, system and cluster analysis techniques, strategic planning tools, a computational and constructive method, and abstract–logical and graphical methods. A cluster approach should be used when designing strategic plans and programs for the socioeconomic development of rural

municipalities. Cluster technologies should be used as a systematic tool for the development and implementation of a strategy for the sustainable development of rural areas. The key findings are based on the multidimensional grouping of rural areas and the formation of homogeneous clusters of rural areas at the zonal level.

Papers in Regional Science

Volume 101, Issue 4 (August 2022)

The role of regions in global value chains: an analysis for the European Union

Lucía Bolea, Rosa Duarte, Geoffrey J. D. Hewings, Sofía Jiménez & Julio Sánchez-Chóliz

Pages 771-794

<https://doi.org/10.1111/pirs.12674>

Abstract: While considerable attention has been directed to the national-level impacts of global value chains, far less attention has been focused on the way in which global production fragmentation has affected regional economies. Using some measures derived from a multiregional, multisectoral input–output model, this paper analyzes the position and share of EU regions in Global Value Chains (GVC). The spatial determinants of these two dimensions are explored using spatial econometric methods to capture the influence of neighboring regions on these outcomes. Empirically, the focus is on a set of NUTS2 European regions for the most recent year (2010) of the EUREGIO database. Our results confirm the hypothesis of spatial dependence between regions conditioning the engagement and position GVCs, suggesting that global production processes are influenced by regional and local factors. In particular, spatial spillover effects play a significant role conditioned by both geographical proximity and similarity of production structures. The results show that sharing certain

characteristics, some of them associated to their degree of proximity and the neighbouring situation of regions condition their specialization, participation and positioning in GVC, generating some important insights informative for the formulation of regional development policies.

Regional economic effects of the Ring Road project in the Greater Tokyo Area: A spatial CGE approach

Tomoki Ishikura & Fuga Yokoyama

Pages 811-837

<https://doi.org/10.1111/pirs.12677>

Abstract: We build a spatial computable general equilibrium model to assess the spatial economic impacts of the completion of ring road sections on the highway network system in the Greater Tokyo Area. Although every prefecture obtains positive benefits in terms of the prefectural sum, some municipalities experience negative benefits. The outputs of the service sector are less tradable than those of the primary and manufacturing sectors, and they increase for a broader area. The regions with net production increases in all sectors gain positive benefits. Meanwhile, several municipalities whose production decreases in all sectors experience welfare improvements.

Australasian Journal of Regional Studies

Vol. 27, No. 3

Growth dynamics and municipal population change in Australia, 1911-2016

George Wilkinson, Fiona Haslam McKenzie & Julian Bolleter

Pages 285-305

<https://search.informit.org/doi/abs/10.3316/infornit.414093485678555>

Abstract: In Australia empirical analyses of municipal populations are uncommon given its cities are usually conceived of as metropolitan areas. Widespread usage of metropolitan statistics is practical; however municipal

perspectives engage with the machinery of government and can reveal complementary insights about cities as institutions. To develop such insights, this study utilised a statistical model of Australian municipal populations to examine the drivers of growth from 1911 to 2016. Statistically significant long term positive relationships were identified between population and location specific features such as being coastal, eastern, and near to a seaport or state parliament. The constant and strong involvement of political factors is noteworthy given they are less recognised drivers of settlement. The findings of this paper, which partly elucidate drivers of population growth in Australia, have major implications for the federal government's plan to steer anticipated high population growth into regional centres.

Regional policy in Australia: can smart specialisation deliver vibrant and prosperous regional Australian communities?

Chloe Ward, Emma Shortis, Bruce Wilson & Anthony Hogan

Pages 306-330.

Abstract: Regional policy in Australia is fragmented, incoherent, and reactive. With responsibility sitting uneasily across Federal, State, and local governments, there is evidence of both duplication in responsibilities and significant gaps in the policy frameworks affecting country Australia. Over the past forty years, this has been exacerbated by the public policy which has focused on reducing costs and introducing markets to various aspects of public service provision across Australia, with lasting, negative effects on country communities. This article reviews the multiple challenges facing public regional policy in Australia and considers those challenges in light of international experience and policy development – particularly that led by the Organisation for Economic Cooperation and Development (OECD) and the subsequent development of 'Smart Specialisation Strategies' (S3) policy in the European Union (EU). This analysis suggests that over the last ten years, policy initiatives in the EU in particular have demonstrated the value of taking a more deliberate approach to regional policy. This observation has been tested in Australia through policy experimentation with

S3 in Gippsland in southeast Victoria. This case study suggests that the implementation of S3 might have a transformational effect in country Australia, but that S3 alone would not be enough to deliver vibrant and prosperous regional communities. In line with the gradual evolution of 'S3' in Europe to 'S4' – Smart Specialisation Strategies for Sustainability - there needs to be a more comprehensive framing of the relationship between city and country Australia, and a new social contract. In the context of the social and environmental challenges identified by country Australians themselves, socio-ecological innovation has emerged as a distinct imperative for this policy experimentation in the Australian context.

Local emergency co-production in Australia: The case of the New South Wales Rural Fire Service

Andrea Wallace & Brian Dollery

Pages 331-353.

<https://hdl.handle.net/1959.11/52449>

Abstract: Given the vast spatial area and low population density involved, together with the prevalence, frequency, and severity of bushfires, firefighting services in non-metropolitan areas of Australia have always depended heavily on the contribution of volunteer firefighters. Australian volunteer firefighting services represent an unusually high degree of collaboration between local volunteers and state and local governments. In this paper, we examine the nature and operation of the New South Wales (NSW) Rural Fire Service (RFS) through the analytical lens of the local co-production paradigm, to date a dimension of Australian volunteer firefighting that has remained largely unexplored in the scholarly literature. In particular, we examine the comparative advantages that the NSW RFS garners from its unique combination of government funding, professional staff, and volunteer firefighters. The paper concludes by considering the public policy implications of the analysis.

Assessing the labour market response due to covid-19 border restrictions: A case study of canterbury, New Zealand

David Dyason, Peter Fieger & John Rice

<https://hdl.handle.net/1959.11/51834>

Abstract: Labour markets respond to supply and demand changes caused by external shocks, including pandemics. In 2020 and 2021, the Coronavirus disease-2019 (COVID-19) pandemic caused a sudden reduction in labour demand in certain industries globally. As economies emerge into the post COVID-19 reality, a return of patterns caused by ongoing structural pressures return. In Canterbury, a region centred on Christchurch in New Zealand, these include migration demand pressures. This paper uses data from the Canterbury region, which is no stranger to disasters, as a case study. Two models are developed to estimate the future workforce requirements during the recovery period. A population growth model is utilised to test the regional labour market's limits, while an economic model estimates the required jobs for the regional economy. The paper finds that the lower economic activity resulting from COVID-19 has reduced the near-term employment demand. At the same time, labour force transition coupled with strict border controls reveals the need for labour force participation to adjust during the extended recovery period. Although short-term demand for skilled migration remains lower, those leaving the workforce will require replacing.

Do state borders affect commuting flows – A case study of the Queensland and New South Wales Border along the Tweed River

Bernard Trendle

<https://search.informit.org/doi/10.3316/informit.414410246189944>

Abstract: This paper explores the impact of State borders on commuting flows. Barriers exist when the commuting frequency at a cross-border link is below the expected level given other characteristics, such as origin and destination size and distance. Work here applies spatial interaction modelling techniques to census 2016 Journey to Work data for the SA2s of the Richmond-Tweed

region of New South Wales and the Gold Coast region of Queensland. The study is particularly relevant, with border closures the instrument of choice of State leaders hoping to restrict the spread of Corona Virus Disease-2019. The analysis uncovers evidence of barriers to cross border commutes using 2016 data. This finding is surprising, given that Australian States and Territories share the same language and culture, along with a constitution prohibiting trade barriers between the states.

How do policy makers deal with climate change? – The case study of the Maldives

Afshin Abolhasani

Pages 398-409.

<https://search.informit.org/doi/abs/10.3316/infornit.414447512132460>

Abstract: The Maldives lies in two rows of atolls in the Indian Ocean, just across the equator. It has a history of monarchical political systems built on undemocratic constitutional rules that have evolved over eight centuries (1153-1953) of recorded history. It established its first-ever democratic constitution in 2008. For politicians and environmentalists around the world, the Maldives is perhaps better known as islands drowning with the rising sea levels as a result of global warming. Since climate change is a cross-cutting development issue and affects every aspect of the Maldivian way of life and livelihoods, the Maldivian government attempted to address vulnerable sectors and defined several strategies that could prevent the country from the negative effects of climate change and sea level rise. In order to reach the mentioned goal, considering stakeholders' interaction is a key strategy in research and policy-making on climate change adaptation. Stakeholders are variously characterized as authorities, evaluators, watchdogs, local communities, etc. The government as a stakeholder and especially the president of the republic as the head of state who has a major role in decision-making on

climate change will be considered in this article.

ABOUT ANZRS AI

ANZRS AI Council Notes

Council has planned for the 2022 conference in Wagga Wagga at Charles Sturt University and improving access to and ranking of AJRS and the website. Conference participants gain access to support, encouragement, and relevant experience. AJRS offers an opportunity for publication. Council acknowledges Tony O'Malley's contributions to ANZRS AI and proposes his name as a lifetime member of ANZRS AI.

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