

Contents

FORWORD

Climate change adaptation: Is it later than we think?	1
Coronavirus outbreak: What should Australians do to prepare?	2
ANZRSI 44 th Annual Conference 2020	2

COMMENTARY

From the Regional Australia Institute	3
Regions Rising 2020 – work with us!	3
From the Productivity Commission	3
Australia’s productivity performance	3
Annual report on Government services: Housing	3
Regional Activities	4
Fighting Food Waste	4
Modifying bushfire behaviour	5
BiG Day In: Promoting STEM in regional Australia	5
Some of Australia’s smallest species could be lost to wildfires	6
From the Cockatoo Network	7
We’re not learning from bushfires – 2003 and 2020	7
From the Conversation	9
3 ways cities can prepare for climate emergencies	9
Australia’s housing system needs a shake-up	10
Findings from the Murrumbidgee Long Term Intervention Monitoring Program	10

CONFERENCES and STUDY OPPORTUNITIES

ANZRSI 2020 Conference	11
TCI Oceania Chapter conference	11
Regional Studies Blog	12
26 th Pacific Regional Science Conference (PRSCO)	12
2020 Churchill Fellowships	13

CURRENT RESEARCH ABSTRACTS

ANZRSI Abstract Alert	13
Regional Science Policy and Practice 12(1) February 2020	13
Papers in Regional Science 98(5) October 2019	13
Australasian Journal of Regional Studies 25(1) 2020	15

ABOUT ANZRSI

ANZRSI Council Notes	17
Roles of Council Members	17
ANZRSI Council 2020	17

Foreword

Climate change adaptation

On 24 February 2020 in [The Conversation](#), Will Steffen, of Australian National University, provided a clear and sobering view of the future climate of planet earth: a target of net zero emissions of carbon dioxide by 2050 ‘... is too little, too late.’ If the temperature is to remain below the target of 1.5% above the pre-industrial global average temperature it would be necessary to remove a total of 130 billion tonnes of carbon dioxide (about 11.5 billion tonnes of carbon dioxide per year) in 11 years.

The article is available here:

<https://theconversation.com/labors-climate-policy-is-too-little-too-late-we-must-run-faster-to-win-the-race-132263>

Ed: This article provides a sensible and difficult target requiring early action, rather than the outright resistance of some and the seemingly cautious support in government.

Coronavirus outbreak: What should Australians do to prepare?

From early March, a series of news and opinions are published in the world Medias and many of them are focusing on Australia's situations. For example, an analytic report by Melissa Davey on 2nd March in *The Guardian* reveals that Australia seems well prepared to handle the situations if an outbreak may happen across Australia. According to the honourable prime minister of Australia, the country was acting as though a pandemic had already been declared in order to be well prepared. Australia's state and territory health departments are thoroughly aware about the facts, and they have been particularly focused on making sure there would be enough medical personnel if there was a surge of hospital patients. This sort of planning is especially necessary for the regional Australia since many of the health professionals including doctors and nurses travel/fly to the regions for providing services.

Also a recent cartoonistic opinion published by First Dog on the Moon in *The Guardian* on 11th March 2020 reads interesting and enjoyable.

PS: [Coronavirus COVID-19 Global Statistics \(updated daily\)](#) by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University. You can see the Australia's situation by states within this spatial statistics map and then compare with other geographies.

These articles are available here:

<https://www.theguardian.com/world/2020/mar/02/what-happens-if-coronavirus-spreads-in-australia>

<https://www.theguardian.com/commentisfree/2020/mar/11/senator-ian-the-climate-denialist-potato-on-what-to-do-during-your-super-dull-government-imposed-isolation>

<https://www.theguardian.com/world/2020/feb/27/australia-declares-coronavirus-will-become-a-pandemic-as-it-extends-china-travel-ban>

ANZRSI 44th Annual Conference 2020

The 2020 ANZRSI Conference is planned to be held in Melbourne, 1-4 December.

There will be two Best Paper Awards at the conference, sponsored by the Bureau of Infrastructure, Transport and Regional Economics. The first award is for the Best Paper presented at the conference. The second award is for the Best Paper presented by a Student. There is a small cash grant given to the winners. Further details can be downloaded from the ANZRSI homepage, or by following the following links: [Best Conference Paper](#) and [Best Conference Paper by a Student](#).

Commentary

From Regional Australia Institute

Regions Rising 2020 – work with us!

The Regional Australia Institute's (RAI's) Regions Rising National Summit in Canberra is now ready to launch for the second year in May 2020!

It will bring together key regional stakeholders from academia, government, industry and community to network, share insights and thought leadership, and learn best practices for the future of regional Australia. It is a powerful platform to advocate, engage and influence a positive discussion to tackle real solutions for the issues we face to realise a better future for regional Australians.

Be prepared!! Ed.

From the Productivity Commission

Australia's productivity performance

Productivity growth has been one of the primary drivers of increasing living standards for Australians. The more goods and services a society can produce with a given set of inputs, the greater the material standard of living of that society.

Read the latest Productivity Insights here:

<https://www.pc.gov.au/research/ongoing/productivity-performance#dashboard>

Annual Report on Government Services (Australia): Housing

The annual Report on Government Services (RoGS) provides information on the equity, effectiveness and efficiency of government services in Australia.

The 2020 RoGS was progressively released on the following days:

- Thursday 23 January (Part A Approach to performance reporting, Part F Community services and Part G Housing and homelessness)
- Wednesday 29 January (Part C Justice and Part D Emergency management)
- Friday 31 January (Part E Health)
- Tuesday 4 February (Part B Child care, education and training).

This newsletter outlines Section G on Housing and Homelessness.

Readers of the *Economist* should refer to the Special Report on Housing published in the *Economist* of January 18th 2020. The two documents differ and the contrast is stark.

The *Economist* argues "...that since the second world war, governments across the rich world have made three big mistakes. They have made it too difficult to build the accommodation that their populations require; they have created unwise economic incentives for households to funnel more money into the housing market; and they have failed to design a regulatory infrastructure to constrain housing bubbles."

The Housing and Homelessness section of the Australian Annual Report on Government Services (Section G: Housing and Homelessness) takes a different path. See <https://www.pc.gov.au/research/ongoing/report-on-government-services/2020/housing-and-homelessness>

It argues that there are three main areas of government involvement in the housing and homelessness sector:

- **Social housing services:** Subsidised rental housing provided by not-for-profit, non-government or government organisations to assist people who are unable to access suitable accommodation through the private market.
- **Specialist homelessness services:** Direct assistance for people who are homeless or at risk of homelessness, including accommodation and other services.
- **Financial assistance (private housing)** — private rental assistance and home purchase assistance (not covered in the housing and homelessness chapters) as targeted payments to assist access to private housing and reduce demand on social housing and homelessness services.

Detailed information on the equity, effectiveness and efficiency of service provision and the achievement of outcomes for social housing and specialist homelessness service areas is contained in service-specific sections of the report.

Regional Activities

Fighting Food Waste

A thriving, efficient and sustainable food industry is central to Australia's economy, regional job security and prosperity, yet 40% of all the food we produce goes to waste.

A CRC to secure Australia's food future

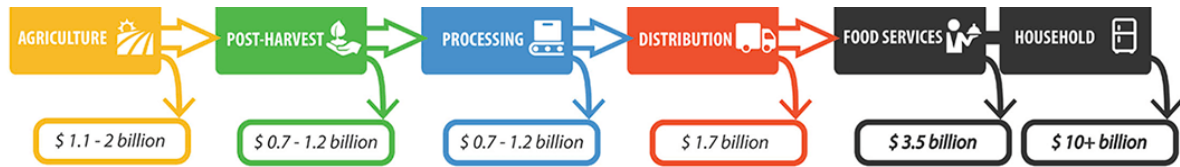
Food waste is a 20 billion dollar problem in Australia, and the Fight Food Waste Cooperative Research Centre (FFW CRC) is working with industry, researchers and community to reduce food waste across the supply chain, transform unavoidable waste into innovative high value co-products and engage with industry and consumers to create change. Food & Fibre Gippsland is an industry partner of the FFW CRC and some of our operations team met with fellow partners, participants, project managers and researchers this week at the inaugural Science Symposium where the results and findings for a number of active projects were presented. This circa World War 2 poster to fight food waste used throughout the day proves that the fight has been going on for a long time ! To find out more:

See the Fight Food Waste Cooperative Research Centre at <https://fightfoodwastecrc.com.au/>

The Fight Food Waste Cooperative Research Centre brings together industry, research and the community to capitalise on Australia's food waste opportunities. Winning this fight will save Australia \$20 billion per annum in food waste through increased industry profitability and reduced food insecurity, as well as enhancing Australia's reputation as a sustainable and trusted producer of premium food products.

Through our three research and development programs, we will REDUCE food waste across the supply chain, TRANSFORM unavoidable waste into innovative high-value co-products, and ENGAGE with industry and consumers to create change.

VALUE-CHAIN FOOD WASTE/LOSSES IN AUSTRALIA: \$20 BILLION PER ANNUM



Modifying Bush Fire Behavior:

Design of Regular Landscape Fuel Treatment Patterns for Modifying Fire Growth and Behavior

Mark A. Finney

ABSTRACT. Patterns of disconnected fuel treatment patches that overlap in the heading fire spread direction are theoretically effective in changing forward fire spread rate. The analysis presented here sought to find the unit shape and pattern for a given level of treatment that has the maximum effect on forward spread rate. This occurs when the treatment units cause the fire to spread through them at the same rate as it spreads around them. Simulations suggested that these treatment patterns reduce the spread rate or fireline intensity over much of the area burned, even outside the treatment units where the fire was forced to flank. The ideal patterns are theoretically scale independent, allowing for flexible application across heterogeneous landscapes. The topology of these patterns has implications for designing landscape-level fuel treatment patterns and for understanding spatial dynamics of fuel patterns across landscapes. FOR. SCI. 47(2):219–228.

Key Words: Fuels, fuel treatments, fire behavior, landscape patterns, fire modeling.

https://www.fs.fed.us/rm/pubs/rmrs_gtr292/2001_finney.pdf

BiG Day In: Promoting STEM education in regional Australia

Brief report by Azizur Rahman, SOCM Charles Sturt University

The **BiG Day In** is an IT careers conference designed by students for students. It is designed for both senior secondary school and university students interested in careers in ICT and technology. BiG Day In helps students obtain more information about ICT and technology careers, and hopefully helps them make a better informed decision about their future. BiG Day In events are held on University campuses around Australia (where possible) to give students an insight into what ‘university life’ might look like. The most recent event was held on 11th March 2020 at the Charles Sturt University Wagga Wagga campus. You may encouraged your community students to attend one of the BiG Day event regularly organised by the Australian Computer Society (ACS) and sponsored by various public and private organisations.

Students listen to 10 presentations throughout the day from organisations/speakers discussing subjects including career paths and opportunities, skills to thrive in the future, the big world of cyber security, collaboration and creativity, the future of technology and much more. Presenters include, Adobe, Australian Defence Force, Services Australia, WiseTech Global, Australian Film, Radio and Television School, Australian Government Digital Transformation Agency, Visual Dreaming, Business & Technology Integration – Avanade Australia, Buzzy Games and CSU ACS, Microsoft, Westpac, and a host of SME organisations to name just a few.

Key words: STEM careers, cyber security, matrix, digital transformation, collaborative game design, advancing human potential.

<https://www.thebigdayin.com.au/waggawagga2020>

Some of Australia's Smallest Species Could Be Lost to Wildfires

A very well written science report by Helen Sullivan was published in The New York Times on 9 January 2020 about some of the smallest species in Australia. Scientists worry about the fate of the nation's many remarkable, overlooked endemic creatures.



A velvet worm in Queensland, Australia. Like many endemic insect and arthropod species, velvet worms are highly local, making them vulnerable to sudden ecological changes like wildfires. [Source: Helen Sullivan, NYTimes.Com; Piotr Naskrecki/Minden Pictures]

According to an entomologist at the University of Sydney who is studying a species of velvet worm, it's an adorable, adorable animal. The velvet worms — of the phylum Onychophora, they are cousins of arthropods and somewhat resemble caterpillars — have a 'beautiful blue velvety texture' and 'cute little stubby antennae'. Velvet worms are predators; they have pairs of clawed legs down the length of their bodies, and they catch prey using glue shot from nozzles on their heads. Often, a single worm will catch the prey and others will then join the feast. Velvet worms are incredibly social; studying them provides clues to the evolution of social behavior in arthropods. And they give birth to live young, which remain with their parents for a period before shuffling off.

They also happen to live in one of the national parks in the Australian Capital Territory, an area badly affected by the recent wildfires. So far the fires have destroyed more than 40,000 square miles, threatening entire species, costing 26 human lives and exacting billions of dollars in damage.

A biologist at Western Sydney University, also similarly worried about — and unable to reach — study subjects the Australian alpine grasshopper, which live in Kosciuszko National Park, in New South Wales. National parks across the state are closed because of the fires.



The ferocious fighting Australian alpine grasshoppers studied by the biologist Kate Umbers, in Kosciuszko National Park in New South Wales. Credit...Kate Umbers

This science report has been considered a good range of barely known smallest species living in Australia which might be of interest to many readers.

<https://www.nytimes.com/2020/01/09/science/australia-fire-ecology-insects.html>

From the Cockatoo Network

By courtesy of Rod Brown, Cockatoo Network, Canberra ACT Australia

WE CONNECT THE DOTS, 02 – 62317261 or 0412 922559, apdcockatoo@iprimus.com.au

(Rod Brown is a former senior government official in the industry, regional development and construction fields. He now runs the Cockatoo Network and is a federally-registered lobbyist.)

We're not learning from bushfires (2003 and 2020)

Eighteen years ago many of us saw first-hand how catastrophic weather events created uncontrollable fires around Canberra. The disaster unfolding on the NSW south coast and in east Gippsland and South Australia are more of the same.

Canberra's 2003 bushfires

I write the 'Good Oil' column in the Local Government Focus newspaper, and in 2003 I commented on the Canberra's 2003 bushfires as follows.

"We live in Kambah, on the south west edge of Canberra, overlooking the Brindabella Ranges. The Murrumbidgee River is three kilometres down the road. The 18 January bushfire jumped the Murrumbidgee - the locomotive roar was frightening, as were the sparks and burning leaves cascading

around us. The fire was within 100 metres of our house as we evacuated with the family photos and the Labrador. As we found out later, the green fairways of the Murrumbidgee golf club saved our house, but the flames had hurtled onwards to the suburbs of Chapman, Duffy and Holder where there was no buffer.

Today there is utter devastation. The Chief Minister said we would have needed 800 fire trucks to save the city, and I believe him. As I write (21 January), the cost estimates are \$100 million, but this must surely climb. The national capital will never be quite the same again. Apart from the huge housing damage, virtually all Canberra's pine plantations have gone, together with the tourism infrastructure along our main waterway.

This bushfire, and its forerunner 12 months ago, are clear signs that the current environmental policy settings are unsustainable. There is a major message for any local government area that has forest adjoining urban areas. Come and have a look – you cannot fully comprehend it from TV footage.

The emotional and psychological impact has been enormous. It will pave the way for bold new steps and major land use changes. It has uncovered a great community spirit too. Canberra is a microcosm of the nation – we come from all parts of the country, and mostly look at things nationally – which probably makes Canberra unique. We cop criticism for lacking soul and living in an ivory tower. This is why we have been extremely touched by the arrival of fire brigades from right across NSW and even Queensland. The Victorians had their own problems, of course. And the PM's genuine show of concern for those affected means that we have forgiven him for taking the Kirribilli option. (The Lodge is an old fashioned dump anyway!)

The blame game has started. But the most sensible comment I've heard was from an old cockie on Kambah Pool Road. He had anticipated the fire, penned his 40 head of cattle where there was no grass, and the fire went around and over them! But he was cranky that the spot fires in the Brindabellas hadn't been nipped in the bud within hours, instead of days. He said "the 1952 fires taught us to get in quick – a handful of blokes could get in there and stop 'em before they get out of hand."

Recriminations are pointless without solutions. Given that fire safety is a local issue, could a group of Councils take the lead by suggesting to the Commonwealth and States that they buy three Eriksson Skycranes ('Elvis' style choppers), or refit RAAF Chinook helicopters? If they baulk, there is no reason why Local Government couldn't do it in tandem with a decent company, provided long term contracts with the fire authorities were in place. The need is to have sufficient capability to deploy resources anywhere at short notice. They should be based at one point to save on maintenance – perhaps at Albury, Nowra, Richmond, Sale or Canberra. The cost-benefit sums would be very impressive."

Fast Forward to 2020

Well I was obviously a little too optimistic back in 2003.

First, there have been no bold new steps in dealing with bushfires.

Secondly, major land use changes haven't happened - back-burning is not common, and the Victorian Government's banning on the logging of native forest must add the fuel loads.

Thirdly, three Elvis helicopters will not be enough to deal with the nationwide fires we now face on a continuing basis.

Interestingly, former fire chiefs warned last March that our firefighting capacity will fall short unless we buy our own fleet of water-bombing aircraft rather than borrowing them from overseas because monster blazes burning simultaneously across the globe are becoming the norm. However the federal government reportedly said that purchasing a national firefighting air fleet would be too expensive and current leasing arrangements are working. Well let's follow this through.

Upgrading our fire-fighting infrastructure

Say a dozen Elvis helicopters based at three or so locations around the nation, with the ability for all of them fly to hotspots at short notice and work in tandem with ground crews. They're about \$40 million each, so that's \$480 million plus running costs. In the scheme of things that's not a lot of money to address a real threat.

Indeed, late last year a Rear Admiral confided to Senate Estimates that, in addressing an imaginary threat, the twelve new French submarines will cost an eye-watering \$225 billion over their lifetime. The explanation was that the original \$50 billion construction cost has blown out, and then there's maintenance on top.

No one has since challenged that figure. What didn't get reported was that there were six Otway class subs, followed by six Oberon class subs. So why do we now need twelve subs? A Defence insider had earlier commented to me that subs are basically deterrents and you only need 2-3 in service to get that effect.

The wash-up is that \$225 billion is a lot of schools, hospitals, sealed roads, water pipelines, dams, port facilities and Elvis helicopters. And \$1 billion would have kept our car industry going. It simply proves that Defence is untouchable – and Abbott, Bomber Beazley and Rudd were all cut from the same cloth. And like a bunch of lemmings we accepted their wisdom.

Anyway, the likely way forward on the bushfires issue is a string of enquiries. However surely we must embolden the States to maintain a national consciousness and sense of urgency on the issue. If defence officials and defence contractors can get ridiculous results from Cabinet, let's encourage the States to develop a sensible proposal to COAG e.g. shared funding of considerably more fire-fighting aircraft, the training of military personnel, some financial support for volunteer firefighters. And let's not have any bullshit about now not being the time to discuss these things.

THE CONVERSATION

3 ways cities can prepare for climate emergencies

Thousands of people evacuated Calgary when its two rivers flooded in June 2013. THE CANADIAN PRESS/Jonathan Hayward

November 15, 2019 9.59am AEDT

Read the whole article here: <https://theconversation.com/3-ways-cities-can-prepare-for-climate-emergencies-125536>

Ryan Plummer : Professor, Environmental Sustainability Research Centre, Brock University, Canada

Darby McGrath : Adjunct professor, Environmental Sustainability Research Centre, Brock University, Canada

Jessica Blythe: Assistant Professor, Environmental Sustainability Research Centre, Brock University, Canada

Julia Baird: Assistant Professor and Canada Research Chair in Human Dimensions of Water Resources and Water Resilience, Brock University, Canada

Thousands of people evacuated Calgary when its two rivers flooded in June 2013. THE CANADIAN PRESS/Jonathan Hayward

This article suggests focussing on three key approaches:

- Embrace resilience thinking
- Adopt green infrastructure
- Cities must collaborate

Australia's housing system needs a big shake-up: here's how we can crack this

February 17, 2020 5.56am AEDT

Hal Pawson: Professor of Housing Research and Policy, and Associate Director, City Futures Research Centre, UNSW

Judith Yates: Honorary Associate Professor, School of Economics, University of Sydney

Vivienne Milligan: Honorary Professor – Housing Policy and Practice, City Futures Research Centre, UNSW

<https://theconversation.com/australias-housing-system-needs-a-big-shake-up-heres-how-we-can-crack-this-130291>

Findings from the Murrumbidgee Long Term Intervention Monitoring Program

Dr Damian Michael, Institute of Land, Water and Society, Charles Sturt University

A five-year ecological monitoring program in the Murrumbidgee catchment reveals multiple benefits of using water for the environment. The Murrumbidgee Long Term Intervention Monitoring Program (LTIM) was funded by the Commonwealth Environmental Water Office from 2014 to 2019. The project was delivered by Charles Sturt University (Institute for Land, Water and Society) in collaboration with the University of NSW, Riverina Local Land Services, and the former NSW Department of Primary Industries and NSW Office of Environment and Heritage.



Eastern Long neck turtle. Pic D. Michael (Connections, ILWS)

The main objectives of the program were to evaluate the response of riverine and wetland water quality, nutrients, stream metabolism and wetland biodiversity (e.g. microcrustaceans, fish, frogs, turtles and waterbirds) to cumulative environmental watering actions in the Murrumbidgee Selected Area, a region that encompassed river reaches and wetlands between Hay and Balranald in southern NSW.

<https://issuu.com/ilwscharlessturtuni/docs/connections-newsletter-56>

<https://www.environment.gov.au/water/cewo/catchment/murrumbidgee/monitoring>

CONFERENCES and STUDY OPPORTUNITIES

ANZRSAI 2020 Conference

The ANZRSAI 44th Annual Conference will be held in Melbourne, 1-4 December 2020. As noted above there will be two Best Paper Awards at the conference, sponsored by the Bureau of Infrastructure, Transport and Regional Economics. The first award is for the Best Paper presented at the conference. The second award is for the Best Paper presented by a Student. There is a small cash grant given to the winners. Get your papers ready.

TCI Oceania Chapter Conference

*The TCI Network is the global practitioners' network for competitiveness, clusters, and innovation.

Food Innovation Australia Limited (FIAL) is collaborating with TCI Network and Food & Fibre Gippsland to host the TCI Oceania Chapter Conference in Gippsland on the 28th May 2020, with the 29th of May offering some optional impact co-design workshops.

The theme centres on clustering to build positive futures, particularly in response to crisis and disruption.

Gippslanders from all over the region are invited and encouraged to come along and hear from a diverse line up of local and international experts and thought leaders.

A detailed agenda is coming soon, but pencil the date into your diary - we look forward to welcoming you to Lakes Entrance, East Gippsland on the 28th of May!

TCI Conference Guest Speakers:

- Merete Daniel Nielsen: TCI President
- Tracy Scott-Rimington: TCI Oceania Chair (email: tracysr@rdabrisbane.org.au)
- Eric J. McNulty: Harvard-affiliated writer, speaker and educator
- Edward Blakely: Professor Emeritus of City and Regional Planning
- Madeline Smith: Specialist in strategy and evaluation for clusters
- Ifor Ffowcs-Williams: CEO - Cluster Navigators Limited

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 <http://blog.regionalstudies.org/> Here are links to two recent topics:

[How monopoly tech makes left-behind places](#)

Authored by Simona Iammarino, Maryann Feldman, and Frederick Guy

<https://www.regionalstudies.org/news/how-monopoly-tech-makes-left-behind-places/>

[Brexit, Foreign Corporations and Early Regional Impacts](#)

Authored by Crispian Fuller Spotlight: An in depth look at key issues for regional studies License:

<https://regions.regionalstudies.org/ezone/article/brexit-foreign-corporations-and-early-regional-impacts/?doi=10.1080/13673882.2018.00001054>

26th Pacific Regional Science Conference (PRSCO)

The Western Regional Science Association (WRSA), Pacific Regional Science Conference Organization (PRSCO), and the Regional Science Association International (RSAI) are pleased to invite you to 59th Annual Meeting of the WRSA, held jointly with the 26th Pacific Conference of the RSAI.

The joint conference will be held March 18–21, 2020, at the Hilton Hawaiian Village in Waikiki, Hawaii.

2020 Churchill Fellowships

A Churchill Fellowship can offer you (as an Australian citizen) a life-changing opportunity to travel overseas to investigate a topic or an issue that you are passionate about. It is for anyone who has exhausted alternatives within Australia and would like to see what other countries are doing successfully in a similar space to inspire new ideas, innovation, and excellence.

The high international regard for Churchill Fellowships provides a pathway for Churchill Fellows to access expertise from around the world that is not typically available to everyone, expanding your knowledge and experience for the benefit of Australian society.

There is a high level of visibility and credibility associated with being a Churchill Fellow. It's a good opportunity to try. **Applications close 11.59pm AEST Thursday 30 April 2020**

<https://www.churchilltrust.com.au/application-process/how-to-apply/>

CURRENT RESEARCH ABSTRACTS

ANZRSAL Abstract Alert

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

Regional Science Policy and Practice

Volume 12, Issue 1 (February 2020)

The territorial fiscal gap in Columbia

Jaime Bonet-Morón, Jhorland Ayala-Garcia
Pages 25-42

First published: 23 July 2019

Abstract: This paper presents an estimation of expenditure needs and fiscal capacity of Colombia's municipalities and departments in 2014. We use standard *per capita* norms to estimate the spending needs and data envelopment analysis for the local fiscal capacity. The results show that: (i) there are high horizontal fiscal disparities in Colombia, with greater incidence in municipalities than in departments; (ii) these disparities favour more developed territories; and (iii) there is evidence of a centre-periphery pattern in the horizontal fiscal disparities, causing central regions of the country to have a lower imbalance between expenditure needs and fiscal capacity.

Regional funding and regional inequalities in the Brazilian Northeast

Luis Carlos De Santana Ribeiro, Renata De Melo Caldas, Kênia Barriero De Souza, Débora Freire Cardoso, Edison Paulo Domingues

First published: 05 August 2019

<https://doi.org/10.1111/rsp3.12230>

Pages 43-59

Abstract: This paper investigates the impacts of a very important credit policy in Brazil called Northeast Financing Constitutional Fund (FNE in Portuguese) using a dynamic and inter-regional computable general equilibrium model calibrated for 2013. Simulations were carried out based on FNE investment data for 2014 and 2015, allowing for isolation of the effect of the funding on macro regions. Results indicate that FNE expenditures between 2014 and 2015 would increase Northeast GDP by 3.51% by 2025. Estimates show a 0.46% decrease in regional inequality among Northeastern states measured by regional GINI. Results are compatible with the objectives of the fund, although the total effects, mainly on regional inequality, are quite modest.

Papers in Regional Science

Japanese Contributions to Regional Science

Ho Yeon Kim, Philip McCann

First published: 26 February 2020

<https://doi.org/10.1111/pirs.12522>

Abstract: Given the field's interdisciplinary nature, regional scientists come with a wide spectrum of backgrounds. In this article, we study the contributions to regional science made by scholars from Japan. First, we briefly examine how Japanese regional scientists came to develop a keen sense toward urban problems. Second, we identify the most influential authors and papers via a citation analysis. The results indicate that scholarly outputs in regional science are reaching a wider audience beyond scientists, while maintaining the order of impact among them. Lastly, we focus on the new economic geography where Japanese scholars have made a significant contribution.

[Environmental Engel curves in Italy: A spatial econometric investigation](#)

Marco Baudino

First Published: 24 February 2020

<https://doi.org/10.1111/pirs.12521>

Abstract: This paper adopts a spatial econometric methodology to investigate the relationship between income and direct household emissions in Italy, as posited by the environmental Engle curve (EEC). The spatial approach is motivated by an expanding strand of studies which have detected significant spatial interactions in household polluting activities responsible for the generation of direct household emissions. Our results suggest the presence of significant spatial dependence for household emissions emerging among regions. At the same time, increases in the level of income do not seem to be coupled with a higher demand for environmental quality by Italian households.

[Inequality and city size: an analysis for OECD functional urban areas](#)

David Castells-Quintana, Vicente Royuela, Paolo Veneri

First Published: 20 February 2020

<https://doi.org/10.1111/pirs.12520>

Abstract: As cities grow, both the productivity of their inhabitants and the income distribution among them is expected to change. While the empirical literature has widely shown how productivity (and income) changes with city size, the empirical evidence on the effects on income inequality remains very limited. The few papers that study the relationship between city size and city-level inequality focus on a single country and do not provide international comparative evidence. In this paper, we study the relationship between city size and income inequality at city level for a sample of 153 Functional Urban Areas (FUAs) across 11 OECD countries.

[The Influence of Local Development on the Impact of Natural Disasters in Northeast Brazil: The Case of Droughts and Floods in the State of Ceará](#)

Victor Hugo de Oliveira, João Mário S. de França, Francisco Mário V. Martins

First published: 18 February 2020

<https://doi.org/10.1111/pirs.12519>

Abstract: Using data from the Damage Assessment Reports from the Civil Defence, the current study investigates the relationship between the damages caused by natural disasters and local development at the municipality level in Ceará state, Brazil. The results show that a better urban water supply infrastructure, a lower population density, and a higher proportion of own revenues relative to total revenues are [all] associated with smaller disaster damages. However, economic development in terms of GDP per capita exhibits a convex relationship with the impact of natural disasters across municipalities, reflecting the potential decreasing returns of preventive investments due to the highly hazardous environment that involves municipalities.

[Is Gibrat's law robust when cities interact each other?](#)

Vanessa Grüdtner, André M. Marques

First Published: 10 February 2020

<https://doi.org/10.1111/pirs.12518>

Abstract: Gibrat's law asserts that the growth of a city is independent of its initial size, but the populations of cities display a pattern of systematic agglomeration. This pattern may emerge because some cities are more attractive than others. We analyse the relationship between the growth and size of 1,188 cities in the South Region of Brazil using municipal data between 2000 and 2010. The selected model is the spatial Durbin model (SDM) that controls for temporal and spatial dependence, relevant omitted variables, economic factors, local amenities and externalities. The results indicate that Gibrat's law is not robust when cities interact.

[Australasian Journal of Regional Studies](#)

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[Economic Restructuring and the Polarisation of the workforce: A regional perspective](#)

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Abstract: Closely associated with rising non-standard forms of work, under-employment and a lack of opportunity for young and new labour market entrants, workforce polarisation is an increasingly pervasive feature of economically restructuring regions. Recent scholarship regarding the causes of workforce polarisation has diverged, particularly since the global financial crisis (GFC). While most explanations for job polarisation rest with technological advancements, growing interregional economic divergence within nations suggests that the extent of job

polarisation is pre-determined by historical socio-economic and industry structures. Other perspectives include the rise of the services sector and changes to the social organisation of care. Efforts to understand and project changes to the occupational distribution need a localised, regional lens. This article presents the evidence and discusses the implications of heightened job polarisation for Tasmania, Australia, pre and post GFC. Marked within skill level and occupation group changes, including increased spare capacity within the workforce, present considerable challenges for policy-makers.

KEY WORDS: Job polarisation; economic restructuring; technological change; globalisation; regional divergence.

[Regional spread of high-growth enterprises in New Zealand](#)

Robert T. Hamilton and Sara Satterthwaite

Abstract: High-growth enterprises are ascribed a key role in regional development and yet are highly concentrated in core regions. Enterprise-level analysis understates the spread of such firms into peripheral regions. Spatial analysis at the establishment-level reveals the regional spread of high-growth enterprises across New Zealand. The study covers over 28 000 establishments created by the 2005, 2011, and 2014 cohorts of high-growth enterprises, dichotomising regional differences between actual and expected numbers of establishments into industry structure and local regional effects. The development of high-growth enterprises merely exacerbates inter-regional differences. Urban centres dominate in terms of their shares of high-growth enterprises and establishments, although two of the peripheral regions do attract higher than expected numbers of such establishments. While the regional spread of high-growth establishments is greater than that of high-growth enterprises, this will not redress the chronic regional disparities within New Zealand.

[Collaboration and Co-Creation in regional and remote education: Case studies from initial teacher education programs](#)

Geoff Woolcott, Robert Whannell, Chris Wines, Linda Pfeiffer, Margaret Marshman and Linda Galligan

Abstract: Education policies and practices developed for urban populations are not always effective when implemented in regional and remote locations. Despite government policy initiatives that may provide for collaboration across communities, a singular issue is that a diversity of solutions may be required rather than a 'one size fits all' approach. This article presents a potential solution to this problem through engaging collaboration and co-creation to optimise educational opportunities in initial teacher education in Australia. Qualitative analysis of a collaborative and co-created process of enhancement, lesson development and reflection brings together the every-day problem-solving processes used by preservice teachers and classroom students with those used by research scientists and community experts. A consequence of such a process that benefits regional and remote communities is the development of collaborative networks founded in co-creation of educational opportunities and based on daily life in local communities.

[Impact of economic and social infrastructure on income inequality - Evidence from Indian states](#)

Biswa Swarup Misra

Abstract: This paper discusses how infrastructure impacts inter-district inequality in India using data for 12 states, that were categorised as leading and lagging for the period 2001-2011. Income data from 388 districts is used to compute state wise Gini coefficients to analyse how infrastructure impacts inequality. Unlike the existing literature which considers either quantity or

quality of infrastructure, this study uses an alternate perspective that considers both 'availability' and 'usage' of infrastructure to study how the economic and social variants of infrastructure impact output and inequality in Indian states. The paper finds that only economic infrastructure has a sobering impact on inter-district income inequality in both the leading and lagging states. Social infrastructure was observed to accentuate income inequality in the lagging states. The worsening of social infrastructure in the backwards districts of both categories of states and more prominently in the lagging ones, appears to explain the findings.

[An affective explanation of climate beliefs: Evidence from dairy farmers in New Zealand](#)

Daniel Tisch and Natasha Hamilton-Hart

Abstract: How do farmers form and sustain their beliefs about climate as it affects their farms and communities? We draw from two areas of scholarship to provide an explanation of how farmers in a particular industry context form their beliefs about climate change. First, we build on research in psychology that shows how values, political orientations and motivated reasoning are important factors in group identity. Second, we draw from scholarship on group identity and belief formation to suggest that farmers prefer to learn from trusted insiders when forming beliefs about the climate. Based on qualitative interviews with New Zealand dairy farmers, we used thematic analysis of the social and emotive process of group identification associated with farmer beliefs about weather patterns and climate. We discuss the implications for communication among policymakers, regulators and researchers in the agricultural sector with an agenda that addresses farmer responses to climate change by enlisting those with insider status.

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