

**REGIONAL AUSTRALIA INSTITUTE  
SUBMISSION TO THE  
ECONOMICS REFERENCES COMMITTEE**

**INQUIRY INTO  
THE AUSTRALIAN MANUFACTURING INDUSTRY**

**September 2021**



## The Regional Australia Institute

Independent and informed by both research and ongoing dialogue with the community, the Regional Australia Institute (RAI) develops policy and advocates for change to build a stronger economy and better quality of life in regional Australia – for the benefit of all Australians. The RAI was established with support from the Australian Government.

## Disclaimer and copyright

This submission draws on RAI's research and findings from its work across Australia. It is intended to assist the Joint Standing Committee to have an overview of some of the issues in relation to skilled migration in regional Australia. No responsibility is accepted by RAI Limited, its Board or its funders for the accuracy of the advice provided or for the quality of advice or decisions made by others based on the information presented in this publication.

## Reference

This submission can be referenced as:

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## ABOUT THE REGIONAL AUSTRALIA INSTITUTE

The Regional Australia Institute (RAI) is a not-for-profit think tank devoted to the prosperity and wellbeing of regional Australia. Our robust research and community engagement enables us to develop better policy outcomes to transform Australia's future.

Since its inception in 2011 the RAI has worked in partnership with government, academia, and community and industry organisations to develop a deep portfolio of research and policy work. This work and these associated relationships have successfully positioned the RAI at the forefront of the regional Australia conversation.

- We gather and analyse the best information we can find on regions and make this accessible to people around the country.
- We work with regional leaders around the nation to understand their challenges and help them identify opportunities for future development that they can implement.
- We also talk to governments at all levels and provide independent, evidence-based advice about the options they have to make regions even greater.

In addition to a significant national research agenda, the RAI also has a strong track record of working directly with regional communities right across Australia to help identify opportunities and provide sound, tailored and solutions for economic growth.

RAI's research and analysis has been proven to help regional leaders create a unified, achievable and relevant set of priorities and actions to benefit their region. Workforce, skills and labour issues have been central to many of our projects with regional organisations.

RAI adds value by blending economic analysis with local input to provide regional leaders with the information needed to agree on actions that will have the greatest impact.

This submission focuses on parts b, c and d of the Terms of Reference, with a particular emphasis on the role of regional Australia in growing manufacturing industries.

## RECOMMENDATIONS

**Rebuild regional learning systems** by funding the return of regional VET and tertiary learning ability in regional Australia – as proposed by the National Regional, Rural and Remote Education Strategy. The seven recommendations in the Strategy were accepted by then Education Minister Tehan in 2019.

### **Support regional innovation systems:**

- Target policy and investment to the regions where growth in the four industries really matters for job generation (i.e.: the specialised regions, not all regions).
- Tailor policy approaches based on the region's past employment growth where:
- the highest investment priority should be to catalyse new economic activities in regions where local conditions are driving growth. In these regions, government intervention may build on local strengths to generate business and employment opportunities, and
- the highest investment priority should be removing or reducing barriers to growth in regions which are lagging behind state and industry trends. In these regions, government intervention may support these regions in realising their full employment potential.
- Assess workforce and skill availability in the specialised regions and act to ensure potential new jobs can be filled, for example through regional learning systems or regional migration strategies as outlined in the RAI's The Future of Jobs Report.
- Identify the location and make-up of innovative regional businesses and competitive regional business clusters
- Review the roles that public and private investment play in regional innovation systems
- Determine what catalyses an effective regional innovation system, and what is the role of large (anchor) firms
- Identify the levers that governments have to influence regional productivity and innovation, and the role and mix of incentives
- Develop and trial locally implementable approaches to fostering innovation in regional small businesses

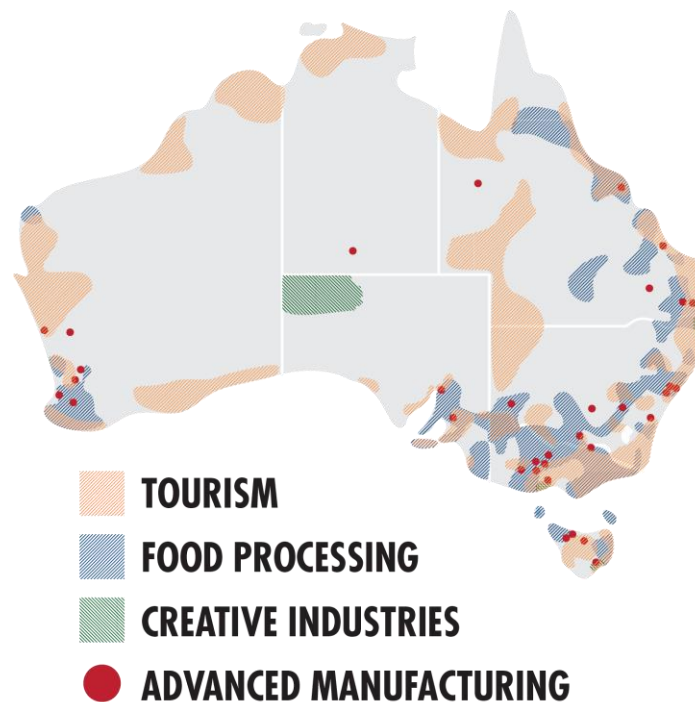
### **Support further research** into the drivers of regional innovation:

1. **Update research:** In 2021-22 regional innovation and productivity is one of the two main research priorities for the RAI and government support will enable the RAI to update the RAI's 2019 research into Advanced Manufacturing and Food Processing as two industry sectors with good growth prospects in regional Australia.
2. **Apply research findings:** Support is also needed to underpin RAI research to understand the pros and cons of industrial diversification and specialisation as economic development pathways for regional economies. RAI work in 2020 investigated the types of regional economies where specialisation had provided the biggest benefits, and others where diversification had provided the biggest benefits. This framework can be used to engage regional selected council/regional economic development organisations to integrate skills, labour and housing to make technology improvements work efficiently in regions. The RAI contribution will help participating organisations map out an integrated approach to leveraging technology change for broader economic returns.
3. **Support business cluster facilitation in regional advanced manufacturing:** Support the RAI to develop, trial and evaluate a regional small business cluster facilitation program. Once piloted, the RAI will deliver this program in priority regions, bringing a practical entrepreneurial approach to disseminating the benefits across regional business networks.

## OVERVIEW: MANUFACTURING INDUSTRY IN REGIONAL AUSTRALIA:

Research by the RAI in 2019<sup>1</sup> looked at the distribution of specialised capacity in four industries across Australia, including Food processing and Advanced Manufacturing.

The research identifies regions that specialised in these industries (Map 1), and where jobs were critical to the local economy, and how these have performed over time. Specialised regions are those where there is a high proportion of local jobs in the industry compared to the national average for a place of that size. OECD experience shows that business-led specialisation approaches are effective in supporting regions to maintain their competitiveness in national and global contexts<sup>i</sup>.



Map 1: The regions which specialise in the food processing, tourism, advanced manufacturing and creative industries, 2016

<sup>1</sup> *Regional Growth Prospects*, <http://www.regionalaustralia.org.au/home/growth-prospects-for-regional-australia-rai-reveals-hotspots/>

This Report has shown that specialised regions have not performed equally over time, with local conditions in some regions helping to drive employment growth, while local condition in others may be constraining it.

Local knowledge and deeper analysis is needed to identify what is occurring locally to drive or constrain job growth. Some factors could include the impacts of a new business or business expansion, variation of high human capital in the region, government or community programs and/or natural assets in the region.

The key industry findings from this work are:

### **FOOD PROCESSING**

- Food processing, or the value add component of agribusiness, is a more likely prospect for employment growth than food production. Occupations in raw food production have been decreasing alongside improved technologies and other efficiencies that reduce the need for human labour. Food processing jobs have now surpassed the number of food production jobs nationally.
- Food processing employment is more concentrated geographically than the broader agriculture industry. There are very distinct areas where food processing really matters and could be a source of growth in the future. Largely these regions are in the south west corner of Western Australia, surrounding Adelaide, throughout much of Victoria, inland along the New South Wales east coast, north western Tasmania and around the Queensland towns of Cairns, Townsville and Rockhampton.
- Many of these areas are geographically close and could be approached with cross boundary collaborations in investment, workforce development and other strategies.
- There is potential for locally led migration initiatives to help regions secure the workforce needed for new or expanding food processing businesses.

### **ADVANCED MANUFACTURING**

- Advanced manufacturing is a small employer in regional areas however jobs in the industry are highly concentrated.
- Only a very small number of regions specialise in advanced manufacturing and there is no strong geographic congregation of these. For these reasons, a national industry strategy is of little benefit and efforts should instead be focused on the handful of places where the industry really matters for local employment.
- In the small number of regions which specialise in advanced manufacturing, it is often one or a few businesses which are responsible for the majority of employment in the industry. These sorts of regional businesses could be a focus for employment growth efforts.

- Advanced manufacturing regions produce niche products and employ people with very niche skills. These are competitive on the international market because so few companies globally can fill the niche. There is an opportunity here to leverage these skills and have greater involvement in global markets.
- Advanced manufacturing often builds on existing primary industries and its fortunes are tied to these industries, such as agriculture and mining, who purchase machinery.

## GROWTH CONSTRAINTS

National productivity growth in Australia has been very slow in recent years, and this has underpinned the slow growth in real per capita incomes in Australia. Between 2009 and 2019 Australia's per capita income slipped from 10th to 13th amongst OECD countries.

The RAI analysed regional productivity trends in its 2015 report *The Economic Contribution of Regions to Australia's Prosperity*, and found that regional Australia led the nation in productivity in industries like mining, primary industries, construction, logistics, manufacturing and health care.

There is a rich foundation of productivity and innovation research in Europe, the US and Canada, through the OECD and from Australia. Most jurisdictions in Australia have policies and programs aimed at fostering productivity and innovation in business, with many of these policies and programs having some regional business elements as well.

Most Australian jurisdictions have recent reviews and current programs relating to regional innovation, including the Queensland Regional Manufacturing Hubs, the NSW Regional Innovation Strategy, and the WA Harvard Complexity study and its follow up. Nationally the Commonwealth Parliament held a Senate Inquiry into Australia's Innovation System in 2015, announced the National Innovation and Science Agenda in 2016, announced *Prosperity Through Innovation* in 2017 and now is delivering Industry Growth Centres. Current data sources include the Australian Innovation System Monitor, the Innovation Map with its university-linked and independent precincts, and the RAI's regional innovation index

Labour productivity helps international competitiveness, but in regions is often experienced as fewer jobs in industries with increasing output. Increasing capital intensity in primary and extractive industries like agriculture, forestry fishing and mining have seen steady reductions in the number of workers needed to produce a unit of output.

So innovation is also needed to expand the economic base and create new jobs in new industries. There is a skills aspect to this with the increasing professionalization of jobs created by regional employers. And there is a net economic impact aspect as well as the RAI has heard from many regional employers that their underlying concerns about attracting and retaining the skilled workers is holding back the investment and expansion plans for their own businesses.

Innovation plays an important role in regional economies. A well-developed regional innovation ecosystem will provide a diversity of occupations for local people – everything from entry level and part time work through to high income professional roles. This helps lift per capita incomes and increase regional spending, which will in turn stimulate business formation and growth in servicing that increasing spending.



## SKILLS NEEDS

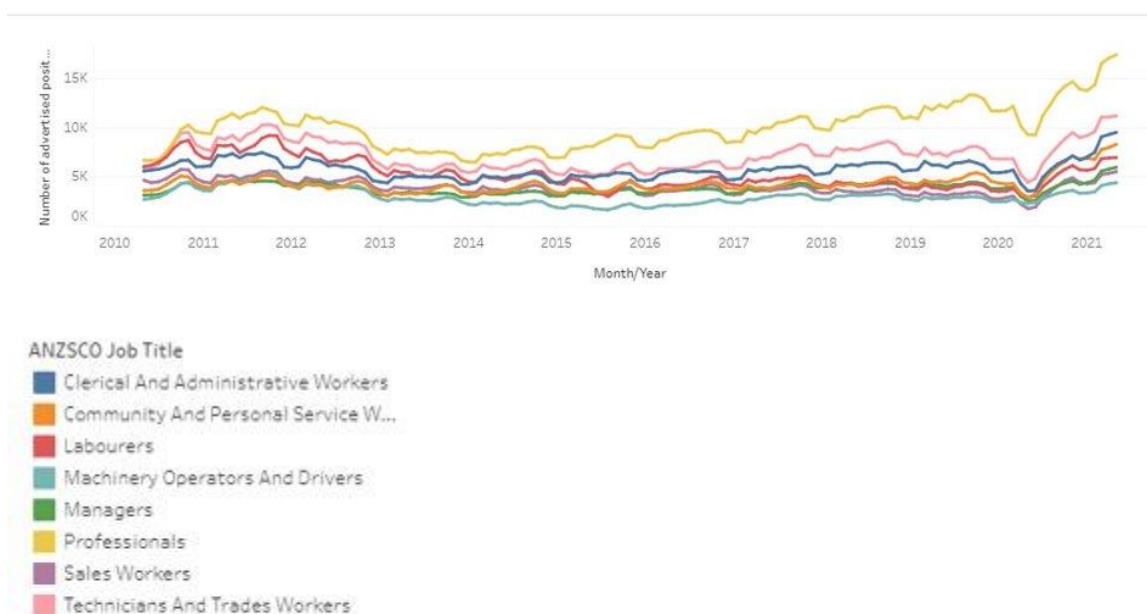
Following a slight dip in June, regional job vacancies rose by 3 per cent in July 2021 to reach a new record of **69,700 jobs** – the previous record being 69,300 vacancies in May this year, well above the peak of hiring during the mining boom a decade ago. Regional employers have maintained their high hiring expectations and labour shortages are holding back business growth in regional Australia.

Driving record job vacancies is demand for skilled labour. Demand for professionals accounted for the largest share – around one quarter – of all regional job vacancies in 2021 thus far. Technical and trades workers were the next most sort-after type of worker, accounting for 16 per cent of all regional job vacancies thus far in 2021.

The July job vacancies precede any effects of the recent lockdown across regional New South Wales. Thus far in 2021 regional NSW has accounted for nearly one third of national regional job vacancies. Any effects of the lockdown on regional NSW will weigh on the overall national profile of regional job vacancies.

Greater Sydney's lockdown – starting at the end of June – appears to already be having some effect on demand for labour in regional NSW. That is, regional NSW recorded the weakest growth in job vacancies of all the jurisdictions, up by 0.8 per cent in July. This compares with an increase of 3.5 per cent in regional Victoria, 4.5 per cent in regional Queensland, 7.3 per cent in regional South Australia and 6.1 per cent in regional Western Australia.

What these figures also indicate however, is that across the rest of the country's regional areas, demand for labour continues to grow, and that restrictions on labour mobility are exacerbating labour shortages .



Advertising for lower skilled jobs, especially Labourers, has fallen away, and job vacancies now are dominated by skilled trades (especially automotive, electrical and construction trades) and professionals (health, education, business services, engineers). Looking over the longer term, since the mining boom peaked in early 2012, the gap in vacancies between professionals and trades seems to be gradually widening.

The challenge for regional employers is that most regions are looking for similar skill sets. This is good for mobile people with the skills, but bad for 'less attractive' regions as population growth has been quite low in many inland places as it has been concentrated in and around larger centres and the coast. COVID restrictions have revealed the reliance on short and long term labour mobility for skilled workers in regional Australia. There is currently intense competition amongst employers across the country for the right people, so regional self reliance for skills needs will become an increasing priority. In this way, regional self reliance mirrors the national self-reliance reflected in policies supporting the re-shoring of Australian manufacturing – also given a boost by COVID border closures.

Closing regional vacancy gaps and ensuring manufacturers can access the skilled workers they need requires:

1. Rebuilding regional learning systems to enable better matching of locals to required skills; and
2. Better matching of newcomers to required skills.

The long term economic benefit will come from local interventions which will enable more regional residents to take on the higher wage and higher skilled jobs that are in demand – many of these in the manufacturing industries.

Improving regional human capital will lift real incomes and reduce welfare dependency – with consequent significant positive impacts on the national budget bottom line.

## MORE EFFECTIVE REGIONAL INNOVATION ECOSYSTEMS

The Regional Australia Institute updated the [In]Sight Innovation Index in 2017<sup>2</sup>, taking a big step towards better understanding regional innovation. The update combines and contrasts traditional measures of innovation focused on R&D and Science, with a new approach that seeks to measure the commercial innovation environment in a region - the region's Business Dynamo.

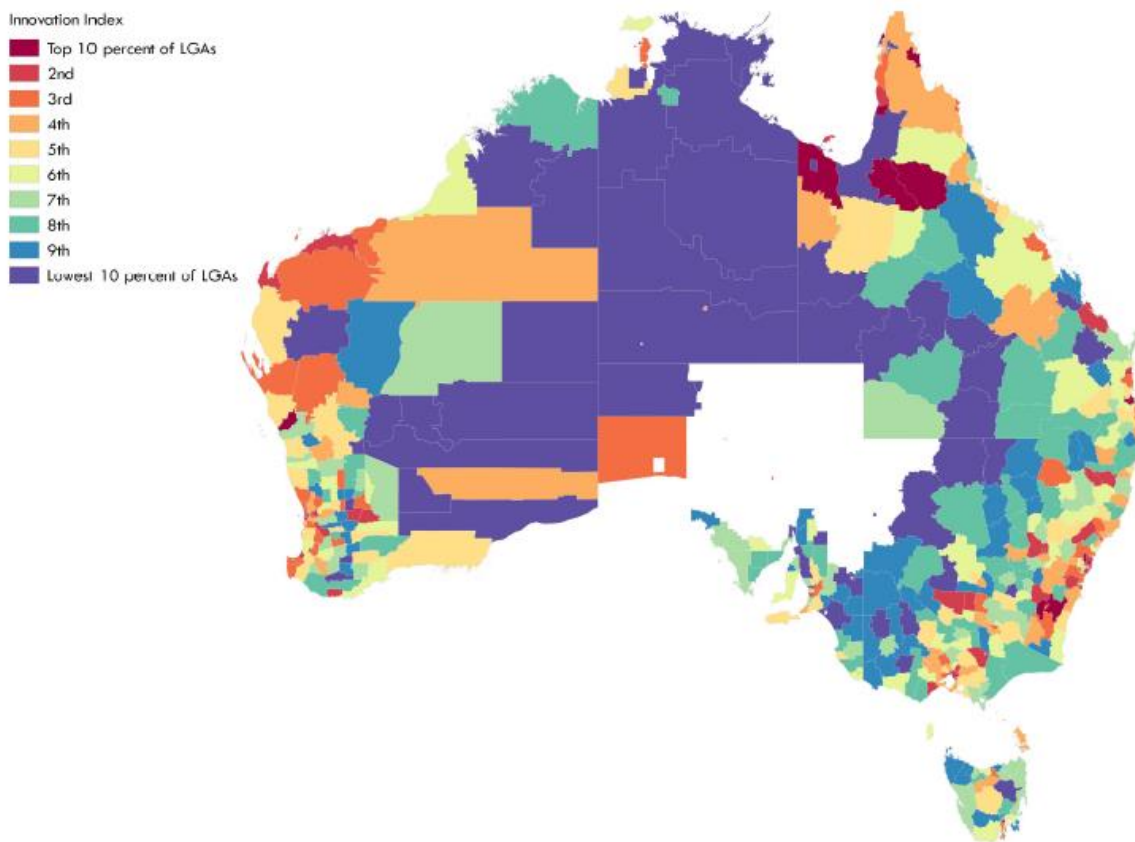
Across regional Australia there is an emergence of start-ups, business accelerators, co-working spaces and entrepreneurial hot spots. Some of this activity is connected with our traditional Research and Development (R&D) system, but much of it is occurring in areas which are less connected to traditional R&D institutions.

The role of R&D is also changing as innovators increasingly use digital technology to bring their ideas to market without relying on the research process. A university or other R&D presence remains a real innovation asset for any community, but in a modern economy it is the ecosystem around that capability – the region's entrepreneurs, business start-ups and the strength of their connections to the R&D presence – that will drive the economic outcomes from innovation.

This transition has been evident for a while but to date there's been no way of consistently measuring this new innovative capacity in regions around Australia. Examining Australia's national picture of innovation through this lens reveals a much more diverse picture than previous work has suggested in regions (map below).

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<sup>2</sup> <http://www.regionalaustralia.org.au/home/wp-content/uploads/2016/06/Innovation-In-Regional-Australia-Spreading-the-Ideas-Boom-1.pdf>



**Figure 1: National [In]Sight - Innovation Map (LGAs – high score (red) better and low score (blue) weaker)**

It remains true that big cities are the nation's key innovation assets and only 26 regional local government areas (LGAs) have a registered R&D institution. This is where the investment flows to, and R&D strength is concentrated in these areas.

But more than 150 regional areas have higher than average rates of innovative capacity that provide a foundation for spreading the 'Ideas Boom'.

Knowledge-intensive business services (KIBS) – from legal and accounting, to design and marketing – are one indicator of a rich and innovative local business network and a key measure of emerging innovation capacity in many of these regions used by [In]Sight.

Regional places including Bunbury (WA), Byron (NSW), Gladstone (Qld), Wodonga (Vic), Mt Barker (SA) and Launceston (Tas) all show emerging capability in KIBS.

Places like Darwin (NT), Gold Coast and Gladstone (Qld) rank highly in terms of this rich local business network, and also have high rates of business start-ups.

Places like Palerang (NSW/ACT), Byron (NSW) and Surf Coast (Vic) combine the rich local business network with a high rate of trademark applications suggesting existing businesses in these places are innovating successfully.

The concerning contrast to this great news is Australia's old industrial centres. These areas have lost many businesses and jobs over the last 20 years. They are also among the worst performers in terms of innovation in regional Australia.

Places like Playford, Wakefield and Port Pirie (SA), Glenorchy (Tas), Broken Hill (NSW) and Mildura (Vic) are all near the bottom of the innovation rankings. Despite many years of concerted effort, these places are not showing the innovation and entrepreneurship ingredients that can help them transition to a new economic base.

This suggests we need a different approach to this transition. One ray of sunshine in this group is Greater Geelong (Vic) which is fairing much better with an overall rank above the middle at 234. Geelong and other areas in regional Australia that are doing well may offer the lessons other places need to successfully transition from an old economy base to an innovation driven future.

Overall, this new approach to measuring innovation in regions shows that while there is more work to do, our regional innovation systems are much more diverse and geographically spread than we have traditionally thought.

Retaining and growing our national and regional strength in R&D remains important, but for most regions the opportunity is in the Business Dynamo. Areas that can build this commercial innovation capability will be positioned to thrive in Australia's new economy.

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