24 Months In
Exploring the impact of the Covid-19 pandemic on Australia and New Zealand’s research workforces

Australia and New Zealand’s research workforces have gone through a tough 24 months. Since the Covid-19 pandemic hit in early 2020, we’ve seen significant academic job losses, major changes to teaching practices, and a highly uncertain workforce horizon.

PostAc has been tracking the demand for research workforce both inside and outside of the higher education sector.

This update presents data on the research labour market in both Australia and New Zealand.

By better understanding research labour force trends, we hope that students, educators and key decision makers can better plan for the future, and work towards a better fit between the higher education sector and other employers of highly skilled researchers.

Australia
Inside the higher education sector

Comparing academic job advertisements from 2019, 2020 and 2021 reveals both the impact of the pandemic, and the recovery. In particular, after an average of ~1000 academic roles were advertised in the Australian Higher Education sector each month in 2019, the academic job market bottomed out at just ~290 roles advertised in April 2020. Happily, the contraction proved short lived. As Figure 1 shows, 2021 academic job postings have reached above 2019 levels, peaking at ~1400 jobs in October 2021.

Outside the higher education sector

Around 60% of Australia’s PhD graduates find work outside academia on graduation. Indeed, despite difficulties of matching candidates with jobs, there are thousands of jobs in the wider landscape suitable for skilled researchers.

Using our unique PostAc® algorithm we have been able to identify not only suitable non-academic jobs for highly skilled researchers, but track the trends in demand.

Our data, shown in Figure 2, shows a similar collapse in job advertisements in 2020. From an average of ~15,000 advertisements calling for highly skilled researchers each month in 2019, the market collapsed to a low of just ~6,400 jobs in April 2020. But by February 2021, the non-academic market for highly skilled researchers was back to the 2019 average, and has continued to grow since. October 2021 saw 36 thousand relevant jobs, well more than double the 2019 average. Particularly rapidly growing industries include...

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Figure 1: Academic jobs, Jan 2019 - Dec 2021, Australia. The dashed line shows the 2019 monthly average of ~1,000 job ads

Figure 2: Non-academic research jobs (RSI >7), Jan 2019 - Dec 2021, Australia. The dashed line shows the 2019 monthly average of ~15,000 ads
supermarket and grocery stores, insurance, social assistance and scientific research services.

**New Zealand**

**Inside the higher education sector**

The picture in New Zealand - seen in Figure 3 - shows a similar story to that seen in Australia. 2020 saw a significant contraction of the labour market inside the higher education sector, falling to a low of just ~60 advertised academic jobs in May 2020, well under half the 2019 average. However, by September 2020 advertisements of academic jobs were back at the 2019 average, before going on to peaks of ~260 jobs in October 2021.

**Outside the higher education sector**

As with the Australia, the demand for highly skilled researchers in New Zealand saw some contractions during the peak of the 2020 lockdowns - but quickly recovered to a stronger labour market situation (see Figure 4). 2021 has regularly seen double the 2019 number of jobs advertised, peaking at ~400 jobs in May 2021.

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**Figure 3:** Academic jobs, Jan 2019 - Dec 2021, New Zealand. The dashed line shows the 2019 monthly average of ~160 job ads.

**Figure 4:** Non-academic research jobs (RSI >7), Jan 2019 - Dec 2021, New Zealand. The dashed line shows the 2019 monthly average of ~1800 job ads.

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**Our data**

This analysis is based on job advertisement data provided by Burning Glass Technologies.

Our initial pool included 2 million jobs advertised in Australia, which we then processed using a series of Machine Learning and Natural Language Processing algorithms: firstly to sort jobs by research skills intensity, then to sort into academic and non-academic research jobs, and finally to sort into different academic jobs and disciplines.

We used this data to build the unique research job search engine PostAc®, which connects researchers with great research jobs outside academia. Find out more at thesiswhisperer.com/postac/, or launching soon at postac.com.au, or postac@anu.edu.au

This report by PostAc®.

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1 https://aclanthology.org/P19-3008/
2 February 2022

Note, this doesn’t necessarily include casual jobs, which may not be advertised using the same processes.