

In response to the Te Ara Paerangi Future Pathways Green Paper Consultation, this paper reviews the case that the current funding environment is hypercompetitive, with negative implications on research and the well-being and diversity of the research workforce. Evidence for hypercompetition includes impacts on the workforce such as accumulating precarity across PhD student and post-doctoral funding, poor diversity outcomes that resist policies aimed at improvement, and funding rates in the 10% range for contestable proposal systems. It may be important to avoid positive feedback causing the rich-get-richer Matthew effect, such as avoiding overlap between funding mechanisms that can amplify a cycle of more researchers applying to contestable funding, undermining the potential to increase funding in response to low funding rates. Recommended solutions include well designed base funding, fellowships, reform of competitive funding mechanisms, and smaller funding packages, along with direct collaborative or international exchanges. Ensuring more effective and equitable future research funding through more anticipatory science policy may be achieved by improved monitoring focusing on the success, connectivity and responsiveness of independent research organisation and the early career tracks of researchers.

Additionally, we need to make sure that students have the ability to match their skills and passions to downstream careers in the RSI sector. One way to achieve this would be to mandate internships for students with other entities in the RSi sector (e.g. private industry, CRIs, local government, iwi, central government) and/or placement at regional hubs. The co-location of government agencies, universities, and wānanga at regional hubs could potentially follow the model of shared campuses of government agencies and universities in the United States. This regional hub model is likely to facilitate benefit return and knowledge return to communities, but in addition, this needs to be explicitly required by all funding streams.

Finally, this all ties into bridging the disparity between the number of postgraduate students enrolled vs those entering the RSI workforce ([Postgraduate Students and the Aotearoa New Zealand Research Workforce | Zenodo](#)). International students come to Aotearoa to hone their skills, and not just gain a doctoral degree by doing this, they also are invested in and contribute to New Zealand's dearth of knowledge and research to improve science within the country. Seeing as academia is not a career option for every single PhD student, and our skills are required in other institutions- If we're wanting a global standard of inclusion and a leading research system- there needs to be a shift in how we allocate jobs and create opportunities for young researchers so their skills are valued and utilized along with local scientists.

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