

# Australian government support for research collaboration with the PRC

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## Key takeaways

- By examining three of the Australian Research Council's (ARC) grants schemes over the last five years, this analysis shows a sharp decline in funding support for collaboration with the People's Republic of China (PRC) relative to other international partners. This is despite many of these other partners being less significant creators of knowledge globally.
- The decline in funding support is more pronounced in some Australian universities and fields of research than others. There is also evidence suggesting that mainland Chinese-background researchers based in Australia have maintained their presence on successful grant teams, even as less support is provided to collaborate with researchers based in the PRC.
- There are legitimate reasons to curtail collaboration with PRC-based researchers in specifically defined areas on national security and ethical grounds. Australia's national interest is not served, however, by overstating the threats, nor by a climate of uncertainty which prompts researchers to pre-emptively shy away from potentially productive collaborations in order to secure already scarce grant funding.

## Introduction

When the 2022 round of the Australian Research Council (ARC)'s Discovery Projects<sup>1</sup> was announced, higher education watchers immediately identified what appeared to be a sharp decline in support for projects involving research collaboration with partners in the People's Republic of China (PRC) – from between 50 and 80 in previous years to 23.<sup>2</sup> This followed allegations that such collaboration served as a conduit for espionage, foreign interference and intellectual property theft, as well as supporting ends that were contrary to Australian values.<sup>3</sup> These allegations prompted a variety of government responses, including the establishment in 2019 of a University Foreign Interference Taskforce that formulated guidelines to address

1 The ARC Discovery Projects scheme 'reflects the Australian Government's commitment to excellence in research by providing grant funding to support research projects that may be undertaken by individual researchers or research teams.' See Australian Research Council, Discovery projects, accessed July 4 2023 <<https://www.arc.gov.au/funding-research/discovery-linkage/discovery-program/discovery-projects>>.

2 John Ross, 'Australia-China research collaboration nosedives', *Times Higher Education*, February 17 2022 <[www.timeshighereducation.com/news/australia-china-research-collaboration-nosedives](http://www.timeshighereducation.com/news/australia-china-research-collaboration-nosedives)>.

3 James Laurenceson, 'Lessons from Chinese government interference in Australia', *9DashLine*, February 14 2022 <<https://www.9dashline.com/article/lessons-from-chinese-government-interference-in-australia>>.

such challenges.<sup>4</sup> These guidelines were subject to, in the Australian government's words, a 'refresh' in 2021.<sup>5</sup> There has since emerged some evidence that researchers based in Australia, particularly those with a mainland Chinese-background, were becoming 'overcautious' or 'hesitant to apply for government grants', with others leaving Australia altogether.<sup>6</sup>

This analysis aims to provide a deeper understanding of developments in Australian government funding support for research collaboration involving the PRC, and how these changes have affected mainland Chinese-background researchers based in Australia to date. To do so, data from three ARC grant schemes between 2019 and 2023 have been collected and analysed. The schemes include the Discovery Projects scheme, the Discovery Early Career Researcher Award (DECRA) scheme, and the Future Fellowship scheme. With a combined annual budget of roughly \$400 million and an application success rate of just 19 percent, these three schemes are lucrative but extremely competitive.<sup>7</sup> For further discussion on methodology, see below.

## Benchmarking against other partners

Support for collaboration with the PRC on all three grant schemes has fallen sharply from 2019 levels. The PRC was involved in 47 grants in 2023 compared with 116 in 2019. Grants involving PRC collaboration fell as a share of all grants from 14 percent to seven percent.<sup>8</sup>

Figure 1 contextualises the PRC's declining involvement by comparing it with 2023's five most prolific collaboration partners. In terms of Discovery Projects, although several other countries saw their involvement on ARC grants decline in absolute terms, the PRC was the only country to see its relative rank also fall. In the 2019 round of Discovery Projects, the PRC was the fourth most common partner. In 2022, however, the PRC's rank fell to eleventh. Whilst it climbed again in 2023 – to a four-way shared seventh rank – the PRC was involved in less than half the grants that involved Canada, ranking fourth.

This trend was consistent in both the Future Fellowships scheme, where the PRC dropped from fifth in 2019 to tenth in 2022, and the DECRA scheme, where the PRC's rank fell from third in 2019 to fifth in 2023. Apart from France's relative rank also dropping in the DECRA scheme, every other top five country maintained or improved its rank in the Future Fellowships and DECRA schemes.

The PRC's relative decline is all the more notable when seen in the context of different countries' research prowess, as indicated by their contribution to the top one percent of the most-cited research articles globally.<sup>9</sup>

In the most recent published data of 2022, the PRC ranked first by this measure. Yet in the latest round of Discovery Projects and Future Fellowships, more grants were awarded to projects involving New Zealand as a collaboration partner than the PRC. This is despite New Zealand ranking 43<sup>rd</sup> in terms of citations. Similarly, the PRC collaborated on the same number of Discovery Projects in 2023 as the Netherlands and Switzerland, which ranked 16th and 20th on citations in 2022, respectively.

## Australian universities and PRC collaboration

Figure 2 displays the Australian universities that collaborated on six or more Discovery Projects grants with the PRC in any year. Collaboration declined in every case, and in all but two of these cases it fell by 50 percent or

4 Australian Government Department of Education, University Foreign Interference Taskforce, accessed July 4 2023 <[www.education.gov.au/guidelines-counter-foreign-interference-australian-university-sector/university-foreign-interference-taskforce](http://www.education.gov.au/guidelines-counter-foreign-interference-australian-university-sector/university-foreign-interference-taskforce)>.

5 Australian Government Department of Education, 'Refreshed Guidelines to counter foreign interference in the Australian university sector released', November 17 2021 <[www.education.gov.au/guidelines-counter-foreign-interference-australian-university-sector/announcements/refreshed-guidelines-counter-foreign-interference-australian-university-sector-released](http://www.education.gov.au/guidelines-counter-foreign-interference-australian-university-sector/announcements/refreshed-guidelines-counter-foreign-interference-australian-university-sector-released)>.

6 Yun Jiang, 'Winning hearts and minds: The PRC's efforts to attract scientific talent', China Matters, December 2022 <<https://chinamatters.org.au/aiaa-china-matters-fellowship/policy-research-report-2/>>.

7 The budget and rate of success are a combination of the three schemes this paper is concerned with. See the 'Summary of Outcomes' of each individual scheme for exact figures. For Discovery Projects, see Australian Government – Australian Research Council, *Selection Report: Discovery Projects 2023*, accessed July 4 2023 <[www.arc.gov.au/funding-outcome/selection-outcome-reports/discovery-projects-selection-report-funding-commencing-2023](http://www.arc.gov.au/funding-outcome/selection-outcome-reports/discovery-projects-selection-report-funding-commencing-2023)>; for Discovery Early Career Research Award, see Australian Government – Australian Research Council, *Selection Report: Discovery Early Career Researcher Award 2023*, accessed July 4 2023 <[www.arc.gov.au/funding-research/funding-outcome/selection-outcome-reports/selection-report-discovery-early-career-researcher-award-2023](http://www.arc.gov.au/funding-research/funding-outcome/selection-outcome-reports/selection-report-discovery-early-career-researcher-award-2023)>; and for Future Fellowships, see Australian Government – Australian Research Council *Selection Report: Future Fellowships 2022*, accessed July 4 2022 <[www.arc.gov.au/funding-research/funding-outcome/selection-outcome-reports/selection-report-future-fellowships-2022](http://www.arc.gov.au/funding-research/funding-outcome/selection-outcome-reports/selection-report-future-fellowships-2022)>.

8 The Future Fellowships scheme is excluded from these calculations due to the unavailability of 2023 data.

9 This ranking was sourced from a ScImago database which includes the journals and country scientific indicators developed from the information contained in the Scopus database. See Scimago Journal & Country Rank, accessed July 4 2023 <[www.scimagojr.com/countryrank.php?year=2022](http://www.scimagojr.com/countryrank.php?year=2022)>.

more. The number of grants administered by the Australian National University dropped most dramatically, by 83 percent, between those years.

### Fields of research

PRC involvement in a range of fields of research also dropped, which is to be expected given the aggregate trend. For the Discovery Projects scheme, the data showed that 24 individual fields of research involving PRC collaboration in 2019 had no collaboration in 2023. Figure 3 shows the fields of research the PRC was most involved with in the Discovery Projects scheme by including those that had four or more collaborations in any year. Seeking to gauge the resilience of these fields generally (i.e., aside from when PRC collaboration is involved), Figure 3 also shows the total number of grants extended. In all cases, collaboration involving the PRC declined. In particular, the PRC contributed to 13 of the grants related to *Materials Engineering* in 2019, but just one in 2023. Notably however, despite this drop-off, the total number of projects in this field of research increased over the same period. This split where a field of research saw a decline in collaboration with the PRC but was stable or saw an increase vis-à-vis all international partners is further seen in *Civil Engineering* and *Mechanical Engineering*.

### Involvement of mainland Chinese-background researchers

Figure 4, which only includes data from the Discovery Projects scheme, shows that the overall number of grants involving mainland Chinese-background researchers has remained stable since 2019. This is despite the number of Partner Investigators (PIs) – potentially overseas-based researchers – declining in close correlation with the decline in the number of grants involving PRC collaboration. Significantly, however, the number of mainland Chinese-background Chief Investigators (CIs) – Australia-based researchers – increased from 108 in 2019 to 122 in 2023.

This trend is reinforced by the other schemes, which also saw an increase in the number of grants that included domestic-based, mainland Chinese-background researchers. In the DECRA scheme, this went from 42 in 2019 to 46 in 2023, and for the Future Fellowship scheme it went from 12 to 18.

**Figure 1. Number of grant involvements for the top five most collaborated with countries in 2023, and the PRC**

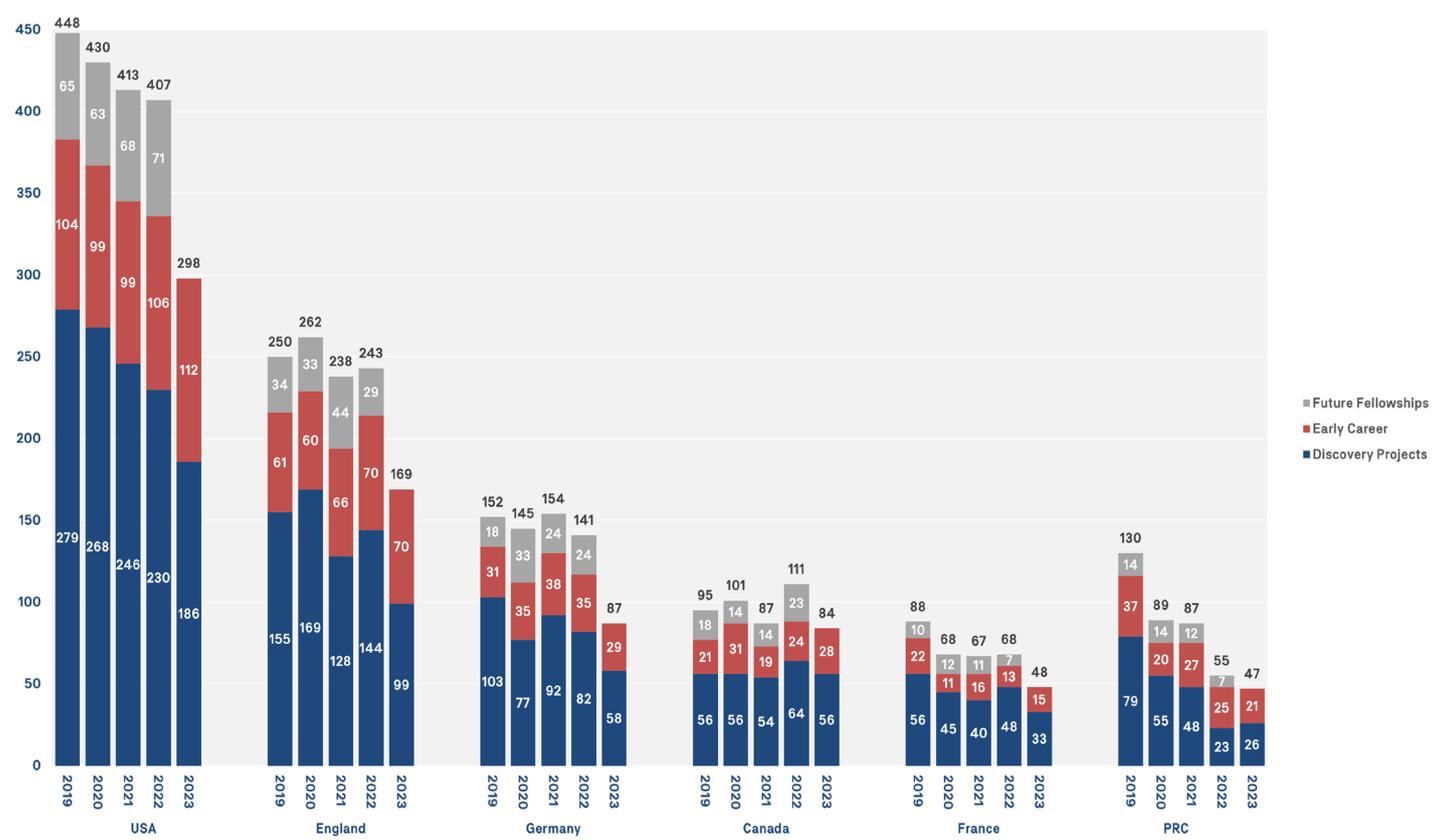


Figure 2. Australian universities with six or more Discovery Projects collaborations with the PRC in any year

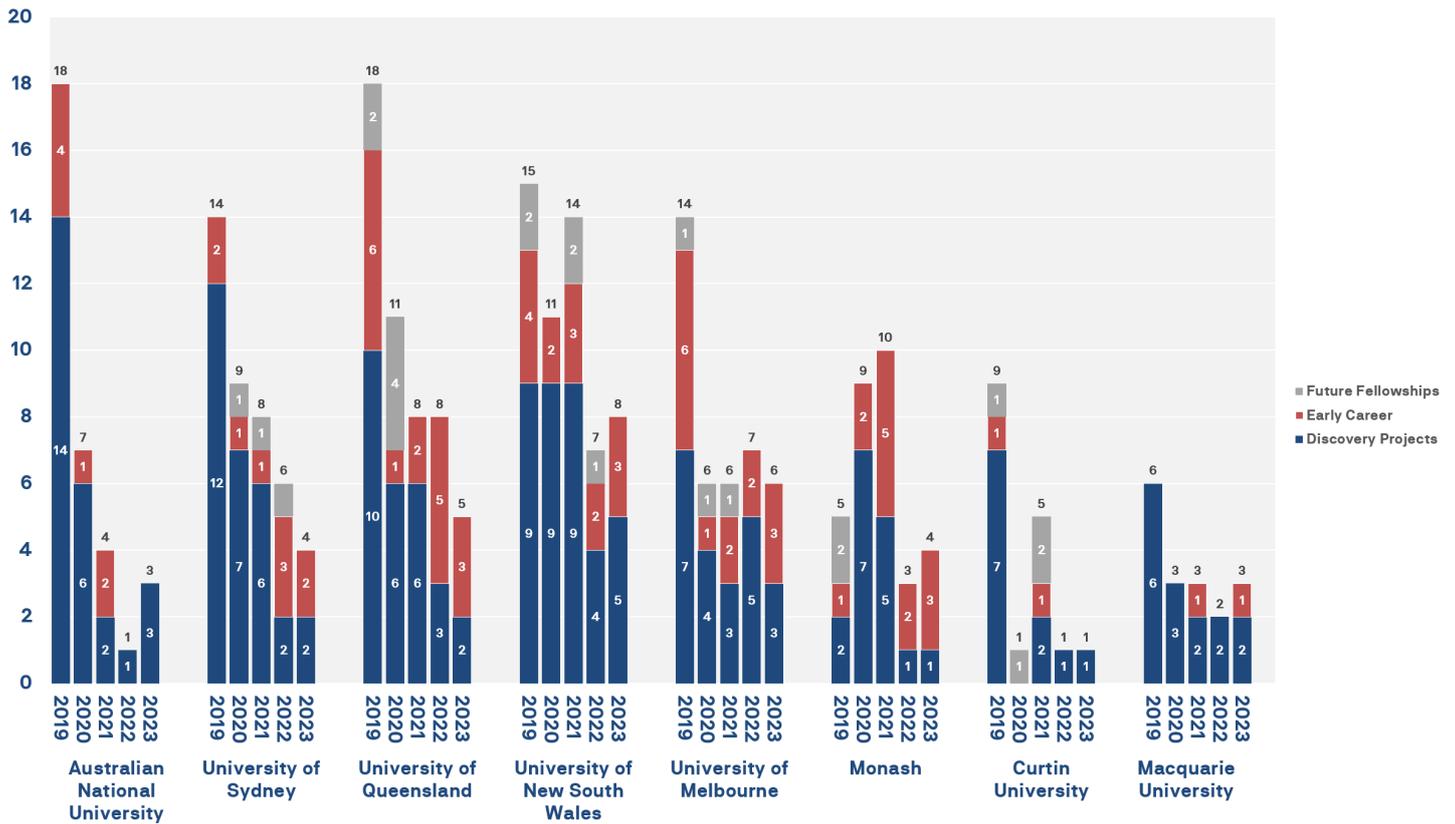


Figure 3. Fields of research codes with four or more PRC collaborations in any year, Discovery Projects only

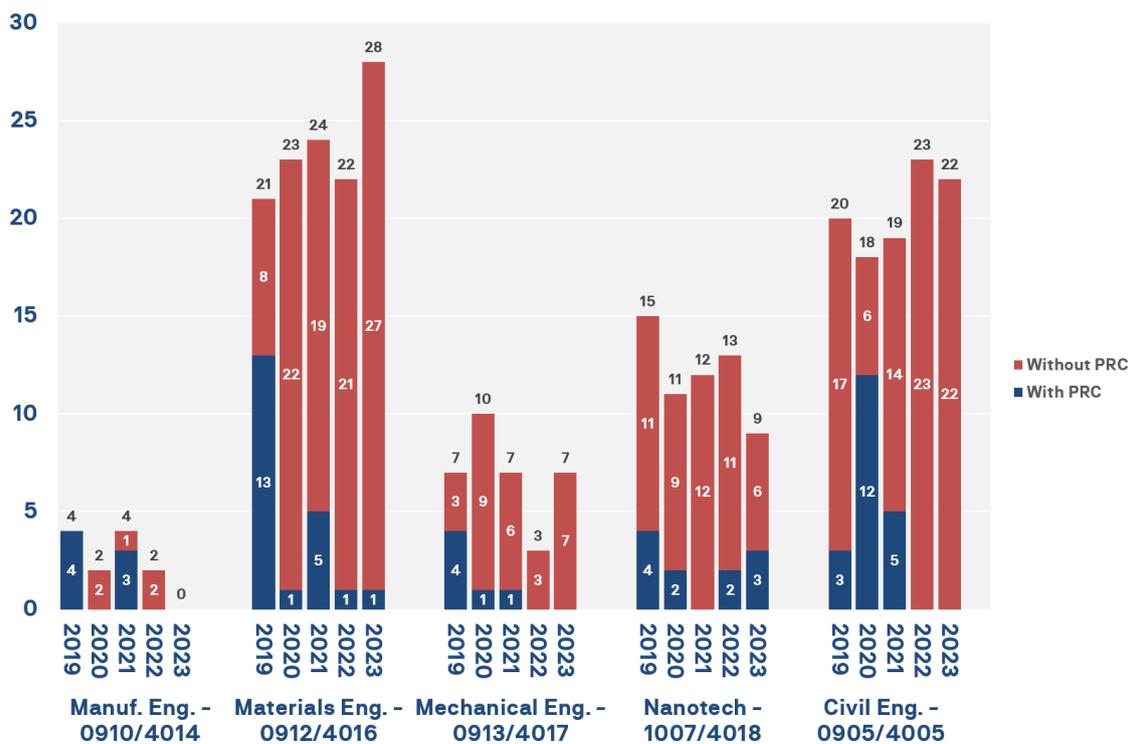
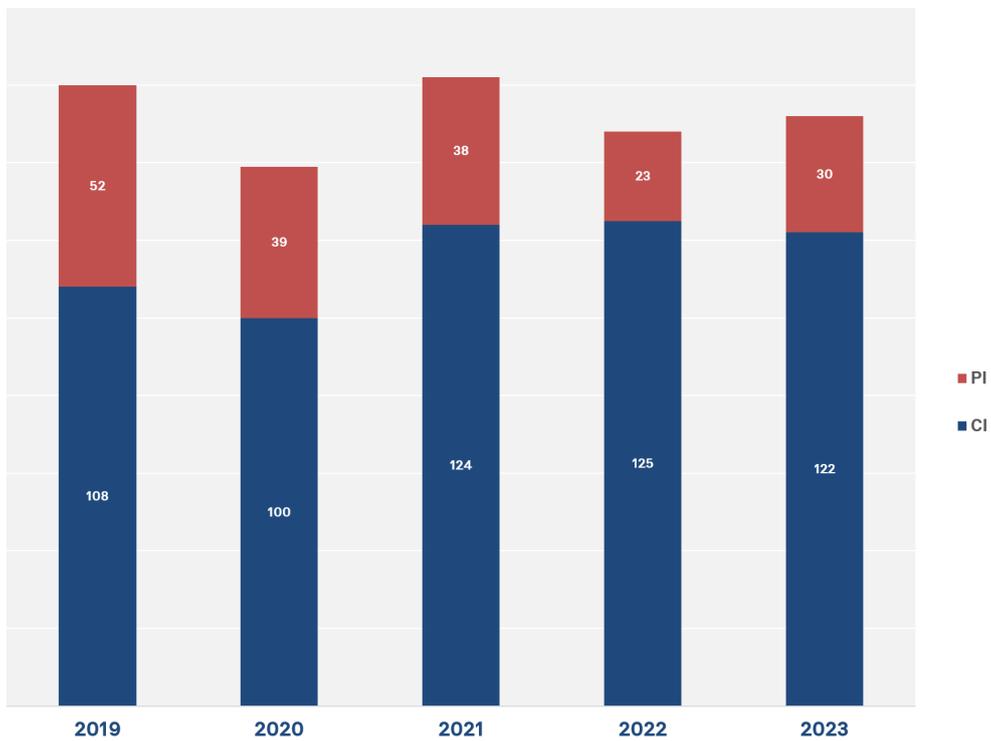


Figure 4. Grants that had at least one researcher with a Mandarin-Chinese surname, Discovery Projects only



## Discussion

The documented decline in support for collaboration involving the PRC overwhelmingly did not take the form of a top-down Australian government directive. ARC grants begin by individual institutions soliciting and building grant proposals with their researchers, these then being subjected to external expert review and finally with recommendations being presented to the minister. In only a handful of instances has the minister exercised discretion and rejected the funding of grant proposals that had been recommended by external expert review.<sup>10</sup> Instead, the outcome reflects a bottom-up process. Specifically, in view of extremely low success rates, universities and their researchers now appear to be absorbing a message from the Australian government that collaboration with the PRC is less desirable than previously and responding by putting up fewer proposals that nominate PRC-based partners. This understanding has been put explicitly by universities, which despite not necessarily wanting to ‘move away’ from collaboration with the PRC, feel pressure to do so. In April 2022, the CEO of the Group of Eight research-intensive Australian universities, Vicki Thomson, remarked, ‘There’s certainly a greater emphasis on working with our Five Eyes-plus partners. The government is creating the policy framework and we’re getting the message, I’ll put it that way’.<sup>11</sup>

There is reasonable concern that Australia’s national interest might be harmed by such a dramatic fall in support for research collaboration with the PRC at the same time as the PRC has emerged a leading source of knowledge creation globally. This is not to say that government support should be blindly maintained at previous levels, irrespective of the challenges to national security and Australian values. There are legitimate concerns regarding dual-use research and the obfuscation of associations and activities, among other matters. But, first, there is no national interest benefit from overstating the threats. The ARC, for example, has stated at Senate Estimates that despite a raft of allegations, its investigations had not revealed any instances

<sup>10</sup> See, e.g., John Ross, ‘Research on and with China purged as Australian grants announced’, *Times Higher Education*, December 24 2021 <[www.timeshighereducation.com/news/research-and-china-purged-australian-grants-announced](http://www.timeshighereducation.com/news/research-and-china-purged-australian-grants-announced)>.

<sup>11</sup> Sarah Ison, ‘Unis ‘get message’ on China syndrome’, *The Australian*, February 4 2022 <<https://www.theaustralian.com.au/nation/unis-get-message-on-china-syndrome/news-story/892d396e15b494b0a0964d9da17e98>>.

of intellectual property theft connected to its grants programs.<sup>12</sup> Similarly, the Australian Security Intelligence Organisation (ASIO) has stated that it is not aware of any breaches by university researchers of Australia's Defence Export Controls.<sup>13</sup> Second, addressing these legitimate concerns is best achieved through targeted measures, not the creation of a general climate of uncertainty in which researchers pre-emptively shy away from productive collaborations out of fear their applications for scarce funding may be adversely affected. Accordingly, satisfying calls from Australia's universities for greater certainty regarding where research collaboration is appropriate and where it is not would be a useful starting point.<sup>14</sup>

Government policy also needs to be calibrated to current rather than past reality. In research fields where the PRC is now the global leader, it is simply not possible or desirable for locally based researchers to switch to alternative international collaboration partners and maintain their existing productivity and Australia's position at the knowledge creation frontier. This requires a change in mindset by policy-makers that potentially still imagines a transfer of knowledge only from Australia to the PRC, rather than knowledge being jointly created and shared.<sup>15</sup>

It is reassuring that the decline in funding support for research collaboration involving the PRC does not appear to be leading to mainland Chinese-background researchers based in Australia being left off successful grant teams, at least to date. This is not to say that anecdotes about mainland Chinese-background researchers in Australia feeling unwelcome are misplaced. If a researcher had spent a long period of time cultivating productive collaboration networks in the PRC and encouraged to do so by local institutions and Australian government policy settings, the costs of now feeling pressure to abandon them are not trivial.

## Methodology

The grants information presented in this brief were sourced from the ARC's 'Data Portal' website.<sup>16</sup> All grants in the Discovery Projects, DECRA and Future Fellowship schemes between 2019 and 2023 – totalling 4,384 – were recorded. The dataset excludes the 2023 Future Fellowships scheme recipients as these will not be announced until the third quarter of 2023.<sup>17</sup>

Each grant was coded according to:

- The countries listed as partners in 'international collaboration';
- The administering Australian university;
- The field(s) of research being pursued; and
- The presence of at least one researcher on the grant team with a Chinese (Mandarin) surname. In the DECRA and Future Fellowship schemes, all researchers must be eligible to live and work in Australia for the duration of the project. For the Discovery Projects scheme, however, CIs are researchers that 'must reside predominantly in Australia for the project activity period', whereas PIs can be based outside of Australia.<sup>18</sup> The distinction is important because any decline in funding support for collaboration with the PRC would guarantee a reduction in PIs with a Chinese surname, but the work of mainland Chinese-background researchers based in Australia (CIs) might still be supported, albeit now involving collaborators in countries other than the PRC.

12 Senate Education and Employment Committee, Education, Skills and Employment Portfolio, Question on notice no. 66, Supplementary Budget Estimates, Parliament of Australia, October 28 2021 <<https://www.aph.gov.au/api/qon/downloadestimatesquestions/EstimatesQuestion-Committeeld4-EstimatesRoundId12-Portfoliold33-QuestionNumber66>>.

13 Senate Legal and Constitutional Affairs Committee, Home Affairs Portfolio, Question on notice no. 181, Additional Estimates, Parliament of Australia, March 22 2021 <[www.aph.gov.au/api/qon/downloadestimatesquestions/EstimatesQuestion-Committeeld6-EstimatesRoundId10-Portfoliold20-QuestionNumber181](http://www.aph.gov.au/api/qon/downloadestimatesquestions/EstimatesQuestion-Committeeld6-EstimatesRoundId10-Portfoliold20-QuestionNumber181)>.

14 John Ross, 'Clarify rules on China research collaboration, Canberra urged', *Times Higher Education*, June 10 2022 <[www.timeshighereducation.com/news/clarify-views-china-research-collaboration-universities-beg-canberra](http://www.timeshighereducation.com/news/clarify-views-china-research-collaboration-universities-beg-canberra)>.

15 Yun Jiang, 'Winning hearts and minds: The PRC's efforts to attract scientific talent', *China Matters*, December 2022 <<https://chinamatters.org.au/aiaa-china-matters-fellowship/policy-research-report-2/>>.

16 Australian Government – Australian Research Council, ARC Data Portal, accessed July 4 2023 <<https://dataportal.arc.gov.au/NCGP/Web/Grant/Grants>>.

17 See the 'Key Dates' timeline in Australian Government – Australian Research Council, Future Fellowships 2023, accessed July 4 2023 <[www.arc.gov.au/funding-research/funding-schemes/discovery-program/future-fellowships](http://www.arc.gov.au/funding-research/funding-schemes/discovery-program/future-fellowships)>.

18 For further explanation of the eligibility criteria for each investigator, see Australian Government – Australian Research Council, 'Eligibility matters', accessed July 4 2023 <[www.arc.gov.au/funding-research/apply-funding/grant-application/eligibility-matters](http://www.arc.gov.au/funding-research/apply-funding/grant-application/eligibility-matters)>.

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