

## Impediments to outbound researchers

- 3.1 This chapter examines several key impediments to Australian researchers seeking to go overseas to commence or support collaborative research, namely:
- Distance and culture
  - Lack of seed funding to establish or develop collaborations.

### Distance and culture

- 3.2 The distance of Australia from the major research centres of North America and Europe was a commonly noted impediment to both incoming and outbound research collaboration.<sup>1</sup>
- 3.3 As a result of this distance, travel costs are a major issue for most Australian researchers. However, some submitters noted that travel funding wasn't difficult to obtain to cement a strong research project<sup>2</sup>, or they were able to budget how much to spend on collaborations because of their status as an institute.<sup>3</sup>
- 3.4 However, the Committee heard of instances where researchers had secured time on facilities based overseas with no equivalent in Australia, where the researchers were unable to take advantage of that opportunity due to a lack of travel funding.<sup>4</sup>

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1 CRCA, *transcript of evidence*, 10 March 2010, p. 5.

2 Dairy Australia, *transcript of evidence*, 9 April 2010, p. 74.

3 ANSTO, *transcript of evidence*, 8 April 2010, p. 64.

4 AINSE, *submission 20*, p. 7.

- 3.5 Some witnesses noted that some non-scientists viewed overseas travel to foster scientific collaboration as an indulgence:

The [NSW] department [of Environment, Climate Change and Water] has quarterly update reporting, and at the last executive meeting, a graph of overseas travel was flashed in front of me. The science division I think has the largest number of overseas trips. From my perspective that should be seen as a good thing. It shows that we are internationally engaged. But it was put to me as: 'Look, Kate, watch out.' That was more the attitude, so it's more about changing that.<sup>5</sup>

- 3.6 Witnesses and submitters expressed their dismay that some people considered funding researcher travel to be an indulgence,<sup>6</sup> with others suggesting researcher travel should be viewed as assisting innovation.<sup>7</sup>

- 3.7 The Australian Academy of Technological Sciences and Engineering (AATSE) observed:

[Australian funding is being spent on research collaboration] because it raises our game, our effectiveness, our productivity. To me that is the prime reason.<sup>8</sup>

## **Lack of funding to establish or develop collaborations**

- 3.8 The benefits of international travel for Australian researchers are many. Travel enables Australian researchers to meet with leaders in their research field, it forges links between researchers that can evolve into opportunities for collaboration, and it enables Australian researchers to use facilities that are not available in Australia.<sup>9</sup>

- 3.9 A common theme in submissions received by the Committee was that there was often a lack of seed funding available to enable researchers to

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5 NSW DECCW, *transcript of evidence*, 8 April 2010, p. 40.

6 UoM, *transcript of evidence*, 9 April 2010, p. 8.

7 Monash University, *transcript of evidence*, 9 April 2010, p. 9.

8 AATSE, *transcript of evidence*, 9 April 2010, p. 51.

9 Flinders University, *submission 56*, p. 1.

travel and forge links with colleagues overseas.<sup>10</sup> This was especially the case for early-career researchers.<sup>11</sup>

3.10 It was noted that researchers needed to access grants to develop relationships with overseas researchers, and that quite often research proposals would have travel components removed from the grant.<sup>12</sup>

3.11 A witness noted that some researchers had funded their own travel overseas to explore collaborative opportunities:

... I have probably had to recommend maybe 10 or a dozen international trips, and for two of them the scientists were actually funding themselves to go overseas.<sup>13</sup>

3.12 Several witnesses and submitters,<sup>14</sup> including Professor Fiona Stanley AC note the value of getting young researchers to international conferences to build connections with fellow researchers:

... we absolutely need to get funded to travel to these international network meetings and conference and to get our young people there.<sup>15</sup>

3.13 The University of Sydney (USYD) also supported the use of conferences as a way of maximising the exposure of young Australian researchers to gifted international minds, but in lieu of sending Australian researchers overseas:

... we need to change some of our own cultural apology approach and think of Australia as a destination. I think we could have some fairly inexpensive initiatives, be they managed better through universities or other academic agencies, such as Nobel Fellows on visiting lectureships for up to a year – up to a month, actually; a year is probably too long. That would bring very high prestige. Many universities in Asia are now running Nobel lectures on their own. They are not cheap but they get focus around selected areas.

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10 Dr Lindsay Campbell, *submission 13*, p. 3; NCA, AAS, *submission 35*, p. 4; CQU, *submission 43*, p. 2; NT Research and Innovation Board, *submission 47*, p. 5; Professor Jane Kenaway and Dr Johannah Fahey, *submission 9*, p. 2; USYD, *submission 18*, p. 7; UoW, *submission 12*, p. 1.

11 Faculty of Science, UoM, *submission 33*, p. 3; CAMS, *submission 5*, p. 3.

12 AMSI, *transcript of evidence*, 9 April 2010, p. 17.

13 NSW DECCW, *transcript of evidence*, 8 April 2010, p. 41.

14 AMSI, *transcript of evidence*, 9 April 2010, p. 28; Professor Vladimir Bazhanov and Professor Murray Batchelor, *submission 23*, p. 1; Professor Brian O'Brien, *submission 60*, p. 2; AMSI, *submission 53*, p. 3; UoM, *submission 51*, p. 9; ANU, *submission 14*, p. 3.

15 Professor Fiona Stanley AC, *transcript of evidence*, 13 April 2010, p. 3.

A second would be funding to universities – again, probably through the compact system – of major strategic conferences. By ‘major’ I mean small, strategic conferences around Australia’s research priorities and how we work with other countries. We should make these quite prestigious.<sup>16</sup>

- 3.14 Another witness noted that establishing relationships with colleagues was the most fundamental step.

I still feel that it boils down to personal linkages; skills, expertise that we need to have on the ground that can link us with the people overseas. To me, that is really the starting point.<sup>17</sup>

- 3.15 Witnesses from the Australian Mathematical Sciences Institute (AMSI) advised the Committee of a small grants model that operates in Canada to support early-career researchers in forging international links, and that a similar scheme used to operate in Australia and should be reinstated:

There was a small grants scheme in Australia 20 years ago; it has not been around for a long time. The sorts of funds I am talking about are of the order of \$20,000 a year and are enough to maintain research programs for many active mathematical sciences. Of course, \$20,000 a year will not allow the employment of young, early-career researchers, but it is certainly enough to be able to provide travel support for international collaborations, to be able to send early-career researchers overseas and so on.<sup>18</sup>

- 3.16 Further methods for supporting early-career researchers are canvassed in Chapter 5.

## **Committee comment**

- 3.17 Geoffrey Blainey’s ‘tyranny of distance’<sup>19</sup> is all pervasive, even impacting on the ability of Australian researchers to cooperate with their international colleagues, and it is a problem that will have to continue to be managed by Australian researchers.

- 3.18 Developments in information and communication technology will serve to mitigate these difficulties slightly, but given the importance to researchers

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16 USYD, *transcript of evidence*, 8 April 2010, p. 7.

17 Dr Mehmet Cakir, *transcript of evidence*, 13 April 2010, p. 35.

18 AMSI, *transcript of evidence*, 9 April 2010, p. 27.

19 ‘*The Tyranny of Distance: How Distance Shaped Australia's History*’, by Geoffrey Blainey, is an account of how Australia's geographical remoteness has been central to shaping our history and identity. First published in 1966, ISBN 0732911176.

of face-to-face contact in developing collaborative opportunities there will always be a need for Australian researchers to travel and meet their colleagues in person.

- 3.19 Addressing the issue of culture, and opposition to researcher mobility, the Committee acknowledges that researcher mobility is vital in building research collaboration and maximising opportunities for Australian researchers and Australian science.
- 3.20 The Committee also acknowledges that funding for travel to establish and support collaborations is insufficient, and is disappointed that often when grant applications are reduced, international travel components are removed. However, the Committee also believes that guaranteeing travel funding would reduce the percentage of successful research grants even further. Further discussion on funding is in Chapter 5.
- 3.21 Reducing an already low success rate for grant applications is an undesirable outcome, and the Committee would prefer to see more research done in Australia than less. The Committee acknowledges that information communication technology is no substitute for true face-to-face contact between researchers, but it nonetheless encourages researchers to use these methods to develop and maintain contact with colleagues overseas.
- 3.22 The Committee believes there is real benefit for young researchers in attending international conferences to make contact with colleagues based overseas, and encourages research organisations and universities to maximise available opportunities for young researchers in attending these events.
- 3.23 Further, the Committee is dismayed to hear of cases where Australian researchers, especially young Australian researchers with potentially innovative research, win time on facilities located overseas, but are then unable to use these facilities due to a lack of funding for travel.
- 3.24 The Committee believes that when unique opportunities like these are presented to early-career researchers, they should be taken as often as possible, and recommends that the Department of Innovation, Industry, Science and Research investigate the viability of a small grants scheme to be established to support the travel expense of Australian early-career researchers who win time on foreign instruments and facilities that are unavailable in Australia.

**Recommendation 1**

**The Committee recommends that the Department of Innovation, Industry, Science and Research investigate the viability of a small grants scheme to be established to support the travel expense of Australian early-career researchers who win time on foreign instruments and facilities that are unavailable in Australia.**