NOTES OF A MEETING OF THE RESEARCH LEADERS’ FORUM

Senate Room
Wednesday 30 August 2006

Members present:
Cheryl Praeger (Chair), Ian Constable, Laurie Faraone, Leon Flicker, Harvey Millar,
Paul Miller, Sally Morgan, Colin Raston, Pam Sharpe, Ian Small,

In attendance:
Doug McEachern, Robyn Owens, Victoria Anderson (EO)

Apologies:
Lyn Beazley, Alan Dench, D'Arcy Holman, Jörg Imberger, Peter Leedman, Barry
Marshall, John Olynyk, Mark Randolf, Gill Rhodes, Zed Rengel, Leigh Simmons,
Steve Smith, Fiona Stanley, David Wood.

1. Welcome and introduction
Cheryl Praeger (Chair) welcomed Harvey Millar to his first Research Leaders’ Forum.

Cheryl explained that the group would hear from four speakers during the meeting,
who would provide their views on how researchers/universities might better
demonstrate the economic and non-economic benefits of research.

2. Speakers

Paul Miller
Paul had been asked to comment on the issues paper published by the
Productivity Commission on Public Support for Science and Innovation.

Paul reported that, as an economist, he had considered the report in relation to
the question of whether R&D impacts on economic growth. He made the
following points:

- Research in the 1950s first described R&D as a driver of economic growth
  at both the firm level and the whole-economy level.
- Since that initial research, the role of R&D as a driver has been accepted
  and further research has supported that position.
- The research undertaken by the Productivity Commission investigated the
  links between output per worker, GDP and R&D at whole-economy level.
  The finding was that estimates of the impact of R&D on productivity were
  fragile.
- The Productivity Commission's study was very thorough and in summary,
  their position is that the economic benefits of R&D are not strong.
- Paul considered that the focus on measuring per-worker factors, which
  are weak and easily masked by other factors, may be one reason for the
  result. Another reason the Commission's findings differ from the standard
  view in economic research literature may be that the study is more recent.
- Paul noted that social and other benefits of research are not the focus of
  the Productivity Commission.
Sally Morgan
Sally worked through the paper she had circulated with the agenda. In discussing Sally's paper, the following key points were raised:

- Sally considered that the focus on economic benefits, by external organisations and as a result by researchers, and the narrow definition of those economic benefits, was doing a disservice. The intangible and unquantifiable nature of social benefits means these are under valued.
- When asked by the chair whether she could suggest other measures, Sally responded that the national discussion is not creative and is fixed on a 'one-size-fits-all' approach despite disciplines being so diverse. For example, Indigenous research will never have a high international citation rate. Australia must value local benefit and national debate on this issue is needed.
- Doug McEachern described a concept under discussion nationally; where research groups would produce a 10-page report containing a number of case studies from their research, which would then be considered by a panel. How this would work in practice is not clear, for example how the reliability of results would be determined, and it has not found wide support.
- Robyn Owens remarked that the level of resolution of any measurement tool must be considered. For example, standard metrics can be high resolution, compared with other options such as that described by Doug (above). She added that the Go8 recommends a coarse-grained approach to measuring impact.
- Ian Small suggested that research could be measured in terms of progress toward an agreed vision for Australia – if such a vision could be agreed.
- Sally Morgan noted that there are existing frameworks that are well supported, for example a human rights framework, from which elements could be taken.
- Pam Sharpe queried whether factors on the path toward the final goal, such as capacity building, could be included, to measure progress.

Ian Small
Having recently come to UWA from Europe, Ian outlined some major differences he has identified in the research environment.

- In Australia there is a very strong focus on achieving economic benefits from research very quickly, when compared with Europe.
- In Europe, Government funding does not compete with industry, meaning that there is an industry benefit from research (for example in researching wheat varieties), Government funding would not be available. One down side of that approach is that many things receive no funding at all where there is no current industry interest. The situation in Australia, where government will fund research of benefit to industry, may be one reason for the relatively low industry research investment here.
- The funding situation in Australia also means that research end users are different. For example, with Ian’s research in plant energy biology, end users in Europe would be scientists in industry settings, who are able to judge the value of the research. In Australia, end users are farmers, who are very far removed, and other scientists who compete for the same Government funding, making judgements of value difficult.
- Another of Ian’s roles is as President of an international committee of researchers using Arabidopsis as an experimental model. That organisation is actively seeking case studies to follow and collect
considerable data on, to demonstrate to multiple audiences, the value of research on the model.

- Doug McEachern noted that the approach of developing strong, highly defined case studies can pressure researchers to measure and record factors they would not normally, possibly wasting time and effort.

Laurie Faraone
Laurie tabled a one-page paper (appendix 1) describing some of the beneficial outputs/outcomes of university research. Laurie also noted that a major overall benefit of universities is in building a resource of expertise not available anywhere else in industry or the community, and which is available to be drawn upon by industry.

Robyn Owens raised the question of environmental benefits of research. Laurie responded that while environmental benefits of particular pieces of research were hard to put a value on, the overall value of a university remained their stock of expertise and knowledge not available elsewhere.

Colin Raston queried whether improving connectivity internationally, through for example PhD exchange and other research training, could be used as a measure of international impact. He added that community engagement, although even harder to measure, should also be considered.

Ian Constable noted that public relations and advertising companies routinely measure impact with a range of social metrics. He suggested that the University tap into that expertise.

Leon Flicker added that medical research has done better than other disciplines in raising funding from non-government sources. He queried whether that has to do with more organised lobbying and advertising, and he suggested other disciplines might learn from that.

Robyn Owens queried whether some simulation was possible to demonstrate the impact that would be lost if research had not been undertaken.

3. Where to from here?

The group agreed the following actions:
1. The notes from this meeting are to be provided to the Research Committee (through Robyn Owens) for consideration.
2. Doug McEachern will be asked to consider providing this group’s comments to the RQF Development Advisory Group (RQF DAG), despite the formal closing date for submissions having passed.
3. The use of case studies to demonstrate benefit was a recurring theme of the meeting, Doug McEachern will be asked to consider whether any case studies already completed could be disseminated around the University as a model of how to demonstrate benefits of research. The idea was raised of whether a flexible template could be made available to assist researchers to develop a framework for articulating the broad impact of their research.
4. Cheryl Praeger will discuss this group’s comments with the Vice-Chancellor and will raise with him, the possibility of discussing these issues with Minister Bishop.
4. **Next Meeting**

The next meeting of the RLF will be held on Wednesday 22 November 2006 from 12:30 to 2:00pm. The topic of discussion will be 'research training: quality and resources'.
Appendix 1.

University Research Outputs/Outcomes (L Faraone)

General:

- Research training (supply of PhD graduates and ECR’s)
- New knowledge (publications, books, reports, etc)
- International reputation/profile (prizes/awards, conferences, joint research activities, etc)
- Foreign income (international students, research contracts, conference hosting, etc)
- Skills/expertise retention/atraction (reverse brain-drain, immigration, etc)
- Creation of new technologies/processes/methods (intellectual property, licensing, spin-out companies, etc)
- R & D of long-term strategic interest to the community (health, defence, cultural well-being, etc) rather than profit-driven R & D
- Access to international R & D activities not available nationally, and exchange of knowledge, via collegiate research networks, collaborative agreements, personnel exchange, etc

Engineering/Technology Specific:

Building of unique long-term research/development/service capabilities/capacity/infrastructure/know-how, that is:
- leading-edge
- of strategic national importance
- of sufficient critical mass
to
- undertake large, world-scale R&D contracts (Govt, industry, national and international, etc)
- generate significant internationally-valued IP and know-how (patents, technology licensing, consulting, etc)
- generate new business enterprises (spin-out companies, etc)

Examples:
- COFS: offshore engineering, oil & gas, marine structures, etc
- CWR: water, water everywhere, but....
- WATRI/WACSON: defence & security, remote sensing, etc