

Inside the Black Box

Research Grant Funding and
Peer Review in Australian
Research Councils

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ABSTRACT

This thesis considers the effects of research funding process design in the Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC). The program delivery mechanisms that the ARC and NHMRC use differ in detail and each council claims to be using the best selection model possible. Neither council provides evidence that peer review is the best possible way of delivering government funding for research and neither can produce empirical evidence that they use the best possible peer review model to determine excellence.

Data used in this thesis were gathered over several years, forming a comparative case study of the Australian Research Council and the National Health and Medical Research Council, with illustrative data from comparable international organizations in the UK and USA. The data collection included: a survey of applicants, semi-structured interviews with experienced panel members and former staff, observation of selection meetings, and examination of publications by and about the research councils.

Researchers firmly believe in peer review and their confidence enables the system to function. However, the mechanisms of grant selection are not well understood and not well supported by applicants, who criticize the processes used to assess their work, while supporting the concept of peer selection.

The notion of excellence is problematic; judgements of excellence are made within frameworks set by the research councils and vary across disciplines. Allocation of research funding depends on peer review assessment to determine quality, but there is no single peer review mechanism, rather, there exist a variety of processes.

Process constraints are examined from the perspectives of panel members, peer reviewers, council staff and applicants. Views from outside and inside the black box of selection reveal the impacts of process design on judgements of excellence and decision-making capacity. Peer reviewers in selection panels are found to use a range of differentiating strategies to separate applications, with variance evident across disciplines and research councils. One dominant criterion emerges in both the ARC and NHMRC processes, track record of the applicants.

Program delivery mechanisms enable and constrain selection but every peer panel member has to make selection decisions by defining discipline standards and negotiating understandings within the panel. The extent to which peers can do this depends on the number of applications assigned to them, the size of the applicant field, and the processes they have to follow. Fine details of process design, panel rules and interactions are the tools that shape funding outcomes.

Research councils believe they are selecting the best, most meritorious proposed research. However, I show in this thesis that the dominant discriminator between applicants in Australian selection processes is track record of the applicant. This effect is the result of several factors operating singly or in concert. Researcher track record, largely determined by quality and number of journal publications, is considered to be the responsibility of universities but support for this capacity building has not been systematically provided in Australian universities.

Reliance on track record to determine the outcomes of all but the very best applications is very like awarding prizes for past work and is significantly different from the models of grant selection that operate in comparable international research councils.

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ANAO	Australian National Audit Office
ARC	Australian Research Council
CEO	Chief Executive Officer
CI	Chief Investigator, or researchers named on a grant application
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEET	Commonwealth Department of Employment, Education, and Training
DEETYA	Commonwealth Department of Employment, Education, Training, and Youth Affairs
DEST	Commonwealth Department of Education, Science, and Training
DP	Discovery-Projects, ARC
EAC	Expert Advisory Committee, ARC
EPSRC	Engineering and Physical Sciences Research Council
G8	Group of Eight (universities in Australia)
GAMS	Grant Application Management System, ARC
GRP	Grant Review Panel, NHMRC
LP	Linkage-Projects ARC
Minister for Education	Commonwealth Minister for Education, Training, and Youth Affairs, and other combinations of portfolios incorporating Education.
NCGP	National Competitive Grants Program, ARC
NHMRC	National Health and Medical Research Council
NSF	National Science Foundation
PG	Project Grants, NHMRC
RC	Research Committee, NHMRC

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