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Impact of ERA Research Assessment on University Behaviour and their Staff

Jen Tsen Kwok

NTEU National Policy and Research Unit

April 2013

Full report available online at www.erawatch.org.au

Published by NTEU ISBN 978-0-9806500-6-8

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ISBN 978-0-9806500-6-8

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This publication is available online as a PDF and e-book at:
www.erawatch.org.au

Acknowledgements

This Report was prepared by Jen Tsen Kwok for the NTEU. The project was conducted in collaboration with the Victorian and ACT Divisions. A project committee of the National President, Jeannie Rea, Victorian Division Secretary, Dr Colin Long, and Policy and Research Coordinator, Paul Kniest has overseen the research design and project progress.

Throughout the conduct of the research, advice has been provided by the NTEU National Executive, members of the National Industrial Unit, and where qualitative research was conducted, a group of Branch Presidents, Branch Vice Presidents (Academic) and (General), Branch activists and Union staff. To protect the integrity of the institutions and participants involved, these individuals are not listed here, but their important, generous contributions must be acknowledged.

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National Tertiary Education Union

20 years 1993-2013

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Abbreviations

ABS	Australian Bureau of Statistics
ACG	Australian Competitive Grant
ACU	Australian Catholic University
ADR	Associate Dean of Research
AGPS	Australian Government Publishing Service
AIATSIS	Australian Institute of Aboriginal and Torres Strait Islander Studies
ANU	Australian National University
APA	Australian Postgraduate Award
APRA	Australian Postgraduate Research Awards
ARC	Australian Research Council
ASTEC	Australian Science and Technology Council
ATN	Australian Technology Network
AUR	Australian Universities Review
BB	Biological and Biotechnological Sciences
CAE	College of Advanced Education
CDU	Charles Darwin University
CI	Composite Index
CNEAI	National Commission for Evaluation of Research Activity
CQU	Central Queensland University
CSU	Charles Sturt University
CTEC	Commonwealth Tertiary Education Commission
CTS	Commercialisation Training Scheme
CQU	Central Queensland University
DEEWR	Department of Employment, Education and Workplace Relations
DEST	Department of Education, Science and Training
DIISR	Department of Innovation, Industry, Science and Research
DIISRTE	Department of Innovation, Industry, Science, Research and Tertiary Education
DVC-R	Deputy Vice-Chancellor (Research)
EAG	Expert Advisory Group
EC	Economics and Commerce
ECA	Early Career Academic
ECR	Early Career Researcher
ECU	Edith Cowan University
EE	Engineering and Environmental Sciences
EHS	Education and Human Society
Ei	Excellence Index
ERA	Excellence in Research Australia
FoR	Field of Research
FTE	Full-Time Equivalent
HASS	Humanities and Social Sciences
HCA	Humanities and Creative Arts
HDR	Higher Degree Research
HEFCE	Higher Education Funding Council for England (UK)
HERD	Higher Education Expenditure on R&D
HERDC	Higher Education Research Data Collection
IGS	Institutional Grant Scheme
IPRS	International Postgraduate Research Scholarships
JCU	James Cook University
JRE	Joint Research Engagement
LERU	League of European Research Universities
MHS	Medical and Health Sciences
MIC	Mathematical, Information and Computing Sciences
MYEFO	Mid Year Economic and Fiscal Outlook
NBEET	National Board of Employment, Education and Training
NHMRC	National Health and Medical Research Council
NPM	New Public Management
NRIP	National Research Investment Plan
NTEU	National Tertiary Education Union
OECD	Organisation for Economic Co-operation and Development
PBRF	Performance-based Research Fund (New Zealand)
PCE	Physical, Chemical and Earth Sciences
PRFS	Performance-based Research Funding System
QUT	Queensland University of Technology
RAE	Research Assessment Exercise (UK)
Rec	Research Evaluation Committee
REF	Research Excellence Framework (UK)
RES	Research Evaluation System
RFM	Relative Funding Model
RIBG	Research Infrastructure Block Grant Scheme
RO	Research only
RQ	Research Quantum
RPS	Regional Protection Scheme
RQF	Research Quality Framework
RTS	Research Training Scheme
RWSAG	Research Workforce Strategy Advisory Group
SCU	Southern Cross University
SEG	Senior Executive Group
SEO	Socio-Economic Objective
SII	Systemic Infrastructure Initiative
SOOS	Steunpunt O&O Statistieken
SRE	Sustainable Research Excellence
STEM	Science, Technology, Engineering and Mathematics
TC	Transparent Costings
TEC	Tertiary Education Commission (New Zealand)
TEU	Tertiary Education Union (New Zealand)
TEQSA	Tertiary Education Quality and Standards Agency
TO	Teaching only (or teaching focused)
T&R	Teaching and Research
UC	University of Canberra
UGC	University Grants Committee
UMelb	University of Melbourne
UNE	University of New England
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UniSA	University of South Australia
UNS	Unified National System
UNSW	University of New South Wales
UoE	Unit of Evaluation
UoW	University of Wollongong
USyd	University of Sydney
UCU	Universities and Colleges Union
UQ	University of Queensland
USC	University of Sunshine Coast
USQ	University of Southern Queensland
UTAS	University of Tasmania
UTS	University of Technology, Sydney
UWA	University of Western Australia
UWS	University of Western Sydney
VQR	Valutazione della Qualità della Ricerca
VTR	Valutazione Triennale della Ricerca
VC	Vice-Chancellor
VU	Victoria University

Executive Summary

In 2012, the National Tertiary Education Union (NTEU) undertook an exploratory, multi-method study about the implications of the Excellence in Research Australia (ERA) exercise and measures of research performance for Australian university staff. This study relied upon research conducted between April and September 2012, involving:

- A national survey of 39 senior research administrators about the use of ERA and the use of indicators of research performance at universities around Australia;
- Eight recorded and de-identified focus groups at four institutions, and eleven recorded and non-recorded in-depth, semi-structured interviews with participants from five institutions, the recorded sample totalling 50 participants; and
- An NTEU workshop in Melbourne that focused upon the experiences of 35 Early Career Researchers (ECR) and Academics (ECA).

The study found that whatever concerns university staff have had about the robustness and probity of the ERA instrument, a pressing concern is what the ERA will be ultimately used for, as the ERA has been integrated into more intense modes of university managerialism. Furthermore, greater investment through the Sustainable Research Excellence (SRE) program will have important implications for Australian universities as workplaces integral to the creation of new knowledge, as was perceived by participants in this study. The policy settings underpinning the ERA and its use directly impact upon the confidence of university researchers in the ERA, as well as their very capacity to undertake broad and diverse types of research.

The ERA exercise is a research evaluation system (RES) that has sought to generate a comprehensive picture of the kind and quality of research conducted in Australian tertiary education institutions, by reviewing the breadth and scale of research undertaken at 41 eligible institutions.[1] The completion of the Australian Research Council's (ARC) 2012 ERA National Report in late 2012 means that the 2012 rankings will be used as a basis to allocate funding through the SRE program and potentially, in the future, through the Research Training Scheme (RTS).[2]

For the vast majority of Australian academics and researchers, during the development and conduct of the ERA process it has not been clear how the funding mechanisms attached to the ERA would operate or what proportion of block funding was intended to be tied to the assessment of research quality. Whether the ERA is even suited to operate as the basis for the allocation of RTS funding has not been robustly addressed in the evaluation of its methodology.[3] The key problem is that there are uncertain implications for researchers once the interdependence between the assessment instrument and the funding mechanism is established, in terms of its impact upon what researchers do, and thus acceptance by the sector.[4]

Important structural contexts have undermined the development of clear, articulate understandings of what the ERA is meant to do. Firstly, the responsibility for the relationship between the Research Evaluation System (RES) and the Performance-based Research Funding System (PRFS) is segmented between the ARC and Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE) (formerly DIISR). The former has focused upon ERA's development and implementation. The latter has had responsibility for developing the SRE and the potential relationship of ERA to other funding mechanisms. The bifurcation between assessment instrument and funding allocation is evident through differences in its stated objectives, especially in the addition of the RTS to the 2012 ERA Submission Guidelines.[5] Secondly, public discourse has privileged the operation of the assessment instrument above the funding mechanism/s. While there has been open discussion (and criticism) about confidence of the sector in the ERA, there has been little robust public debate about the potential funding mechanisms.

The qualitative research conducted to support this study has highlighted that lack of clarity about the ERA's purpose has at one level suspended dimensions of criticism, but at another has undermined the confidence of Australian academics and researchers. Amongst the focus groups and workshops conducted, the ERA process was consistently conflated with perceived government policy priorities, and even more disturbingly, the practices at various institutions that have either sought to manipulate the ERA outcomes, or drawn upon ERA indicators in the performance management of staff. This includes the formal use of the ERA journal rankings for over a year after being abandoned (because of its misuse by institutions), and in spite of efforts by the ARC to ensure it is no longer used.

Along with the sporadic interest of the Australian media in this issue, the qualitative research supporting this Report demonstrates that potential or actual change framed by the desire to maximise research performance funding through ERA has already occurred at a number of levels:

- Institutional and management behaviours and practices - from the institution-wide down to the intra-departmental level, in both formal and informal ways.
- The ways professional associations, disciplines and other professional groupings that can be generalised as 'communities-of-practice' function.
- The capacity for university staff to exercise not only autonomy, but basic precepts of freedom of intellectual inquiry.
- Career pathways - ranging from the opportunity for graduate students to commence higher degree research to the career progress of early and mid-career researchers.
- The character, breadth and inter-disciplinarity of Australian research, and in important instances, the prospects for translational science and policy-oriented research.

The lack of quality information amongst academics and researchers ranging from early career through to senior and executive roles, and the conflation of the integrity of the assessment instrument with the perverse consequences it has engendered, poses a risk to the confidence of the sector in ERA. More importantly, institutional manipulation and misappropriation of the ERA poses a risk to the integrity of both the ERA assessment instrument and the SRE funding mechanism.

In the recent history of research quality assessment in Australia both the ERA and its predecessor the Research Quality Framework (RQF) were intended to operate as instruments that could assess the quality of research produced in Australian universities. Though in its early days the ERA was heralded over the RQF by the sector for a number of reasons, the aims of the proposed ERA were identical to its predecessor in at least one important respect. Government and policy-making circles had long considered the prospects of introducing a quality assessment instrument to ameliorate perverse signals ingrained by preceding research funding policy. Funding allocation formulae were commonly portrayed as pushing universities to treat research in economic terms, and to privilege quantity over quality in the publication of research.[6]

Dating back to the introduction of the Unified National System (UNS) in 1989 and the establishment of the ARC, a modern feature of Australian research funding policy has been the allocation of research funding according to performance-based formulae. Integral to the competitive grants administered by the ARC and NHMRC has been the development of performance-based funding within the operating grants of universities, seeking to both stimulate and reward the non-salary components of research and research training. The Australian system of research funding, divided largely between performance-based research block grants and competitive research grant programs, is described as a 'dual support system'.

Since 1989, successive funding programs have relied upon research performance indicators that could neither identify, nor target funding to, areas where the quality of Australian research had been objectively demonstrated.[7] This did not change as research block funding became formula-based in 1995, as the number of Research Block Grants multiplied, or as the proportion of discretionary funding available to universities declined.[8] Following the establishment of the ERA assessment instrument, the SRE scheme has become the first funding mechanism introduced with the intention of rewarding research quality.[9]

In certain quarters it has been an implicit assumption that the ERA, like its predecessor the RQF, would modify the basis of research funding. In 2005, then Minister for Education, Brendan Nelson, called for the RQF to redistribute not only the entirety of the Institutional Grant Scheme (IGS), but also 50% of the RTS.[10] In 2009, the Labor Government's ten-year innovation blueprint *Powering Ideas* asserted that both the ERA and SRE would be linked to sectoral change, with additional funding being used to drive structural reform within institutions and across the sector.[11] In March 2011, the Minister for Research and Innovation, Kim Carr, explicitly wedded ERA to the allocation of the SRE and the RTS.[12] This became part of the intended use of ERA in 2012,[13] and was further flagged in DIISRTE consultations in late 2011.[14]

As statutory organisations dependent upon public funding, encouraged through quasi-market settings to compete with one another, it is apparent that when performance indicators are introduced as a basis to allocate competitive funding (no matter how small) they will be used by universities to maximise revenue, and in doing so they retain the capability of seriously impacting upon both the university workplace and Australia's 'research fabric'.[15] While the ERA currently distributes a very small proportion of the overall Research Block Grants (60% of the Threshold 2 allocation or almost $60m in 2012-13), it is having an increasing effect upon institutional behaviour. Though the allocation of funding establishes a driver for systemic change, it is also apparent that the introduction of any assessment instrument would modify some behaviours through reputational competition alone.[16]

Though there will undoubtedly be efforts to measure Australian research quality through other assessment methodologies, the ERA will not be conducted until 2015.[17] With the 2012-13 Mid Year Economic and Fiscal Outlook (MYEFO) delaying the full implementation of the SRE program, over $300 million in funding will be denied from supporting the indirect costs of research in the sector for the next three years. More importantly this means that support for the indirect costs of research will remain well below 50 cents in the dollar. Nonetheless, the SRE, and potentially the RTS, will be annually distributed partly on the basis of ERA scores, and potentially until a time in which a quality assessment exercise is conducted again.

The fact that university research relies upon public investment means that the Australian public should also expect that the policy objectives are demonstrable, transparent, and seek to minimise systemic risk. In the international literature, numerous studies highlight that a fundamental component of the establishment of an RES is 'assessing the assessment'.[18] In addition, the substantial international literature demonstrates that the implications for 'research actors' and the 'constellation' of research within a national system is critical to the conduct of research quality evaluation 'in its proper context'.[19]

The nature and effect of the interdependence between assessment instruments, funding allocation and institutional responses must be a primary concern for planning in relation to research funding policy.

Conclusions and implications

The research presented in this report leads one to draw a number of important conclusions and implications about the further development of the ERA as an instrument designed to assess the quality of research at Australian universities. In order to minimise the adverse impact that the ERA itself has

upon institutional behaviour, the NTEU would contend that there is the need for:

- A comprehensive independent review of the ERA's impact on institutional behaviour and its implications for the allocation of government resources, compliance costs, research careers and freedom of intellectual inquiry.

- A review of the operation of the ERA in the context of the principles outlined in the National Research Investment Plan (NRIP). In particular, it should ensure the ERA is not inconsistent with Action 7 of the NRIP which addresses structural issues associated with research careers in higher education and provide measures to make these careers more attractive.

- An examination of the direct costs to government and the ARC in administering the ERA as well as the direct and indirect costs imposed on institutions and individual researchers in complying with the ERA.

- Universities to develop policies that promote and protect intellectual freedom consistent with their missions as universities as required by the *Higher Education Support Act (2003).*

- The development of a comprehensive communication strategy that engages the entire research community and includes easily accessible and plain language information about the operation of ERA aimed specifically at staff new to the Australian higher education system including early career researchers, research support staff and staff involved in managing the ERA at their institutions.

- The development of ERA peer networks based on ERA discipline clusters, which would be independent of individual university structures, and be responsible for bridging gaps in communication in relation to assessment processes followed in different discipline groups.

- Greater use to be made of the ERA research by publishing as much of the non-confidential material as possible to showcase the quality of Australian research.

- Ensuring eligible researchers have provided consent as to how and where their research is assigned including in relation to the weights assigned to different FoR codes in multi-disciplinary research.

- Assurances to be obtained from universities that they will no longer use the now discarded ERA journal rankings and other research metrics in relation to staff:
  - Appointments
  - Probation
  - Promotion
  - Performance appraisal or management, and/or
  - Workload management.

1. Introduction – the present study

The NTEU represents the professional and industrial interests of over 27,000 staff employed in Australian tertiary education. Our membership is comprised of academic, research, professional, administrative, technical and other general staff employed at Australian universities and other tertiary education institutions. This report is the result of an exploratory, multi-method study conducted by the NTEU National Policy & Research Unit about the harmful implications of the Excellence in Research Australia (ERA) for publicly funded university research and Australian university staff.

The NTEU has a long-standing interest in the ERA assessment exercise, providing responses on aspects of the design of the instrument and funding mechanisms since 2007. This has included the following submissions:

- The Inquiry on the Higher Education Legislation Amendment (2007 Measures No.1) Bill 2007.
- The Australian Research Council's ERA Inquiry, June 2008.
- The Sustainable Research Excellence in Universities Issues Paper, 31 August 2009.
- The Australian Research Council's ERA Consultation, March 2011.
- The *Options for the Inclusion of ERA in SRE Funding Allocation Model*, September 2011.

This has also included participation on the Research Workforce Strategy Advisory Group (RWSAG), first convened in June 2011 to review the development of quality standards and issues relevant to the review of the Research Training Scheme (RTS).

The NTEU's concerns about the professional interests of members in relation to the ERA began in late 2009. Some of these concerns were acknowledged by government in May 2011, when Minister Kim Carr abandoned the ERA journal rankings, stating that the rankings were being 'deployed inappropriately within some quarters of the sector' and in ways that reflected 'a poor understanding of the actual role of the rankings'.[20] After urging the Minister in October 2010 and the ARC in August 2011 to conduct an independent and comprehensive analysis of the implications of ERA for the sector and university staff, the NTEU proceeded with exploratory research of its own.

The NTEU National Council in October 2011 requested that the ERA be monitored to evaluate:
- The differential effect upon the eight discipline clusters.
- The effects within disciplines and Field of Research (FoR) codes.
- The effects upon university staff, including early career and research staff, and in relation to staff appointments and promotion processes.

When the research began, the NTEU was already aware of situations within the sector in which the ERA had been instrumental in enabling universities to restrictively manage the research performance of staff. Responses to a national survey in June 2012 about the ERA and research performance prompted a widening of the kinds of concerns originally intended for the study. Subsequently, what began as an evaluation of the impact of the ERA upon university staff shifted to a study that sought to explore change in institutional behaviour and practices in relation to research performance, especially where intensified through the ERA process.[21]

1.1 Literature on ERA exercise

In the literature that has emerged in the last four years, scholars have made important contributions in relation to exploring and unpacking the implications of the ERA for the Australian tertiary education sector, from tertiary education specialists to academics researching within their respective institutions, disciplines and 'communities of practice'.[22]

A substantial proportion has been published as editorials and articles reviewing the development of the ERA exercise from disciplinary perspectives.[23] These studies range from legal scholarship to psychology,[24] from journalism to information systems,[25] from commerce to the humanities.[26] These studies also cross a range of technical concerns from the design of the ERA instrument and its variegated reliance upon expert review, bibliometrics and esteem indicators, to the ERA journal rankings and their implications for the character and diversity of Australian research. They include warnings around how the nature of research might change because of the ERA design, including in terms of research that is predominantly:
- Aboriginal and Torres Strait Islander focused
- Interdisciplinary
- Policy-related
- Published in a foreign language
- Creative arts-based, and
- Area-focused.

The *Australian Universities' Review* (AUR) has also provided important contributions ranging from analysis of the ERA methodology to effects of the ERA on disciplinary groups.[27] Much of the criticism that arose through the focus groups about the robustness and probity of the ERA instrument are strongly reflected in the aforementioned publications, and it is not the intention of this study to attempt to recreate research that explores differential effects within the Field of Research (FoR) clusters or codes.

Some of the most relevant prior scholarship focuses upon the purpose and use of research evaluation systems, with a number of articles attuned to the culture of audit that has expanded with the emergence of the ERA and the unfolding of 'gaming' practices amongst academics, research

Table 1.1: Sample of institutional responses to NTEU's national survey

	Did not acknowledge receipt of email	Declined to respond to survey	Responded without answering specific questions	Responded to questions
ACT				ANU; UC
NSW	CSU; SCU; UoW	Macquarie; Newcastle; UNE; UTS; UWS	UNSW; USyd	
NT	CDU			
QLD	Bond; QUT; USQ; USC	JCU		CQU; Griffith; UQ
SA			UniSA	Adelaide; Flinders
TAS		UTAS		
VIC	La Trobe; Monash	Deakin; Swinburne	RMIT	Ballarat; Melbourne; VU
WA		Murdoch		Curtin; ECU; UWA
Multi-state	ACU			Notre Dame

managers and institutions.[28] As Cooper and Poletti have argued, 'the transformative capacity of auditing measures such as the journal ranking scheme that constitutes the heart of the ERA threatens to produce a number of perverse or dysfunctional reactions within the academic community that threaten to undermine research quality in the long-term'.[29] Other relevant scholarship has questioned the rationale in linking the identification of research quality to the allocation of government funding. As stated by Calver, 'The linkages between achievement, recognition and reward have the potential to shape the research priorities and agendas of institutions and individual researchers'.[30]

Prior scholarship has been particularly strong in scrutinising this in relation to the now defunct ERA journal rankings. In fact the majority of the literature and the warnings about the misuse of the ERA is focused upon the ERA journal rankings. For instance, Spongberg considered that the future of interdisciplinary feminist research was dire 'given that the ERA lists will eventually be used to determine funding of research in Australia'.[31]

Others have observed that the Department has displayed a lackadaisical approach to defining the funding instruments. In considering the government's attempts to develop funding policy, Macintryre argued, 'These consequences have clear implications for the ERA methodology. It is one thing to produce a dashboard of indicators for research performance in a particular field of research, another to arrive at rankings that will determine the future of that field at an institution'.[32] These views presage the perspectives reflected in this report.

What is open to further consideration is the extent to which the ERA assessment imposed upon Australian researchers will result in positive versus negative adaptive behaviour, and the extent to which any kind of adaptive behaviour is constrained either by particular design elements of the ERA instrument, or the adaptation of universities to this performance-oriented environment.

1.2 Methodology

Between April and September 2012, the NTEU conducted an exploratory, multi-method study that included:

- A national survey of 39 senior research administrators about the use of ERA and the use of indicators of research performance at universities around Australia (Table 1.1).
- Eight recorded and de-identified focus groups at four institutions, and eleven recorded and non-recorded in-depth, semi-structured interviews with participants from five institutions, the recorded sample totalling 50 participants (see Table 1.2).
- An NTEU workshop in Melbourne that focused upon the experiences of 35 Early Career Researchers (ECR) and Academics (ECA) (see Table 1.3).

The purpose for utilising a range of data collection methods has been to triangulate and thus cross verify the perspectives, subjectivities and concerns of interview and focus group participants.

1.2.1 National Survey on Approaches to ERA and Research Performance Measures

Between April and June 2012, an NTEU national survey was addressed to 39 Deputy Vice Chancellors Research (DVC-Rs) as the senior officers responsible for research policy at their institution. The survey asked questions about the institutions' policies on ERA journal rankings and the use of research metrics. 28 institutions (almost 70%) provided some kind of reply, with eleven not acknowledging any contact (see Table 1.1). A list of the questions sent to these individuals is provided at APPENDIX A.

Table 1.2: NTEU focus groups and in-depth interview sample

		Count			Count
Gender	Male	25	Class	Level A	3
	Female	25		Level B	12
NTEU Member	NTEU Member	45		Level C	8
	Non-member	5		Level D	7
Academic/General	Academic	44		Level E	14
	General	5		General	3
	Other/Unknown	1		Other/Unknown	3
Work Function	T&R	39	Discipline Cluster	PCE	0
	TO	1		HCA	6
	RO	8		EE	2
	Other/Unknown	2		EHS	12
Discipline Type	HASS	25		EC	5
	STEM	19		MIC	3
	Other/Unknown	6		BB	1
Age	Under 20	0		MHS	14
	20-29	0		Other/Unknown	7
	30-39	5	Total		50
	40-49	9			
	50-59	16			
	60-69	13			
	Over 69	1			
	Other/Unknown	6			

Out of the 28 universities that acknowledged the survey invitation, five declined to respond to the survey and four provided replies that did not explicitly answer the survey questions. In the case of Swinburne University, the DVC-R referred the NTEU to an article he had published in *The Conversation*, but did not state how Swinburne's research policy impacted upon academic promotions.[33] In the case of Murdoch University, the Branch identified that the DVC-R was relatively new and the university had only just established a Research Development Committee to consider possible approaches to research management. At the University of Southern Queensland, the DVC-R had left and the NTEU is still awaiting a response from the new DVC-R. It is important to note that where the university response was not comprehensive, those communications often came from someone other than a DVC-R, such as Directors of Human Resources, itself indicating that there are important staffing implications in the development and use of research performance metrics.

1.2.2 Focus groups and in-depth interviews

NTEU conducted focus groups at universities in Victoria and the ACT, and utilised a combination of qualitative focus group methods.[34] The focus group design was originally segmented across three groups of staff:

- Teaching and Research academics in ongoing employment (T&R)
- Research only staff (academic or general) (RO)
- Teaching only or teaching focused staff (TO)

Focus group design remained reliant on non-probability sampling and participants were not selected on the basis of the representativeness of the group. Though originally intended to segment on the basis of these three categories, the overwhelming interest of T&R academics made segmentation difficult, and all focus groups became open to academic and research staff.

There was no interest in selecting participants other than on the basis of the basic criteria, although the recruitment process deliberately sought to include non-members, combining emails through NTEU Branch emails lists, cold calling, and in some instances distribution through university email lists. Nonetheless, the methods of recruitment tended to attract participants who were members, and in more senior career positions. With the recruitment process, opportunities to conduct focus groups arose at smaller workplaces not located on the main campuses of universities. Three focus groups were conducted away from the main or major campus

Table 1.3: NTEU ECR Workshop sample

		Count			Count
Gender	Male	9	Discipline Type	HASS	23
	Female	26		STEM	12
NTEU Member	NTEU Member	14		Other/Unknown	0
	Non-member	21	Contract	Ongoing	11
Academic/General	Academic	28		Contract	13
	General	3		Casual	4
	Other/Unknown	4		Other/Unknown	7
Work Function	T&R	17	Total		35
	TO	1			
	RO	10			
	Other/Unknown	7			

of each institution. All focus groups were between 45 and 69 min in length. To assist in honing discussion on the day, a half-page of discussion points was circulated in advance of each focus group. A list of the questions sent to these individuals is provided at APPENDIX B.

In undertaking the focus groups, opportunities arose for individual interviews to be conducted that provided different kinds of expert information about the nature of university adaptation to the emerging research performance environment. These were focused primarily at research managers and administrators in senior and executive positions. While supplementary to the focus group method, these interviews were an important component of the sample, providing more nuanced and descriptive information about university research management processes. Interviews ranged from 45 minutes to 2 hours long. All recorded interviews and focus groups were de-identified, and **bolded** names used in this report are aliases.

A significant proportion of the findings contained in this study collect the perceptions, narratives and attitudes across this sample (see Table 1.2). The study demonstrates that qualitative approaches have particular sensitivity to exploring social processes and phenomena in Australian universities that are sensitive in nature.[35]

1.2.3 NTEU ECR Workshop on ERA

Because the focus group sample had a tendency toward highly engaged mid-career and senior staff, many of whom were able to demonstrate expert knowledge about tertiary education policy, research evaluation systems, and the operation and implications of the ERA process on their institutions, the bias meant an under-representation of more junior research and academic staff. To address concerns about the integrity of focus group data, the NTEU ran a two-hour workshop with NTEU Victorian Division in August 2012, focusing on concerns of ECRs and ECAs. The workshop was aimed at 20 to 35 people who defined themselves as ECRs or ECAs from across greater Melbourne (see Table 1.3).

In the workshop, participants were divided into six groups with the intent of collecting comparable information. The findings from the small group discussions amplified attitudinal concerns depicted in the focus groups, in particular concerns about the quality of information and professional anxiety about the implications of research performance expectations upon career pathways.

The promotion of the event again depended upon the support of NTEU university-based branches but also relied heavily upon the support of member and non-member early career advocates at various institutions, and more intense use of social media promotion. In the end, the workshop was over-subscribed and hosted 35 workshop participants from 7 of the 9 universities in Victoria. The largest number of participants were from La Trobe University, followed by Melbourne and Victoria University.

2. Research Evaluation and Performance Funding in Australia

The ERA exercise represents the first research quality assessment process to be fully conducted with the Australian tertiary education sector. Soon after the Labor Government was elected to office in 2007, the Minister for Research and Innovation, Kim Carr, declared that the Coalition's Research Quality Framework (RQF) would be discontinued, the ERA exercise would commence in its place, and the ARC would be tasked with responsibility for its development and implementation. By the end of 2012, Australia completed the second full ERA assessment exercise. To understand the rationale for the ERA it is necessary to situate it amidst the broader performance-based research funding policy environment.

2.1 Overview of Australian research funding policies and performance funding post-Dawkins

A rich scholarly literature exists in relation to the history of performance based funding and its relationship with research in Australia.[36] In an attempt to streamline this narrative, the impetus of performance based research funding in Australia can be claimed to have two major turning points. The first was the introduction of the Dawkins reforms that led to the Unified National System (UNS) under the Hawke Labor Government. In the late 1980s this represented the first major shift towards market-based public policy in Australian tertiary education and also created a unitary system of performance-based funding.[37]

Before the Dawkins reforms, Commonwealth funding in relation to research was mainly allocated through the Commonwealth Tertiary Education Commission (CTEC), a statutory body established in 1977 with the purpose of advising the relevant Minister about tertiary education funding for the direct costs of teaching and research.[38] Until 1987 a binary divide had existed between the ways research-oriented universities and institutes and colleges of advanced education (CAE) were funded. Also until 1987 under the Minister for Education, Susan Ryan, alternative funding mechanisms were not on the cards.[39] By early 1987, the Australian Science and Technology Council (ASTEC), a statutory body providing advice to government specifically on science and technology, had delivered a report advising the Hawke Government about the inadequacy of research funding arrangements and proposed greater allocation of funding through competitive grants processes conducted by a more independent ARC.[40]

The Dawkins reforms delivered greater public investment on a rolling triennial basis beginning in 1989-91, with a portion of the operating grants to universities becoming administered through competitive programs such as the ARC and NHMRC. These bodies would be the vehicles for achieving selectivity and concentration of research. Dawkins also introduced the 'relative funding model' as a basis to adjust to the new system and ensure the old CAEs benefited from a more equitable funding base, providing equal funding for functions carried out by institutions irrespective of type. This led to the development of the Research Quantum's Composite Index (Ci).[41]

Under Dawkins research funding would be distributed through three major mechanisms:

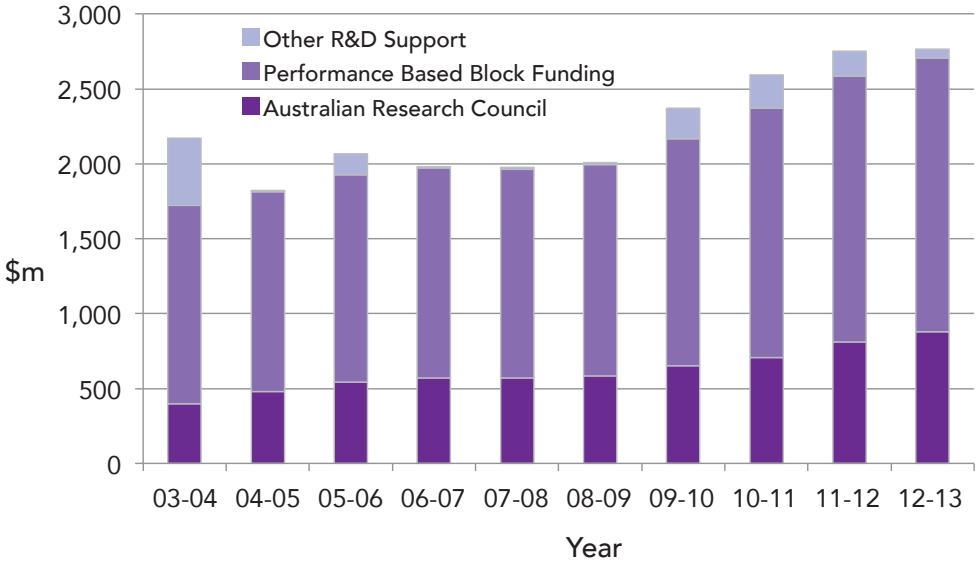
- Program specific funding distributed by the ARC and others.
- Support for research training made on the basis of enrolments as well as Australian Postgraduate Research Awards (APRA).
- The Research Quantum (RQ).

Reforms around performance based research funding would be the subject of ongoing review and change. By 1995 the Research Quantum, which was originally allocated only on the basis of success in attracting operating grants, changed to the Composite Index to reflect the increased scale and complexity of research, by incorporating performance indicators that measured the number of publications and research degree completions.

Nonetheless, the Dawkins reforms established a policy framework that has in important ways endured beyond specific funding programs or performance indicators. According to the Green Paper, the tertiary education system needed to be funded on the basis of public accountability requirements, performance indicators were necessary to ensure this accountability, and the block grant funding system should be modified so that a proportion of the operating grants of universities were allocated on a competitive basis.[42] It represented a 'revolution' in the direction of tertiary education funding by identifying contestability as a basis to encourage efficiency in the allocation of resources by institutions. This also represented a system of allocation on the basis of an institution's research performance dependent upon the preparation by institutions of research management plans and the use of return data (in particular, research income and publications) and other data collected as part of the Higher Education Research Data Collection (HERDC).

The second major turning point was the Coalition Government's 1999 *Knowledge and Innovation* policy statement, following the West and Willis Reviews.[43] The Coalition's engagement in tertiary education was characterised by a range of important events, such as a significant cut in public sources of funding from 1996, and

Figure 2.1: Summary of Australian Government support for Science and Research 2003-13



Sources. 2012-13 Science, Research and Innovation Budget Tables; MYEFO 2012-13 Expense Measures

an escalation in the proportion of performance based block funding. However, the *Knowledge and Innovation* policy statement is important because it proposed a performance-based approach to all research block funding. This became articulated through two performance-based schemes, the Institutional Grants Scheme (IGS) that replaced the Research Quantum, and the Research Training Scheme (RTS). Universities would also be obliged to develop more transparent Research and Research Training Management Plans that reported on research performance as part of their educational profiles.

It is notable that concerns about the introduction of performance indicators have arisen throughout the existence of these policy frameworks. For instance, Marginson and Considine considered that the RQ was becoming the primary measure for the research standing of institutions and that institutions began to focus on the activities that generated the most Quantum allocation, a focus that was heavily weighted toward research income rather than research activity (80% of the total).[44] The RQ would elicit concerns about perverse incentives that privileged research-intensive universities, and disciplines in which research was more expensive (such as the sciences).

Under both the Labor and Coalition Governments' funding programs, a university's share of research publications was also one measure that determined the proportion of funding it received, but the measure only identified the volume of work produced. It was perceived that these publications pushed a greater bias towards certain kinds of research output, narrowed concepts of research by focusing on publications, and towards the publication of quantity versus quality. Research increasingly demonstrated that while the quantity of research was increasing, it was being published in low impact journals.[45]

According to the National Research Investment Plan (NRIP), the higher education sector accounted for $6.7 billion (or 24 per cent) of gross expenditure on research and development (GERD) in 200809 and support for the conduct of publicly funded research constituted $4b or 45% of government research and innovation funding ($8.9b in 2012-13).[46] Almost 50 per cent of higher education R&D expenditure was directed to basic research activities.

In 2011-12, research block funding represented $1.8b (see Figure 2.1). This had grown from $1.3b in 2003-04. However, as noted by Larkins, the RIBG and other research block grant funding has progressively decreased between 2000 and 2008 from 71 cents in every dollar of research income (not just the ARC) to 39 cents in 2008.[47] The contribution of research block funding represents the critical infrastructure that supports Australia's research effort.

In spite of the introduction of research quality assessment in Australia since 2006, the Department has continued to use research income and publications returns in conjunction with data from the HERDC to determine the allocation of funding for a number of schemes including:

- Research Training Scheme (RTS).
- Australian Postgraduate Awards (APA).
- Sustainable Research Excellence (SRE) program.
- Research Infrastructure Block Grants Scheme (RIBG) (Category 1 research income only).
- Joint Research Engagement (JRE) Scheme.
- Commercialisation Training Scheme.
- International Postgraduate Research Scholarships Scheme.

The implication is that performance indicators have impacted upon the nature of research performance long before the development of the ERA or its predecessor the RQF. At each occasion that these programs have been assessed or revised, tertiary education specialists have raised issues about the imposition of performance-based indicators on Australian research. Nonetheless, without the ERA it is obvious that other kinds of indicators influencing contestable research funding will remain, if not expand, as the basis of maximising competitive advantage between institutions.

2.2 Development of the RQF

Discussion about the introduction of research quality assessment in Australia dates back to the 1990s. The National Board of Employment, Education and Training (NBEET) considered the introduction of a research quality exercise similar to the UK's Research Assessment Exercise (RAE) in 1996 and decided that is was not desirable, in spite of problems with the existing publications measure.[48] Interest in a research quality exercise was also evident in the Senate Committee on Education's 2001 *Universities in Crisis* report, as well as the Department of Education, Science and Training's 2002 *Setting Firm Foundations* issues paper.[49]

In May 2004, Coalition Prime Minister John Howard announced that the Australian Government would establish Quality and Accessibility Frameworks for publicly funded research as part of the *Backing Australia's Ability* programme.[50] This followed the publication of the *Evaluation of Knowledge and Innovation Reforms Consultation Report* by an External Reference Group led by Professor Chris Fell. This report found that research block funding should be based on 'peer review judgments made of the overall research excellence of each university' and concluded that 'there would be value in exploring whether it is possible to design an approach to quality assessment that avoids the RAE's drawbacks'.[51] The Government established an *Expert Advisory Group* (EAG), chaired by the RAE's Sir Gareth Roberts, to support the development of the RQF.

The aim of the RQF initiative was to develop the basis for an improved assessment of the quality and impact of publicly funded research. It was intended to be:

- Transparent to government and taxpayers so that they are better informed about the results of the public investment in research.
- Ensure that all publicly funded research agencies and research providers were encouraged to focus on the quality and relevance of their research.
- Avoid a high cost of implementation and a high administrative burden on institutions.
- Inform future research funding distribution.

The methodology for the proposed model involved universities selectively submitting groups of researchers for assessment by external panels, resulting in a system of ratings on the basis of the portfolios provided. This would then form the basis for the allocation of formula based research block funding to the participating institutions.[52] By 2005 the Minister for Education, Brendan Nelson, had called for the RQF to redistribute the entirety of the IGS, and also 50% of the RTS. Following further discussion in the Expert Advisory Group, the final advice was provided in March 2006 to the Minister for Education, Julie Bishop, who then appointed the RQF Development Advisory Group for the implementation of the RQF, with 2008 intended as its first assessment round.

2.3 Development of the ERA

On the election of the Labor Government in late 2007, the ERA was introduced to replace the Coalition's RQF, and at its announcement the ERA apparently faced less opposition, largely because of differences in the methodology of evaluation. Where the RQF sought to identify the quality of research at a given institution through a comparative assessment of each institution's four best research groups, the ERA was intended to comprehensively analyse quality in all areas of each university's research activity. Also, when the ERA was first announced the NTEU was told that the actual assessment of disciplines would not occur simultaneously and thus would not be comparable, and would be rolled out over a number of years. Originally, the ARC acknowledged you could not compare apples with oranges.

It was clear from the outset that the ERA represented a key policy instrument in achieving the Rudd Government's tertiary education reform agenda, with a role in promoting sectoral change. In explaining the government's intentions to replace the RQF, the Minister for Research and Innovation, Kim Carr, outlined that the ERA had a role in benchmarking Australian research excellence in an international context, but also forecast that the ERA would identify areas of potential research excellence to inform future resource allocation. As part of the Federal Government's sensitivity around these matters, Senator Carr emphasised the importance of seeking support from researchers that the system was fair, equitable and transparent, and stated that the ERA would be decoupled from funding until the system's standing and credibility was assured.[53]

On 5 March 2008 it was announced that the ARC would administer the ERA. Administrative efficiency, simplicity and a balance between metrics and peer review were among the reasons offered by Government for making the ARC responsible for the ERA.[54] By late January 2011, the ERA 2010 National Report was released, soon followed by the publication of a comparable ranking of ERA scores on *The Australian* website.

2.4 Development of the funding allocation methods linked to the ERA

The preparation for ERA 2012 overlapped with trials and consultations conducted by the DIISR, which had primary responsibility for the development of the Sustainable Research Excellence (SRE) funding allocation method attached to the ERA scores. A timeline highlighting key dates that combine the development of the ERA and the SRE is listed in Figure 2.2.

The SRE program was announced by the Australian Government in the 2009-10 Budget Papers as part of the *Powering Ideas* white paper, the Labor Government's response to Terry Cutler's Innovation Review.[55] The SRE initiative was aimed at redressing the indirect costs of

Figure 2.2: Timeline highlighting key dates since the establishment of the ERA

New Labor Government ends the Coalition's RQF process	Dec 2007	
ARC tasked with development and implementation of the ERA	Mar 2008	
ERA Consultation Paper released	May 2008	
New Indicators Development Group convenes to develop ERA methodology	Jul 2008 to Mar 2009	
Draft Submission Guidelines for PCE and HCA clusters released to sector	Jan 2009	
	May 2009	Federal Budget and *Powering Ideas* introduces new SRE program
ERA 2009 Trial conducted - involving only PCE and HCA clusters	Jun to Oct 2009	
Institutional reports for PCE and HCA released. ERA 2010 Submission guidelines released.	Dec 2009	
	Jan to Apr 2010	Survey 1 trial on staff hours data conducted
	May to Jun 2010	Consultation Paper exploring principles of SRE allocation released and department conducts consultations. Universities financial data due.
Institutional submission for ERA 2010 conducted. Based on eligible researchers at 31 Mar 2010.	Jun to Aug 2010	Survey 2 on staff hours data conducted.
Minister Kim Carr announces ERA 2012	Oct 2010	
	Nov 2010	Minister Kim Carr modifies *Other Grants Guidelines* legislative instrument to allow for allocation of funding through SRE program based upon ERA.
	Dec 2010	Universities advised about distribution of SRE funding for 2011.
ERA 2010 National Report released	Jan 2011	
ARC review of Ranked Journal List and Journal Rankings for ERA 2012	Mar to Apr 2011	
ERA Journal rankings end. Minister Kim Carr announces changes to ERA 2012.	May 2011	
	May to Jul 2011	Staff Hours Survey conducted by the Department of Innovation, Industry Science and Research for the Transparent Costing (TC) exercise
Consultation on ERA 2012 Submission guidelines and Discipline Matrix	Jul to Sep 2011	
ERA 2012 Submission Guidelines and Discipline Matrix released	Sep 2011	
	Aug 2011	Consultation Paper on Options for Inclusion of ERA in SRE released
	Sep to Nov 2011	SRE distribution methodology including Excellence Index (Ei) finalised
	Dec 2011	Universities advised about distribution of SRE funding for 2012
Institutional submission for ERA 20102 conducted. Based on eligible researchers at 31 Mar 2011	Mar to Apr 2012	
	Jun 2012	SRE Financial Data Collection due
	2013	

research, ensuring that tertiary education institutions were better placed to meet the cost of research activities not met by competitive grants programs. Along with the Research Infrastructure Block Grants (RIBG) the SRE was intended to lift indirect support to 50c in the dollar of Australian Competitive Grant (ACG) funding, and eventually was intended to take over the RIBG program by 2015.[56]

Soon after the 2009 Budget, the former DIISR began development of a funding formula, and consultations into the detail of the funding model occurred in late 2009 and early 2010, culminating in a Consultation Paper.[57] These consultations determined that the SRE would determine three discrete allocations:

- **An SRE Base (20%):** Where all universities receive a share of 20% of SRE funding based on their share of ACG Income (Base).
- **An SRE Threshold 1 (13%):** Where universities that participate in TC and ERA receive a share of a further 13% based upon their relative share of the first $2.5 million ACG income.
- **An SRE Threshold 2 (67%):** Based on a formula that would incorporate the ERA.

In 2011, the 67% of SRE funding (Threshold 2) was allocated on the basis of Transparent Costings (TC) and a 'performance moderator' based on research staff (FTE) divided by weighted publications. An options paper was released in August 2011 to explore the modification of the SRE Threshold 2 to incorporate allocations based upon the ERA quality rankings.[58] These consultations developed an Excellence Index (Ei) derived from the results of the 2010 ERA exercise. In 2012, allocation of the SRE Threshold 2 funding is to be determined by a performance index that incorporated the Ei score.[59] The institution's Ei score is the sum of each FoR code's contribution to the Ei score and is weighted 7, 3, 1, 0, 0 for the score of 5, 4, 3, 2, 1 respectively.

In contrast, funding for student places predominantly has been supported through the Commonwealth Grants Scheme (CGS), funding for which has risen from $3.5b to $4.8b between 2007 and 2010. In relation to research training, a proportion is allocated through scholarship schemes such as the Australian Postgraduate Award (APA) and the International Postgraduate Research Scheme (IPRS). A proportion also comes from the Research Training Scheme (RTS) whose purpose is to support the indirect costs of research training for higher degree research (HDR) students.

The introduction of performance based funding attached to research training highlighted that the necessity of research training extended well beyond student finance, with the former Minister for Education, Dr David Kemp establishing in the white paper that previewed the RTS, that HDR students were a major resource in terms of research yield, academic rejuvenation and dissemination of knowledge and skills within and between the research and wider communities.[60] In 2012, the RTS performance index was composed of three kinds of performance based data: HDR student completions (50%) per cent; Research income (40%); and HERDC recognised research publications (10%).

The funding dedicated to the SRE program was the major part of the discretionary funding denied the tertiary education sector in the 2012-13 Mid Year Economic and Fiscal Outlook (MYEFO) (see Figure 2.3).

In August 2011, the former DIISR also undertook a review of the development of quality standards and issues relevant to the review of the Research Training Scheme (RTS) through the Research Workforce Strategy Advisory Group (RWSAG). The review was undertaken in two parts, beginning with a review of the quality aspects around research training, and intended to follow with a second review focused upon technical aspects of the RTS. The draft consultation paper for the first review anticipated that the second could include options on how outcomes of the ERA would feed into the funding formula.[61] This second options paper has not yet been presented to the sector.

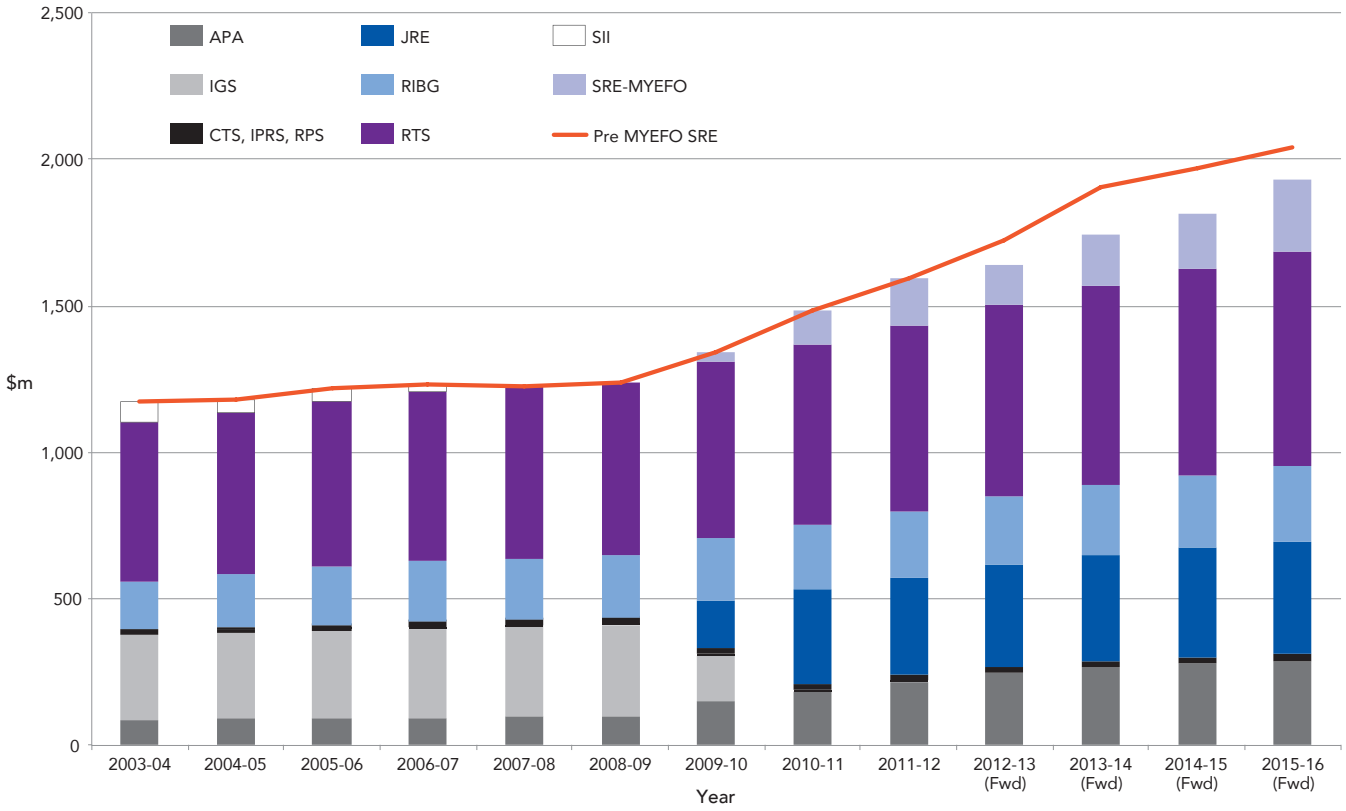
Also in 2011, the former DIISR published a review of Australia's publicly funded research, calling for greater national strategic dialogue and better coordination of Australian research effort.[62] The review also called for a feasibility study to be undertaken about approaches for developing a system-wide research impact assessment mechanism. Discrete from this, a national trial to measure the economic, social and environmental benefits, or 'impact' of publicly funded research was undertaken at 12 universities, including members of the Australian Technology Network of Universities (ATN) and the Group of Eight Universities (Go8), Charles Darwin, Newcastle and the University of Tasmania. This was called the Excellence in Innovation for Australia (EIA).[63] In July 2012, a discussion paper moving towards a National Research Investment Plan (NRIP) followed the Department's review of publicly funded research and the Plan was finally published in November 2012.[64]

2.5 Why the quality of publicly -funded research is evaluated

At its most general, a research evaluation system (RES) represents a state instrument deployed through a research policy agenda that is focused at improvement in the quality of publicly-funded research. It is distinguishable from the practice of research evaluation or assessment that focuses upon the methodologies that describe individual evaluation tools, ranging from peer review to bibliometrics, and from case to patent analysis. It is also distinguishable from a newer term, performance-based (budgeting and) research funding systems (PRFS), which describes not only the evaluation of research quality but the distribution of research funding that depends on the results of the evaluation.[65]

In becoming part of the management and governance of publicly funded research around the world, RESs have had a diverse array of national histories (see Table 2.1). As asserted by the German State Secretary for the Ministry of Education in 2005, these first emerged in the 1980s, and shifted to the evaluation of institutions in the 1990s.[66] System-wide research assessment began in the UK in 1986 when the University Grants Committee (UGC) prepared and published

Figure 2.3: Past and projected funding for Research and Research Training provided under Higher Education Support Act (HESA) 2003, 2003-16



Sources. 2012-13 Science, Research and Innovation Budget Tables; MYEFO 2012-13 Expense Measures

its first report. In the Netherlands, a committee for chemistry was established in 1978 and delivered a report about the development, quality, and relevance of Dutch chemistry in an international perspective in 1980. The Dutch model began in earnest in 1985, with the Ministry of Education and Sciences and Dutch tertiary education institutions agreeing to develop a national system in which universities would be responsible for the internal and external assessment of their various education and research roles.

In the international scholarship, the emergence of RESs and PBRFs is generally attributed to a range of system-wide forces. Firstly, there is the transformation in the public value of tertiary education systems which posits the nation-state as a driver of prosperity and economic productivity, and the growing perception that public investment in science and technology is a basis to leverage global competitive advantage. Secondly, the interest in evaluation systems is underpinned by the convergence between 'Mode 2' approaches to knowledge production that result in context-driven, interdisciplinary and problem-oriented research, with changes in research funding systems that deliberately focus upon transparency and public accountability.[67] Thirdly, there is government's expanded emphasis upon competition through concepts such as the New Public Management (NPM) that has used the inherent competition in research to formalise systems of funding contestability, and establish coordination frameworks that simultaneously drive at improvements in state control as well as transparency.[68] As claimed by Hicks, the introduction of PBRFs tend 'to be just one part of larger changes and although independent rankings may substitute for the research evaluation component, without the larger changes universities cannot respond to incentives to increase their prestige. This suggests that the focus should not be the PRFS *per se*, but rather increasing contestability and institutional autonomy in a university system'.[69]

Ultimately, the literature highlights that performance-based approaches to evaluating and funding research are highly diverse and have internationally resulted in a 'continuum of complexity'. Certainly, there is a range of critical ways in which one may wish to delineate different kinds of RESs. Gerna and Martin described one important distinction between *ex ante* and *ex post* evaluations, or the difference between formative evaluations that are conducted prior to research, and summative evaluations that involve making judgments about the performance of a unit by comparison to similar units.[70] Coryn et all distinguished between three types of RESs by looking at the performance indicators embedded in the funding allocation process:

- **Type I:** Large-scale performance/judgment based exercise of various types and classes (performance based funding).
- **Type II:** Bulk funding models (block grants to large groups).
- **Type III:** Indicator driven-models (e.g. funding based on algorithms).[71]

In contrast, Glaser differentiates between four kinds of RESs based upon their consequences for universities.[72] Hicks narrowed in on PRFSs and details shared characteristics amongst all of them including the focus on increased productivity, stronger service orientation, enhanced accountability and introducing market incentives.[73] Tunzelmann and Mbula described another four basic approaches to RES.[74]

Table 2.1: Selected national performance-based research funding systems for universities

Country	System	Year implemented/ major revision	Agency
United Kingdom	RAE moving to REF	1986/current	Formerly HEFCE, now Department of Business Innovation and Skills
Spain	sexenio	1989	National Commission for Evaluation of Research Activity (CNEAI)
Slovak Republic		1992/2002	Ministry of Education
Hong Kong, China	RAE	1993	University Grants Commission
Australia	Composite Index; RQF; ERA	CI – 1995; ERA – 2010, 2012	Australian Research Council (ARC)
Poland	Parametric evaluation	1991/1998-99	Science Council
Portugal	Research Unit Evaluation	1996	Science and Technology Foundation
Italy	VTR/VQR	VTR – 2006; VQR – 2003/current	Agency for the Evaluation of University System and Research
New Zealand	PBRF	2003/current	Tertiary Education Commission
Belgium (Flemish community)	BOF-key	2003/2008	Steunpunt O&O Statistieken (SOOS)
Norway	Norwegian model	2006	Ministry for Research and Education
Sweden	New model for allocation of resources	2009	Ministry of Education
Denmark	Implementation of the Norwegian model	Current	
Finland	Funding formula for allocation of university resources	1998/2010	Ministry of Education

Source. Hicks 2012

The use of performance indicators has become commonplace internationally. As argued by Meek and Lee, 'This is where performance indicators become most controversial as the emphasis shifts from their use as one of many inputs into effective decision-making to using them as a ranking device to differentially allocate esteem and funding'.[75] Nonetheless, in considering the different ways in which RES is understood, it is important to acknowledge that the introduction of state-sponsored RES is not necessarily associated with the allocation of government funding. And where it has been, others have warned about the unique national dimensions that guide the design of research assessment. For instance, Auranen and Nieminen have provided warnings about the country-specific differences among university systems in relation to steering impulses and competition incentives, and that university research is conducted in different country-specific funding environments.[76]

Previously, Orr argued that system design must match the design purpose. He argued that a penalty system would only work if the purpose was to instil competition, 'a decision regarding each element must be related back to the ultimate purpose of the procedure and to the context within which the procedure will be implemented. A change in purpose would necessitate a review of the procedure's design. Adopting an existing procedure for a different context would equally require modifications'.[77] Comparability is tied to purpose, and the design purpose represents a central feature of an RES's integrity and credibility.

Instructive to this, the Berlin Workshop in 2005 called for the object of research evaluation to be situated 'in its proper context'. This proper context included the threat of 'project fallacy' or a disaggregation between the actual assessment exercise, as conducted by a public agency, and the impacts upon the nature of research, or interaction between the measure and the strategies of the 'research performer'. The workshop importantly concluded that, 'Evaluation needs to take the actors and the constellation as the units of analysis'.[78]

In May 2012, the League of European Research Universities (LERU) likewise called for governments and research funders to 'assess assessment', 'evaluating what works in different research environments, applying lessons learned rigorously but sensibly, and enabling informed decisions on the basis of valid and reliable evidence. Indeed, one of our main messages in this paper is that research assessment needs to be understood correctly and applied sensibly'.[79]

Underpinning any of the potential approaches and methodologies that a country might take to research evaluation, it would seem self-evident that an assessment about the impact of the RES itself should be fundamental to evaluation, importantly providing insight into how the RES might be improved over time. This kind of assessment must look not only at research productivity in a metric sense, or confined to the evaluation instrument itself, but its effects upon the culture of research more broadly.

3. Reflections on the ERA exercise

3.1 Summary

The next three chapters set out the findings of this Report. Chapter 3 particularly relied on the eight focus groups and eleven in-depth, semi-structured interviews, the recorded sample totalling 50 participants, as well as drawing from the national survey of 39 senior research administrators about the use of ERA to build questions around the quality of communication about the ERA. This was supplemented by findings from the ECR workshop.

Amongst participants there was a wide divergence of opinions about what the ERA was meant to do, whether it was fulfilling those purposes, and the extent to which it generated public benefit. In contrast to DIISRTE's claims that there is a 'broad acceptance of ERA as a rigorous method' by tertiary education stakeholders,[80] many participants had fundamental concerns with the ERA methodology. In any case, it is important to highlight that the ERA was not universally considered a poor assessment instrument.

Many academics and researchers expressed deep concerns about whether the ERA process was inclusive of different kinds of research output, and the implications for publishing in journals not included in the *2012 ERA Journal List* (such as foreign language journals). Some expressed concerns about whether the ERA process was inclusive of non-traditional outputs, such as creative outputs, and other esteem indicators (such as editing non A* ranked journals). In nearly every focus group, an assumption was made was that the ERA process had a disproportionate journal emphasis, and disadvantaged particular disciplines and kinds of research.

In part, this can be contextualised by the fact many academics and researchers had poor access to information about the ERA. However, barriers to information also led many researchers to conflate the ERA with practices and behaviours at various institutions that have either sought to manipulate the ERA outcomes or drawn upon ERA indicators in the performance management of staff. This includes the formal use of the ERA journal rankings over a year after they were abandoned and in spite of some efforts by the ARC to ensure they are no longer used. In limited instances the ERA and the ARC were blamed for institutional research performance practices in fact unrelated to the ERA.

Lack of clarity about the ERA's purpose has at one level suspended some criticism, but on another has reduced the confidence of Australian academics and researchers. It has enabled a conflation of the integrity of the assessment instrument with the perverse consequences it has engendered. The lack of quality information amongst academics and researchers ranging from early career through to senior and executive roles poses a risk to the confidence of the sector in ERA.

3.2 Perceptions of the ERA methodology

In brief, the Australian ERA exercise is a system of research evaluation that fundamentally depends upon peer review. The ARC collects comprehensive data from all eligible tertiary education institutions, including institutional information and data on a range of indicators of research productivity. These are described as submissions.[81]

The data is evaluated by eight Research Evaluation Committees (REC) established at what is understood as the 'discipline cluster level', and composed of senior, expert researchers from around Australia who have been nominated by the ARC. The eight disciplinary clusters are defined by the ARC (and in the 2012 ERA exercise this has been modified to create a discrete discipline cluster for Economics and Commerce):

- Physical, Chemical and Earth Sciences (PCE)
- Humanities and Creative Arts (HCA)
- Engineering and Environmental Sciences (EE)
- Education and Human Society (EHS)
- Economics and Commerce (EC)
- Mathematical, Information and Computing Sciences (MIC)
- Biological and Biotechnological Sciences (BB)
- Medical and Health Sciences (MHS)

The scope of data covered in the decisions made by RECs has included:

- Explanatory Statements.
- Eligible Researcher Data (FTE; level; status; function; FoRs up to three four-digit codes).
- Data on Research Outputs (books, chapters in scholarly texts, journal articles, conference papers, non-traditional output).
- Data on Research Income.
- Data on Applied Measures (plant breeder's rights, patents, registered designs, etc).
- Data on Esteem Measures (fellowship of a learned academy or AIATSIS, nationally competitive fellowships, membership of a statutory committee, etc).

RECs and ERA Peer Reviewers also directly peer reviewed a sample of research output. In the evaluation process, RECs rate each Unit of Evaluation with a score between N/A and 5. A Unit of Evaluation is effectively the Field of Research (FoR) code for all research submitted at an eligible institution. The final RECs scores are published in the National Report.

In the 2010 ERA exercise, particular research outputs (i.e. journal publications and some conference papers) were ranked according to the 'ERA journal rankings' along four tiers of quality A*, A, B, and C. This ranking system was abandoned in May 2011 and replaced with a 'new journal indicator'.[82] Available to the RECs is a list of all the journals that a single Unit of Evaluation published in, and orders them from the journal containing the greatest number of articles down to the least.[83]

3.2.1 Mistaken assumptions about the role of ERA journal rankings

The focus groups explored concerns around the ERA methodology in some depth. However, a significant number of participants addressing the ERA methodology mistakenly presumed that ERA journal rankings were still in operation.

To illustrate the degree of misunderstanding, in Focus Group 3 the discussion about the ERA methodology led to assumptions that the ERA journal rankings were still being implemented. Three participants went on to assert that a primary purpose of the ERA was to create a hierarchy of research outputs focused around journal publications. The ERA methodology thus had a purpose in influencing: (a) the mode of output of academics towards journals irrespective of discipline, and (b) the direction of output to specific journals considered as A* and A.

Participants employed in departments or research centres that no longer focused on ERA journal rankings often acknowledged a residual practical use of the ERA journal rankings as a quality proxy for publication selection and performance review purposes. Others acknowledged their role in the university environment for a range of non-evaluation purposes, sometimes informally, but on numerous occasions implemented through university policy. Some of the more adverse consequences in the use of ERA journal rankings will be explored in a later chapter.

3.2.2 Other assumptions and key concerns

Taking into account that some of the concerns expressed by participants, including potential misunderstandings about how the 2012 ERA process was conducted, key issues across all focus groups included that the ERA:

- Has too strong an emphasis on journal publications.
- Excludes important kinds of research such as non-traditional outputs and esteem indicators (such as creative works and non-English language journal publications).
- Contains an inherent bias towards STEM disciplines.
- Created misunderstandings around submission expectations because of changes in the 2012 methodology.
- Has a questionable methodology because of alleged inadequate practices and accountability measures around journal ranking assessments or ERA peer reviewers.
- Does not moderate ERA scores according to career progression of the FoR groupings of staff, thus weighting the demonstration of research quality to senior and established staff.

Concerns expressed about the ERA methodology are well illustrated by two Level B researchers in Focus Group 4 and 5:

FRANCIS: Some of the stuff we'd be interested in is other esteem measures for research, or whether you sit on government advisory committees. ...Basically from (what) I understand, the vast majority of what it's (the ERA) used for, and what actually gets reported, is income and publications. ...A lot of outputs, that we see as important, might be included or not included but they're not given the same weight. That's certainly our impression.

ELAINE: I do want to point out that another area that ERA completely overlooked is publications in other languages. I publish in both French and English and my French publications count for nothing - nothing at all. Maybe they (the ARC) don't have any knowledge of (what) quality is and which journals I picked to publish in. Often collected editions are now themes that are run around particular research centres in France. Without (the inclusion of collected editions there are no incentives) to network with someone. ...None of the value that you bring to a university in terms of your international connections and your language actually counts for anything.

Notably there were contrasting perceptions about the potential inclusion of impact measures. Some claimed that a problem with the ERA was that prestigious academic journals tended not to be read or engaged with by more general Australian audiences. In contrast, others suggested that developing an impact indicator would endanger more esoteric fields of research, and have an insidious effect upon research management processes, with research managers likely to look for potentially misunderstood evidence of the quality of academic work:

JASON: Indeed, if ERA was to start talking about impact they'd be running around saying, 'We want evidence of you having produced something that's had an effect in your profession or in your field'.

3.2.3 Improvements to the ERA

There are three issues about the ERA methodology that have clear ameliorative implications for a future ERA round. The first is that a number of research administrators were concerned about the opportunity cost placed upon institutions for meeting their obligations to the ERA submission.[84] The SRE assigns elements of its funding on the basis of compliance with ERA and the TC exercise, but does not account for the opportunity cost arising from the investment of time and resources by universities, senior leadership groups, senior administrators, research managers or support staff, and a legion of 'eligible researchers', preceding or following the ERA process. Certainly, without any independent review of the ERA process the opportunity cost of the ERA exercise in terms of this resource commitment, and of REC members and ERA peer assessors, has not been quantified.

The second is the need to ensure more explicit language and improved communication between institutions and

the ARC to manage misunderstood expectations. This occurred in 2012 for a number of institutions in relation to the percentage of outputs that would be peer reviewed by ARC assessors, with many institutions thinking it was 30% of all outputs, rather than 30% of each kind of output.[85] The implications of this was a very significant time and labour impost placed upon staff and administrators at a number of institutions in April 2012.

The third is that the ERA methodology does not account for research quality on the basis of career progress, and unambiguously contains incentives that disadvantage the development of research staff by institutions, and in particular ECRs and ECAs. This issue arose in a number of contexts during the course of data collection, including in non-recorded interviews.

Professor John Hattie, a New Zealand research evaluation expert, and Associate Dean of Research at the University of Melbourne, elaborated this point. In comparing the ERA and the NZ Performance Based Research Fund (PBRF) he expressed major concerns around the implications for investing in and growing new researchers:

> *Why should 'I' (university) invest in this group of young academics and hope that they will grow? Why not just go out and pick them when they're grown? That is the biggest problem I see with ERA and PBRF. That's why we deliberately changed the rules of PBRF to favour the younger (academics), and encourage the universities to invest in them. ...So my biggest problem with the ERA is –(that) it could stop us investing in our own (young academics).*

3.3 Perceptions of the purposes of the ERA

To properly situate the perceptions of staff, the five key objectives of the ERA according to the *2010 ERA National Report* and the *2012 ERA Submission Guidelines* are as follows:

1. Establish an evaluation framework that gives government, industry, business and the wider community assurance of the excellence of research conducted in Australia's higher education institutions.

2. Provide a national stocktake of discipline-level areas of research strength and areas where there is opportunity for development in Australia's higher education institutions.

3. Identify excellence across the full spectrum of research performance.

4. Identify emerging research areas and opportunities for further development.

5. Allow for comparisons of Australia's research nationally and internationally for all discipline areas.

In the 2010 and 2012 submission guidelines its intended use for the distribution of funding is stated but is notably inconsistent. In the *2010 ERA Submission Guidelines* there is a reference to the SRE:

> *ERA will inform the performance component of the Sustainable Research Excellence in Universities Program. The eligibility of institutions for funding from the Sustainable Research Excellence in Universities Program will be contingent on their participation in ERA. The Government will determine how the allocation of other Research Block Grants may be linked to ERA results in consultation with the higher education sector.*[86]

In 2012 the intended uses were modified to include both the SRE and the RTS:

> *ERA is included as a key measure of performance in the 2011–2013 mission based compacts between the Australian Government and institutions and has already informed the development of the Government's Research Workforce Strategy (RWS). ERA outcomes will also inform:*
> - *The allocation of funding through the Sustainable Research Excellence in Universities (SRE) initiative;*
> - *The funding of research training through a modified Research Training Scheme (RTS); and*
> - *The new minimum standards for higher education research and research training, to be administered by the Tertiary Education Quality and Standards Agency (TEQSA).*[87]

The most common purpose identified by participants was the role of ERA in benchmarking Australian research and identifying areas of excellence. As stated by one mid-career researcher:

> **PETER:** It's designed to measure or perform or assess I suppose, in a metric sense, in a qualitative sense, exactly how we perform as a nation with regards to specific and particular themed research areas, and how we then compare to other research produced in other places. So where we sit, what our focus is, how that focus might shift, (and) how good that focus is comparatively. That's my understanding of the government's use of it.

Unlike Peter, few others identified a role for ERA in identifying emerging areas and opportunities for excellent research, and it was largely left to senior administrators and higher education experts to insist upon the value of the ERA as a public policy instrument, potentially demonstrating to the Commonwealth the value of allocating resources to publicly funded research and universities, against other industries and sectors that compete for the same scarce funding.

On the matter of the ERA's use in informing a funding mechanism, the breadth of knowledge and attitudes were even more diverse. For some it was not clear whether the ERA was meant to allocate funding (or whether it was intended to be used as a performance measurement tool):

SIMON: (The ERA) is supposed to be more aggregated at that institutional-national kind of level, across the particular research areas, but is it being used to compare institutions against institutions, and researchers against researchers, and make appointments on the basis of professional appointments on the basis of an individual's performance within a research centre? I'm not sure whether legally that that's what the ERA charter is, whether that's permissible.

BARRY: I think similar thoughts pop into my mind as well, as Simon's just said. Although I also think, and I'm actually not really sure about this, is how much research funding is actually allocated to universities based on (the) ERA? I'm not sure about how it sits, how important is it really? I had a lectureship in the UK and I was part of their - what they call the RAE which is sort of a similar kind of an exercise. It was always very clear that this was going to contribute a huge amount of funding to universities so it was always attached with such huge importance. So apart from it being an audit and a way of trying to quantify our research quality, I'm not clear about how it actually sits in terms of funding models.

Some participants acknowledged that the comparability of ERA scores meant that the ERA was intended as a basis to allocate and concentrate scarce funding. Very few understood that the ERA was likely to allocate SRE funding. Aside from a research manager who sought to explain it to his focus group and references in an interview with Ian and a research manager, the only consideration of the SRE between participants was as follows:

ELAINE: That was just for the sustainable research at SRE funds. It was for the $5 million basically, that's all, wasn't it?

FACILITATOR: That was competition over $5 million?

ELAINE: Yeah. Wasn't it?

NIGEL: Yeah, but I'm not sure exactly where that fund's come from. I think it's tied to the ERA, the sustainable research funds.

No participant from the ECR workshop mentioned the SRE. Needless to say, there were near negligible references to the RTS as a basis of funding allocation. One of the two references was in relation to the introduction of the recent changes to the meaning of 'research active' conducted through the Monash Institute of Graduate Research (MIGR).

For many participants, the intended allocation of public funding triggered concerns about the kind of resource concentration intended by government. Some demonstrated immense trepidation about measures encouraging greater competition in general. Others portrayed concern about the implications of greater competition for Australian researchers or research in particular disciplines. Several participants, especially senior staff from non-Group of Eight (Go8) universities, were particularly concerned about the concentration of public funding in the Go8s.

Some participants suggested that there were strong differences between what the ERA was purported to do and what it actually did, such as a mid-career researcher from Focus Group 2, an ECR from Focus Group 5, and a senior researcher from Focus Group 8:

CAROL: No, I can see the idea, and I kind of agree with my colleagues, but unfortunately what (the) ERA was intended to do and what it actually does on the ground for working academics are often two different things.

SCOTT: It's there obviously to assess research. It hasn't done that all that well and there's been lots of unintended consequences there that are pretty harmful, I guess.

BILL: But I think it's also an agenda setting system - where it's possible to influence the way research goes, by the way things are applied and various metrics. As such, I don't think that's a terrible thing, but what concerns me is how it can potentially be used by universities and schools, in terms of staff security, and also the impact it's having on teaching, and the trade-off...

In essence, with the participants who expressed an opinion around the purpose of the ERA, a significant proportion claimed the ERA's public benefit was vastly different from perceptions about its intended purpose. In many cases that intended purpose was considered secondary to the implications that the ERA presented in relation to the professional interests of staff.

There was almost a negligible distinction between the role of the ARC and the Department of Tertiary Education in terms of differentiating the responsibilities and policy intentions of government. A small number of focus group participants could not establish a legitimate public purpose for the ERA. In one instance, David from Focus Group 1 highlighted that the argument around research evaluation had not been made as a matter of staff engagement. Notably, where some participants did strongly approve of the ERA exercise, reservations about what the public intent of ERA were enlarged by what it was used for:

JOHN: Now the basic idea of the ERA I don't oppose, alright? I think it's worthwhile - the idea that they're looking for good quality stuff is useful and the government should take that into account in funding. I have real problems with the way it's structured, but I don't have any principle objection to it. I see people really very easily take these things, and do it in an unthinking way, or do it in a way that precludes good work, that's the main danger.

Amongst numerous participants a conflation was made between the introduction of ERA and government's perceived endorsement of adverse performance management practices imposed by institutions. In Focus Group 5 the ambiguity about the relationship between government policy and university behaviour, a description of an Australian approach to university autonomy that Marginson identified back in the 1990s as 'steering from a distance',[88] was directly addressed and unpacked:

MATTHEW: Yeah, but is the government actually funding your faculty less in these areas - - -

GARY: I don't think so, no - - -

JUDY: The government does not fund facilities. The government funds the universities.

MATTHEW: Right. Is the funding for universities - - -

JUDY: Any distribution within the university is the matter for university management as well as faculty management.

GARY: I guess they're thinking one day it might.

MATTHEW: Yeah, one day it might, but if it isn't now, so the management is using the ERA for a purpose which has no financial relevance at the moment by the sounds of it.

NIGEL: I think there (is) governmental pressure on the universities to use the ERA.

MATTHEW: Is it financial or is it just words at the moment?

NIGEL: Well, I don't know because, I mean, all I can go by is rumour.

JUDY: I think it goes to the question about, what information do we get from the universities?

NIGEL: Yeah, but, the critical usage of the ERA is in the distribution of scholarships. That's where it (is) being used already. I mean, it's not only being used for scholarships. It's been used for distribution of research funding inside the university and the faculty offshoots that have (been) spawned by the ERA, have been used in OSP applications in our faculty. But for the higher degree co-location of scholarships the university has certainly moved to have more scholarships in the area of high ERA scores. The rumour is that this is in response to governmental pressure.

A number of participants believed that institutional performance management processes implemented by institutions were tied to the government's intention to exert greater influence or 'control' over the university research environment:

KATE: The government isn't about funding appropriate numbers of universities to provide higher education for the whole community. It wants to redistribute its funding on the basis of some measure of output. It *does* want to redistribute the funds to the institutions that have the best outputs, and it is trying to devise a system to put everybody in competition with each other, rather than saying that every state in Australia deserves to have good universities, every region, and this is how we're going to fund it.

JASON: This is an Australian attempt to emulate what the British were doing for the previous 20-25 years in their research assessment exercise. Other countries have done them and others have not. It is about greater centralised governance of higher education in Australia. As people point out (this) is somewhat ironic given that most universities come from state Acts of Parliament. It is the way that federal government is able to control performance. How does it do that? The perception around this, and I think the nervousness for all of us, is the implications of how the data will eventually be used (and through) how people are ranked.

LESLEY: Why did the government invent this? To create league tables. I think right across the teaching profession. And I put universities in there, although it's (a) slightly different angle. There's a feeling that somehow we probably aren't performing well enough. So you look at the school staff and you say, 'Well the schools are doing badly on these terms. We'd better measure ourselves against the rest of the world'. Whereas previously what they had was a numerical measure of number of outputs (for) universities, now they want to rate them according to quality. So that's a new thing - where we're going to measure stuff that universities do.

GAIL: It's not the rhetorical intention and it's not how it's explained, but I think people are quite aware (that the ERA) would have a number of ramifications, that it would be great on 'this' level, and it would work like 'this' at another level. It's been done in the UK and we're copying it here. They knew what they were bringing in and it has created anxiety to the extent that I kind of I kind of try to block my attention from it. That's why I felt that I didn't really want to come here today. I block my attention from it as much as possible, except when people literally grab me and say you have to do this, or report on it.

3.4 Quality of communication on the ERA

The desirability of communicating reliable information about the ERA to researchers can be argued to inform sound public policy on a number of fronts. Staff engagement would appear to be an important basis to ensure probity about the integrity of institutional submissions. It would also appear to be a necessary basis to properly evaluate whether improvements in research quality have eventually occurred. Of particular importance, in the lead up to first ERA trials in 2008, the Minister for Innovation and Research Kim Carr put forward staff engagement as a de facto design purpose, arguing that for funding to be allocated based upon the ERA, the ERA required the trust and confidence of university researchers;

> *Crucially, the evaluation exercise will initially be decoupled from funding arrangements with the aim of ensuring that the system's credibility and standing are assured before ERA is used to drive resource allocation. This way, the government intends to achieve the trust and confidence of university researchers, and to establish a consensus that the system is fair, equitable and transparent.*[89]

Lastly, the quality of information about the ERA and related funding mechanisms is related to staff knowledge about the internal distribution of research funding by institutions, a principle that has previous been espoused within the research sector, and remains central to the agency of university staff as creators of knowledge.[90]

With the extent of misperception about the public benefit of the ERA in mind, it is clear that the quality of communication about the ERA is also a central tenet in building the trust and confidence of the sector in the ERA. It is notable then that the 2010 and 2012 ERA Submission Guidelines exclude any stated obligation for institutions to engage or inform university researchers, even though it is they who are apportioned to FoR codes in institutional submissions and it is their research that is being assessed.

Furthermore, concerns about the quality of institutional communication about the ERA were highlighted during the national survey on institutional approaches to the ERA, where senior administrators were asked about whether the abandonment of the ERA Journal Rankings had been communicated to staff since May 2011. From the senior administrators who responded directly to survey questions, 12 stated that the abandonment of the ERA journal rankings had been communicated to staff. Some provided details about the fora in which they communicated the end of the ERA journal rankings.

In the survey, a handful of institutions did not make public statements about the end of the ERA journal rankings. Some claimed they did not need to because ERA journal rankings had not been incorporated into university-wide policies in the first place. ANU stated, 'So far as I can recall, ANU did not use journal rankings in any formal process and therefore did not reverse this when rankings were abandoned'. ECU asserted, 'ECU made no formal changes to policy or guidelines with respect to the ERA journal rankings used in Round 1, and hence have no need for further change in response to the abandonment of the rankings'. UNE stated, 'Thus no formal communication was issued relating to the dropping of journal rankings from ERA 2012. The issue would, however, have been communicated by Discipline Champions and Research Director during the preparation of ERA 2012'. Furthermore, one DVC-R interpreted 'formal communication' as communication with 'ERA Cluster leaders, all Associate Deans Research, all Deans via Senior Executive and in changes reported to Academic Board'.

The responses inferred very different perceived expectations in the communication of institutions with staff. This prompted the development of a set of questions that sought comment from focus group participants about the nature of institutional communication on ERA and how information about the ERA was acquired by university staff.

Taking into account that the insight from focus group participants may have been constrained by the disengagement of some from the process, it appeared the most common kind of communication about the ERA from institutions would be an email from the Vice Chancellor or the Research Office. In some instances, participants were aware of university-wide meetings. In fewer instances, participants were aware of faculty, school or centre meetings providing specific information about ERA. On rare occasions this was the subject of discussion at regular faculty meetings. The hierarchical nature of communication was inferred from participants at smaller campuses or in research centres and institutes who displayed poorer access to information than those on main campuses or those well integrated into the university's faculty structure. In a few instances, the first discussion about research performance based on the ERA for some research staff arose during performance review.

Notably, information about alignment to performance measures was predominantly mandated through faculties or schools. Harold, for instance, misplacing a discussion about the abandonment of the ERA journal rankings for the abandonment of the ERA more generally stated:

HAROLD: (I receive occasional information) from the research office, usually a general email, but mostly from within the faculty and discipline networks. (When it comes to) information about the publication scholarship, and the PhD applications, needing to be strategically aligned, that's faculty information and that's continuing even though ERA has been stopped. It's still being used.

The ARC's information about the ERA was most commonly accessed through the website. Some described the website as more helpful than their own institution's pages, usually published by the central research office. A number of participants were quite dismissive about the quality of institutional information that circulated about the ERA. One focus group criticised the quality of information on the university's research website. In Focus Group 7 the question

was met with an unambiguous answer:

LEAH: I think the quality is quite poor.

JILL: It's almost non-existent.

SARAH: I agree. Very random and you know too random to be professional.

It also appeared that quality of communication was hampered in certain instances by staff disengagement, as emerged in Focus Group 6:

BRIAN: I will tell you I'm disengaged with (the ERA) because I couldn't cope with these changes - from one extreme to the other. I said I'm not going to engage with this anymore. I'm not going to keep on changing my focus from one to the other.

JENNIFER: I did know that the journal thing had gone and I think I paid attention to that because of the sense of relief I felt - truly. I have also been very disengaged. It does make me anxious, this whole thing. We only get told about ERA when we have to do things, to contribute towards it, to identify this or that. And we only hear about it when we do well. If we didn't do well, we'd probably hear about it too. That's the level of communication. And I don't want any more. I'm quite happy.

GAIL: Again my sense is that (when) things come around, I read them incredibly quickly and they instantly go to the bottom of my brain's filing system.

Focus group participants overwhelmingly claimed that the institution's formal communication channels provided deficient, mandated and often punitive-oriented information about the ERA:

GAIL: I just know it was never conveyed to me as a dialogue within the faculty. It was always, 'This is what has to be done'. It was a mandated compliance thing. It was never a dialogue around ways to improve, embed, consolidate, whatever. To be quite honest, the only thing that would allow me to engage with it was that we had a very humane face in the form of X, who was the middle person, and empowered me to dare to touch it. Because I didn't want to pay attention. It had just come down in such a sense of mandate. It's about compliance - checking and monitoring and surveying.

3.5 Explaining perceptions and concerns about the ERA

The concerns of participants about the ERA in part were the basis for conducting of the NTEU ECR Workshop at which the poor quality of communication at the peripheries of the academic workforce was strongly confirmed (see Case Study 1). ECRs and ECAs involved in the workshop brought an almost universal interest and engagement in information about the ERA because of a perceived direct relevance to future career pathways.

In contrast to the recommendations made by speakers at the workshop that recommended either disengagement or active shaping of the government's research evaluation agenda, the demographic background of participants and their comments about the ERA process suggest there appears to be a performance knowledge hierarchy, where technical knowledge about institutional and government policy in relation to ERA and other government policies conferred implicit or explicit social status because of a growing understanding that this had direct implications for staff performance . This will be described in greater detail in a later chapter.

It emerged in all forms of data collection that the implications of the ERA are more profound than its role as an instrument focusing university academics and researchers upon the importance of research quality, and was responsible for institutional adaptation, the escalation in institutional attention to research performance, and a range of significant adverse consequences attached to these developments.

Case Study: NTEU ECR Workshop on the ERA

On 17 August 2012, NTEU ran a 2 hour workshop at the Graduate School of Education, University of Melbourne, focusing on concerns of Early Career Researchers (ECR) and Academics (ECA) in relation to ERA and measures of research performance. The workshop hosted 35 NTEU members and non-members from across Melbourne, although many more wanted to come.

The event was advertised on the basis of relevance to an ECR/ECA cohort and the implications of the ERA for career pathways. Based upon the replies to the workshop survey, it appears that many came with perceptions of career relevance in mind.

The purpose of conducting six small group discussions was to collect comparable information about ECR and ECA perspectives on key themes. Each small group explored the following three themes:

- What ECRs believed the ERA is intended to do.
- The professional concerns of ECR's in relation to ERA.
- Where ECRs acquired information about ERA.

The workshop cohort had much lower union density than the focus groups, with 60% non-members, and a much larger proportion employed on an insecure basis. A major point of interest was whether the workshop would reveal greater ambivalence amongst the ECR/ECAs to the ERA's intended purpose.

What is ERA intended to do?

Across the six groups there was some acceptance that government had implemented the ERA as basis to demonstrate its public investment in the sector. However, four of the six small groups highlighted that they were not clear on what ERA was intended to do. They were not sure about what kinds of research are assessed or produced under the ERA. They were concerned about new and shifting goal posts between ERA 2010 and 2012. They were there to ask about the role of 'impact' in the measurement of research quality. They claimed that the ERA lacked transparency.

In understanding that ERA was a basis to distribute public funding a range of assumptions were made about what the ERA was intended to do. Of concern, this included using ERA as a basis to:

- Measure staff performance.
- Shut down some universities.
- Control research output and researchers. One group described ERA as a 'Big Brother on researchers'.

It was also assumed and understood by each of the small groups that universities had used ERA for a range of internal purposes including:

- To develop the quality of research at that institution.
- To invest funding in particular research areas, including taking funding away from certain disciplines.
- As a marketing process to improve the institution's international profile.
- As a marketing process to attract high quality researchers.
- As a management or compliance tool imposed upon staff.

ECR Professional Concerns

While there were differences between groups about the types of career concerns, all groups saw ERA as critical to career development. It was understood that the ERA exercise would directly impact upon their publishing behaviour, and that because they wanted to fulfil publishing expectations, they were trying to understand how journals were ranked. Most concluded that they were at the workshop to become more empowered about future career choices, to enable them to better negotiate the expectations place upon them by supervisors, research managers and through performance reviews.

There were a number of important concerns about journal publications and the ERA journal list. From a straw poll at the end of the workshop, 21 of the remaining 28 participants had been recently asked or told to publish in A* or A ERA ranked journals. Many did not distinguish between the ERA or the ERA journal rankings.

Group Two stated they hoped that ERA could guide them to do good research through appropriate rewards. The groups were also unambiguous that career development and advice around research performance was not great. One group called for the introduction of academic mentors to guide publication and performance, guided by the perception that under previous collegial modes of institutional governance career mentorship had been a stronger motif.

Concerns were expressed that the continued use of ERA journal lists were:

- Limiting diversity of journals academics can publish in, for instance, because it didn't recognise foreign language publications.
- There were differentiated implications for different disciplines depending on number of A* journals. Anything other than journal publications is not sufficiently captured by ERA.
- Conference journals were not valued at all.
- ERA undervalued the creative work of universities, e.g. arts/music practice.
- ERA excluded disciplines and research centres where outputs were largely outside ERA.

Perceived quality of Information on ERA

It was widely understood that the quality of information shared with ECRs about ERA was poor. The most frequent and reliable sources of information were colleagues,

academic supervisors, Heads of School and Associate Deans of Research. Individuals spoke highly of external websites such as John Lamp's ISI webpage,[91] the Research Whisperer,[92] and the NTEU. The ARC website was frequently nominated as a source of information but some groups expressed reservations with its usefulness and usability. The professional association HERDSA was mentioned. University-based special projects were also mentioned as being useful including:

- University research forums and symposiums
- Mentor groups, coaching sessions, ECR workshops.

It emerged that information about ERA circulated within Faculties had varying levels of reliability. Sometimes information was only circulated for the purpose of focusing ECRs upon research publications. In some instances it involved only emails from the Vice Chancellors, the Dean of the Faculty or the Head of School. In other instances there were staff meetings at which ERA performance measures were explored. In one group it was mentioned that the first time they had engaged with ERA was in performance review. Nevertheless, the overarching perception was that information about ERA predominantly came through informal channels and there was a lack of concise and reliable information about ERA available.

The workshop accentuated and reinforced most of the professional issues raised in the focus groups. These included that:

- The knowledge base of ECRs around ERA was much poorer than more securely employed and more senior academic staff.
- The perception of the ERA amongst ECRs was more positive compared to the focus group participants but perceptions of its purpose were more divisive and extreme.
- Misinformation in universities about ERA was rife.
- The most reliable sources of information tended to be academic colleagues, supervisors, Heads of Schools and Associate Deans of Research.

More information about the workshop is available at: http://www.nteu.org.au/vic/article/NTEU-Early-Career-Researcher-Workshop-roundup-13227

4. Institutional adaptation to the ARC process

4.1 Summary

In order to augment their performance under the ERA process, senior leadership groups at eligible institutions applied a range of preparatory strategies over the course of the 2010 and 2012 ERA processes. Typically these would include the delegation of communication or coordinating roles to senior staff such as Deputy Vice Chancellors of Research (DVC-R). In many instances it involved the establishment or secondment of dedicated staff in faculties and schools or central research offices. In many instances it involved the establishment of cross-faculty networks or coordinating groups, sometimes spread across senior leadership, other academic leaders such as Associate Deans of Research (ADR), and faculty or school research managers or research administrators.

Staff knowledge about the practices deployed at their employing institution in relation to the ERA exercise ranged significantly, and in certain circumstances was limited. It became clear that in certain situations the limits on staff knowledge were caused because the activities and strategies of certain leadership groups would likely damage the integrity of the institution's submission. Nonetheless, the engagement of participants through data collection demonstrated that manipulation of the ERA process occurred in at least three key ways:

- 'Appointing research stars' – efforts by universities to lift the overall institution or a school's ERA submission by employing highly productive 'research stars', sometimes on a part-time or adjunct basis.

- 'Disappearing research' – where a research manager or senior administrator would ensure certain research outputs would not be evaluated, by apportioning them to FoR codes that did not met the low volume threshold, and without input from the relevant eligible researchers. Sometimes, this would occur through 'directed manipulation' with senior administrators directing or advising managers to not enter research, or researchers not to submit output.

- 'Horse-trading' research outputs which involved discussions between university administrators and decision makers to 'hive-off' research, i.e. discussing how certain research outputs would be assigned or apportioned multidisciplinary FoR codes to maximise ERA scores in particular institution-preferred FoR codes.

Most often these practices were justified as ways to 'protect the research' of the university, or to protect the research of faculties and schools that perceived themselves as being placed in competition with one another over scarce funding allocated by the institution, whether the link between resource allocation and the ERA was explicit or not.

Institutional manipulation of the ERA process and exploitation of the ERA more broadly pose a risk to the integrity of the ERA outcomes and the reputation of the ERA, and by extension the relevant funding mechanisms. On any premise that the ERA operates as a robust evaluation instrument, a key step in lifting confidence in the ERA process would be to limit its manipulation and misuse.

4.2 Manipulating the ARC assessment process

The focus groups and interviews demonstrate that adaptation to the ARC's ERA assessment process was not limited to the universities themselves. Numerous responses acknowledged the adoption of ERA journal rankings by individual academics as a way of demonstrating publication quality, the adaptation by Research Evaluation Committee (REC) members and ARC peer reviewers in determining ERA journal rankings or Unit of Evaluation scores, and interestingly, the political debates within professional and representative associations in their engagement about the ERA journal list, journal rankings, and approaches to the ERA process.

The NTEU's concerns are that many practices occurring in universities during 2010 and 2012 are largely irregular and also poorly documented modifications of the 'comprehensiveness' of ERA submissions. As stated in the ERA 2012 Submission Guidelines:

> *Institutions are required to submit comprehensive information on eligible researchers and research items produced in all disciplines within the specified reference periods in the four-digit FoR codes within each of the eight ERA discipline clusters. Institutions must not be selective about the eligible researchers or research items that are submitted. Institutions may only be selective about research outputs they choose to identify for ERA peer review for those disciplines which are subject to ERA peer review.*[93]

In terms of the capacity to exclude certain kinds of output, the only exceptions would appear to be where an output fails the definition of research, which is 'the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understandings', or where the aggregation of outputs do not reach the 'low volume threshold'.[94]

For the purposes of accountability, the guidelines go on to state that the inclusion of false and misleading information will potentially attract criminal sanction:

> *If it appears that any institution or person has knowingly provided false or misleading information, or*

> *knowingly omitted any matter or thing without which the information is misleading, or it appears that any other criminal offence may have been committed, the ARC may investigate the matter with a view to prosecution under Commonwealth criminal law. The Commonwealth is committed to protecting its revenue, expenditure and property from any attempt, by members of the public, contractors, sub-contractors, agents, intermediaries or its own employees, to gain financial or other benefits by deceit.*[95]

It is notable that responsibility for the integrity of each submission is imposed upon institutions and, in particular, the Vice Chancellor as the signatory to the 'Certification Statement' (2012: 70). As already stated, there is no formal expectation that staff engagement will occur in relation to submission of research output, apportionment or assignment of FoR codes. This may provide some protection for staff against allegations of criminal conduct but this would also mean that the capacity to ensure probity about an institution's submission is significantly diminished.

In the course of data collection, participants provided eyewitness accounts about practices and behaviours in which the apportionment of FoR codes to research and researchers were modified for the purpose of improving the institution's submission, rather than for improving the accuracy of the multidisciplinary coverage of institutional submissions.

4.2.1 Appointing research stars

In the lead up to the 2012 ERA exercise media stories circulated about the involvement of institutions in a range of 'game-playing' practices, including poaching 'research stars' to boost the impression of the institution's research performance.[96] This included the appointment of research leaders in part-time or adjunct positions. Elements of the ARC's changes to the eligibility of researchers in the 2012 ERA methodology were intended to reduce this kind of behaviour, namely the requirement that staff on less than 0.4FTE demonstrate their ties to the institution.[97]

Focus group participants confirmed that this practice of star appointments had occurred. With the ERA eligibility cut off date at 31 March 2011 it appeared that the poaching or appointment of 'research stars' was increasingly focused in terms of an institution's strategic opportunity to lift research performance through purchasing rather than developing research excellence. Such a practice leaves open questions about the institution's commitment to internally developing research excellence.

It was also argued that this practice had adverse implications for the culture of research at various institutions, with segmentation between staff on the basis of research duties and with existing teaching staff being provided less and less opportunity to pursue research:

CRAIG: So the school has engaged in recruiting people that are stars - who will bring in the journals. Some of these people are not being incorporated within the School. They basically look after themselves. They have very nice salaries, because they are stars. But I don't see that we are building capability or that we are getting better. We only look like we are getting better, by recruiting the Maradona and the Messi's, and whatever, which may help only if they are team people, and sometimes they are, sometimes they're not. I think the concept of it is that we are having a split, and the people that are publishing in Bs and Cs, they are not getting up, and they are not getting extra (allocations), so that they can improve their quality.

LANCE: There is a current group of people who are untouchable and cannot be called upon because they 'are' research, and they will not be brought down to the teaching level or have their time wasted in the classroom. And then there is the teaching crew, who are still expected to publish but we have no expectation (that) we're actually going to get into these journals. We've been told we won't be rewarded for our teaching performances, and that if we don't have high (quality) research we're going nowhere, but we won't be freed up to do research that was getting published previously.

4.2.2 Disappearing research

According to the 2012 ERA Submission Guidelines, 'To ensure that there is a meaningful level of data to be evaluated, a low volume threshold exists for each Unit of Evaluation in ERA'. This threshold was amended in 2012 from 30 to 50 apportioned indexed journal articles, and meant that if there were less than 50 journal articles in any UoE, it would not be evaluated.

This rule has provided an important opportunity for universities to introduce practices that 'disappear research', by strategically apportioning FoR codes to research outputs so that weaker areas fall under the low volume threshold, and in some instances perhaps by not submitting particular outputs altogether.[98] It also meant an opportunity to try and showcase research by ensuring strong research was collected together above the low volume threshold.[99] Some participants described the manipulation of FoR coding as 'hiving off':

MATTHEW: That was made (by) central management. They would simply assign a paper to any discipline that they felt they could assign (it to) - subject to the rules. In electronic engineering, which has been downsized, their publications are being - their good publications are being assigned to computer science. So, I mean, this re-badging is blatant.

At one institution 'disappearing research' without engagement with the relevant researchers was elaborated

by one senior administrator as a way to strengthen the university's submission, especially where units of evaluation did not align with departments or faculties within the university itself:

FACILITATOR: Well, I certainly wonder about some of the metrics that I have seen, which requires that staff (do) not publish in B and C journals or …

TRAVIS: That (achieves) absolutely nothing. So we've done that. We've disappeared (research). We disappeared the two-digit code X. We were close to having 50 publications in that area. We don't have a faculty at the moment there, so we don't put in a submission at X.

FACILITATOR: **So the gaming occurs, anyway. So if we're going to be putting forward (research) and removing …**

TRAVIS: It would be much better to say, 'Why should we stop our researchers from doing research in that field if they want to?' It's just because we don't want to put forward a (submission for) X.

It is apparent that there is in fact a fine line between an administrator providing counsel to ensure researchers maximise the university's ERA score and researchers being improperly directed to assign inaccurate FoR codes. One Level B researcher would have preferred access to her record of research output to ensure that her school was benefiting from her publication record. In comparison, Bill described some of the advice from the research office as modifying the literal truth, to ensure the interests of researchers and institutions alike were met:

BILL: We've had pep talks about strategies and how to maximise our performance. We get told to look incredibly closely at the FoRs and SEOs, what we should actually put down, and whether we should think about perhaps stretching, not the truth - stretching credibility a little bit - and putting papers down under a particular code where perhaps they might be better elsewhere, because certain codes have more importance, and because we can put more people together within those codes.

4.2.3 Horse-trading research outputs

Another set of concerns that emerged during the course of data collection was the role of senior administrators in meeting together to alter the assignment or apportionment of FoR codes in order to maximise the research score of various Units of Evaluation (UoE). Based upon comments in the focus groups and interviews, these practices appear to have been conducted across various levels of seniority for at least three of the five institutions.

One senior administrator reported about this, attributing responsibility for 'horse-trading' meetings at one institution to the DVC-R:

HARVEY: Well, there were book chapters. Some of them they could shift because of that multiple coding… but it was an astonishing meeting to attend. There were commitments given to people from some areas - 'If you give us those publications, for this particular 4 digit code, we run you down, we'll make sure that you're okay after ERA'. Now I'm sure that those areas are regretting that decision to go along with it, because they're not okay after ERA.

FACILITATOR: **Can I ask - was it Associate Deans from different departments that were at that original meeting?**

HARVEY: It was Associate Deans Research and there were FoR code leaders at the meeting as well.

FACILITATOR: **Were there also people from the central Research Office?**

HARVEY: Yes.

FACILITATOR: **Was it called by the Research Office?**

HARVEY: It would have been called by the Deputy Vice Chancellor of Research.

FACILITATOR: **So the research office has quite an interventionist role in the way that ERA journal rankings and ERA journal publications were used for the 2010...?**

HARVEY: The Deputy Vice Chancellor Research did. Yes. He has executive responsibility for that and I know that at one point he was weighing up for ERA 2012 whether to 'raid' areas that scored a 3. In ERA 2010 the publications to bolster were some of the areas that scored a 4.

FACILITATOR: **Can you explain that in a little bit greater detail?**

HARVEY: He proposed that this time you needed 50 publications to get a ranking in humanities and social sciences, which you didn't need last time, where you only needed 30. Our area had more than 150. So he was weighing up whether to instruct us to get it under 50 and move the publications to other areas.

A research manager at another institution discussed a similar practice in the lead up to 2012, but at a more decentralised level revolving around the faculty's assignment of FoR codes, and in contrast with some opportunities for researchers to view their record:

SAM: Usually what would happen is, say if I nominated one social science code and another social science code, at the faculty level they would go, 'Is this (publication) more this discipline or the other? How does it read? Does it sit better with your side? Does your area need any more?' So there was this whole laying-off of bets. If the other code had enough (publications) it would relinquish it and it would become ours. It was that kind of game playing. It was about packing up, shoring up, certain areas. Certain schools exclusively have their own FoR code. So we had our people in that code, because our code and that code go hand-in-hand, but so does another code with that code. It was a matter of, 'Let's divvy this up'. (If a researcher) had a strong portfolio in our code and another code, they had to make a decision about where to put their portfolio. Would it be split? Or should we split this other code completely apart, pull it apart completely, and put everything in another code? These were decisions made at the faculty level. The university is only concerned with the numbers, the big picture stuff. If there was a problem, yes, there would be a discussion at the university level about how this worked. But normally, it was just the faculties talking to each other for coding.

At another institution, this was largely a consideration for networks of academic leaders, particularly those in similar disciplines, or disciplines with a potentially broad disciplinary base:

STUART: Yeah, so essentially we had common publications in obvious areas like with A, with B, with C, but also with perhaps things you'd least suspect, like X, Y, and - almost everywhere in science. So it always becomes a question of, 'Well is this proportion correct?' Then there's a group of publications that no one wants. So what do you do with them? 'You have them', 'No, we'll have them'.

Harvey, who outlined the DVC-R's role in organising horse-trading meetings at one institution, also explained why there are clear incentives for institutions to ensure that researchers have minimal engagement in the apportionment of multidisciplinary codes to outputs:

FACILITATOR: **Did the research office need to do things differently in terms of the way that it communicated or organised communication involving Associate Deans of Research or people who were otherwise on the REC committees? …**

HARVEY: [pause 3 secs] I don't know that research services should necessarily be responsible for this. They could have offered a little bit more feedback to people. But so much of the ERA result is in how it might be manipulated. There's strategy involved. It's probably not good to tell people that we might have shifted their publications for strategic reasons, that we might have coded their research in particular ways for strategic reasons. If you offer that kind of advice, there'll be all kinds of argument. It will take you five times as long to prepare the submission.

FACILITATOR: **So do you think there's a problem then in the fact that it can be gamed or manipulated to improve scores in particular areas? Or is that just the way that it's designed and it's inevitable?**

HARVEY: Look, it's the way ERA's designed and I'd prefer there was no ERA exercise because I think it's encouraged the worse possible kinds of conduct on the part of universities. And the game playing of Go8s was just appalling. The way that universities buy in staff is disgraceful.

These kinds of practices, especially where researchers play no role in the assignment of codes unambiguously undermines the comprehensiveness and integrity of institutional submissions. The ARC has highlighted that all research must be submitted for assessment, and in the course of the ERA 2012 exercise the ARC did do an analysis on what could be considered 'inappropriate discipline coding'.[100] The kind of manipulation of FoR coding attached to researchers or outputs largely reflect an intention to mislead the ARC and horse-trading meetings represent a form of collusion. The extent of feedback and concern around these practices indicate that there are major integrity issues for the ARC or the Federal Government to pursue across the sector.

4.3 Staff perceptions about manipulation of the ARC assessment process

The responses of focus groups and interview participants to their institution's manipulation of the ERA submissions were diverse, but what generally tied these responses together was the perception that 'game-playing' in the submission of ERA data generated a different set of attitudes to the concepts underpinning the rationale of research quality assessment, diminishing the accuracy of measurement and comparability of quality, and narrowing the ERA's purpose.

Amongst more senior members of the academic community, rumours about the manipulation of the ERA process were commonplace. Certainly a number of senior administrators saw the strategic preparation of the institution's ERA submission as a necessary evil. Preparation and manipulation of the ERA submission was considered necessary in order to protect the institution's capacity to undertake research. For some members of one institution, it is notable that the preparation of their institution's ERA submission was seen not only in relation to improving the institution's overall

score, but in anticipating the internal use of ERA scores by the institution, and competition for scarce funding between faculties, schools and disciplines.

One tertiary education expert, Stuart, claimed that though the ERA was established to be a funding mechanism. He queried the role of ERA as an efficient mechanism:

STUART: They are funding mechanisms. No matter what we want to call them. That's what they are. They are not quality measures. They are funding mechanisms. My question is, 'Is there a better way to distribute funding?'

Ian, a senior academic at an institution that had not sought to distribute SRE funding on the basis of the ERA scores, expressed strong reservations about the implications of tying the ERA to the SRE and RTS, in light of the extent of 'game-playing', even though he perceived the ERA as a useful instrument for academic and research administrators;

IAN: (I have) major concerns. One thing is (that research) becomes centrally managed activity, and I think it really has to be at the university level that you determine funding. I know with the ERA there is a huge amount of game playing and we all played the games. If there was a relatively weak discipline, 'How can we hide that discipline elsewhere or not count it?' And when the ERA results came out every university claimed that they were at the top. That's all fine when it's just game playing, but if it really determines funding, I think it will be a disaster. With RTS and SREs. It then becomes like the five-year plan for China. Someone in Canberra will say, 'Well, this is our five-year plan. You basically (need to) make it more attractive'. I think you have to be beyond that.

Other senior academics came to the view that their institution's ERA submission and the ERA process overall was an explicitly political exercise. This is well captured in the comments by Jason:

JASON: I see the purpose of the ERA in its first form (was) about assessing the quality of research performance of groups. It does therefore create problems for individuals who don't neatly fit into the groups that the universities decide to submit, because it doesn't assess all groups. It assesses the groups that the universities put up. So there's an interesting sort of political and judgemental process that goes into forming the groups that are going to be nominated around the fields of research codes, the discipline codes.

In addition, where some of the aforementioned 'game-playing' practices were openly discussed, it was clear that this had highly negative implications for confidence in the ERA and even the ARC. A range of unintended and adverse consequences of institutional adaptation for the professional interests of university researchers and the nature of research were commonly cited. At the conclusion of one focus group, discussion about the practice of 'disappearing research' initiated a wider condemnation of the ARC rather than the institution's behaviour:

SCOTT: But one thing they really should remedy is that any piece of research in itself shouldn't be a negative. I think that if you're producing research, it shouldn't be something that's got to be hidden like a dead body.

[Group laughter]

DIANE: I agree with that.

SCOTT: Some sort of house of horrors. There's various C publications (all) published under the green lawn. This is so embarrassing for the ARC. Surely they can be shamed into remedying things. (This) effectively makes certain areas of research or publication a crime against the university.

Just as important were staff perceptions about the internal responses of institutions to the introduction of the ERA and, in particular, how poorly considered some management responses to improving ERA or research performance in general were. For some participants there was a perception that the university's responses were clumsy and not assisting researchers with the external expectations imposed by government:

TAYLOR: It's not really a problem about having some sort of regulatory body doing these things. It feels like in this university, and particularly over the last few years, that the university is using the regulatory body to regulate even more tightly. So rather than helping us meet those external expectations, which the different disciplines may more or less meet, they're tightening it so that the window is narrower and narrower in terms of what we do...

More so than concerns about the ERA exercise itself, it is clear that there were overwhelming and very strongly held views in relation to staff confidence in the capacity of universities to responsibly manage research performance. The focus groups and interviews identified that intrusive and damaging ramifications that can be linked to the ERA are already evident in the sector. The final chapter will highlight some of the more adverse kinds of institutional practices that are currently unfolding, including dimensions of institutional change that transcend the ERA instrument.

5. Competition around research performance and adverse consequences for Australian researchers

5.1 Summary

In the focus groups and interviews, perspectives were sought about the significance of the ERA in relation to the way universities have changed research performance expectations. It was perceived by many, including senior administrators and research managers themselves, that the ERA at an institutional level was often misunderstood and misapplied for the purposes of intensifying research performance. This misuse was sometimes characterised by an explicit intention by senior administrators, and in other instances diverged between schools and faculties at the same institution, sometimes on the basis of particular discipline groups or according to unit managers.[101] In a number of instances, university-wide policies that defined the performance benchmarks necessary to be considered 'research active' were introduced to modify expectations of research performance. At some institutions restructuring has been introduced on the basis of crude indicators of research performance such as ERA scores. The shifts in institutional approaches to research performance included the selective conversion of staff, not only into teaching-only but HEW positions.

The development of research quality evaluation in Australia has been instrumental in generating new risks to the depth and breadth of publicly funded research. Previously the perceived risks to freedom of intellectual inquiry and the autonomy of scholars were narrowly conceived, and revolved around the idea that RESs reinforce the conservative influence of traditional discipline leaders.[102] Such assumptions need to be revised in light of the adaptive behaviours of institutions portrayed in this study. Certain constraints placed upon scholarly autonomy are in some ways inherent to the very concept of research quality assessment, particularly because it seeks to produce scores that operate as proxies for expert judgment.

The kinds of adaptations that have been observed, however, cannot be properly understood without understanding the corporatisation of research in Australian universities, which has depended upon the central construction of 'performance information systems at institutions', the purpose of which has been to render research activities as 'measurable and commodifiable'.[103] That is, in understanding the rationale for university managements, research management is a prominent but non-exclusive priority constituted by a matrix of accountabilities.

This is enhanced by the character of local funding systems in which central planning groups determine and establish the formula for block funding distribution.[104] Constraints on the autonomy of staff do not only originate from the assessment instrument but from the implicit and overt expectations placed upon staff by institutions in the attempt to concentrate and build research strength in light of the way quality is measured. Underpinning the ERA's misuse are other kinds of institutional transformations, such as the diminution of collegiate decision-making structures that mean many institutions are often poorly equipped to analyse the implications of ERA assessment or their own research performance processes.

The focus groups revealed that two important ERA indicators were most commonly misused:

- ERA Journal Rankings – The abandoned ERA journal rankings continue to be widely used through both formal and informal means, in spite of the ARC's attempts to discourage their use.

- FoR codes – At certain universities, the conflation of certain FoR codes and academic disciplines has led to the assumption that ERA scores evidence the performance of academic units, has heightened internal competition between disciplines, and led to the reallocation of resources.

The growing frequency of these circumstances has important implications for the professional and industrial interests of staff. They also have policy implications where such practices and behaviours entrench career barriers; diminish the culture of research; destroy or diminish the breadth of research; or diminish the attractiveness of the academic career. The introduction of a quality evaluation assessment has not diminished managerial dependence upon more established performance indicators such as research income and HDR completions, but created a value-oriented and sometimes more subjective layer through which the research performance expectations placed upon staff can be expressed.

5.2 The escalation of institutional competition on research performance

Aside from the manipulation of the ERA process itself, the ERA has accelerated institutional concerns about research performance and provided an important set of measures to mobilise adaptive behaviours and practices. In 2012, the introduction of the student demand-driven model, in particular, not only lifted the climate of competition around student demand, but the climate of competition between universities over their share of other sources of public funding.[105]

The expanding institutional concern with research performance is evident, for instance, in the recent 2012 Higher Education Industry Survey,[106] in which over 730 senior level decision-makers in tertiary education took part. The summary report found that for those who work within the research:

- Rankings and performance measurement was their key priority.
- Securing government funding is their biggest challenge.
- International collaboration is the largest area for opportunities.
- Concentration of research excellence is the biggest challenge in building a research workforce.

The implications for university staff through the adaptation of institutions linked to the ERA became evident in significant structural changes that occurred in Australian universities in 2011 and 2012. A prominent example was the University of Sydney. In late November 2011, the university sought to reduce academic staffing costs by 7.5% and make as many as 340 staff redundant based on an assessment of their ERA research output. The university's own Draft Change Proposal tied this to the university's ERA performance, stating;

> *The proposed process for managing the reduction in academic staff will be based on relative research performance, assessed on a University-wide basis. The assessment of relative academic research performance will be based on research outputs as defined in the Excellence in Research for Australia* **(ERA)** *guidelines, or equivalent research output as assessed by Faculty and Central Assessment Panels.*[107]

By mid-2012, a strong campaign by the University of Sydney NTEU Branch reduced management's target to 23 redundancies. Another example was the Australian National University (ANU). In March 2012, the ANU announced between 100 and 140 staff cuts in order to make the university 'financially viable and internationally competitive'. The ANU's statement around the financial strategy proposed that staffing reductions would be conducted in a strategic manner, using academic performance (including ERA, student demand and evaluation) as the criterion in determining staff reductions.[108] The ANU NTEU Branch's strong campaigning reduced redundancies in the School of Music from 34 to 21 staff.[109]

A Monash University physicist, Susan Feteris, has subsequently argued that the introduction of the ERA has led to a halt in the rise of women researchers in Go8 institutions starting from 2010 and continuing through 2012, claiming that women were predominantly affected where 'redundancy rounds used ERA-based criteria' and staff 'feared they may be selected took voluntary packages'. [110]

Parallel to cases where the ERA performance of institutions has been referred to in relation to the proposed re-profiling of the academic workforce, there have been other recent instances where universities have introduced or intensified managerialist practices through the introduction of research performance metrics or staff performance benchmarks:

- Many universities have individual staff ranking systems such as UQ's Q-Index, UWA's Socratic Index, ECU's Aspire and Curtin's Research Performance Index.
- Other universities have sought to introduce university-wide research performance benchmarks or standards such as Deakin University, La Trobe University, University of Tasmania and Charles Darwin University.
- Other universities have devolved the formation of benchmarks, standards or performance measurement instruments to their schools and colleges. This includes University of Sydney, University of Melbourne, and Monash University.

Performance metrics and benchmarks are intimately tied to the employment relationship. In the vast majority of instances the establishment of new research performance standards has not been based upon staff negotiation or involved staff representative bodies such as the NTEU.

This has led to poor management practices and the development of poorly constructed management systems. Research performance based on the ERA journal rankings in particular is now evident in different institutions in relation to:

- Appointments.
- Workload models.
- Performance appraisal.
- Identification for redundancies and voluntary separations.

5.2.1 ERA Journal Rankings

The ERA journal rankings composed one component of the 'dashboard' of indicators that Research Evaluation Committees (REC) used in assessing the quality score of a Unit of Evaluation in 2010. With the ARC shifting from the 'ERA journal rankings' to a 'refined journal indicator' for 2012, the list of ERA journal rankings has been abandoned and not updated since 2010. The national survey conducted about the ERA and research performance asked a question about whether the ERA journal rankings had been formally abandoned. This was answered by senior administrators in a variety of ways. Of the sixteen who responded to the NTEU's question twelve stated they had formally abandoned the ERA journal rankings. Nonetheless, where DVC-Rs stated that ERA journal rankings were abandoned, there remained important questions about how and to what extent this information was circulated across the university community.

The fact that numerous focus group participants assumed that the ERA journal rankings were still in operation in spite of their formal abandonment in May 2011 is not particularly strange, not only because the quality of communication about the ERA has been inconsistent amongst various institutions, but because it is clear that the ERA journal rankings have sustained a range of informal and formal uses, either amongst academics and discipline groups as a proxy for quality journals, or residually through practices imposed by institutions, including through incorporation into operational plans, performance standards and statements attached to individual performance review. As stated by one participant, Jill, "All that A* stuff doesn't apply anymore. Not unless management is telling you to". Likewise, a more senior academic, Judy, claimed, "In my department we have to say if we're going to mention the rankings, we say former

rankings. A DVC told me that, 'Even though we don't go by the rankings, we all know what they're worth'."

Numerous participants reported the continued listing of ERA journal rankings in CVs attached to university applications for appointment and promotion. Others stated that use of the ERA journal rankings were not uncommonly discussed in relation to research performance at faculty or departmental meetings. Some reported that depending upon individual scholars, collaborative planning around intended publications could commonly involve explicit references to journals ranked in the A or A* categories. The most extreme informal use of the ERA journal rankings was on an offshore campus, where staff performance according to research funding applications and proportion of publications based on the ERA journal rankings were posted on a common room Leaderboard.

Some academics stated that they were being informally encouraged by peers to modify or change the nature of their research interests based upon the proportion of old A* and A journals that existed for different four digit codes. Lance reported this as a kind of 'topic narrowing':

LANCE: Basically it was being heavily hinted that we might want to shift (our research interest) to a neighbouring four digit code where there were more A stars. We performed poorly at our FoR. That's at this university, but it's also because we had a grand total of X journals (in our FoR) to choose from. In the neighbouring FoR you have more than four times. So basically the emphasis was move your disciplinary interest to a more opportune field if you want to have A stars.

Lesley, a research manager, suggested that the continued use of ERA journal rankings at one institution was augmented by a university-wide software program that aggregated the university's research output based upon ERA journal rankings in 2010, but continued to allow this during the 2012 assessment exercise:

LESLEY: The trouble is that once these lists are created they have a certain meaning. And so at this institution they created a piece of software that had all of the publications from this university ranked. If I'd look up Jennifer, I would see that a particular journal is an A star, and 'another particular one is a B. All of that information is in front of me. Different universities would have done different things, but this university was extraordinarily well organised. Now the point is that the list was quite legitimate in the first time round. The trouble is when it came to ERA 2012 the list was still kind of kept, because there wasn't another list… The same piece of software would still show what that journal was last time around, and people still used that nomenclature. So although the list was highly criticised, and the ARC withdrew it… it's still considered.

Though some participants reported on the ARC's rejection of discovery and linkage grant applications that included references to the ERA journal rankings, participants who were involved in ERA peer review and ARC assessments considered that the continued use of ERA journal rankings in applications was common.

It became clear that the informal use of the ERA journal rankings could hardly be considered controversial when there was such common formal use from institutions themselves. As explained by Sam, 'How are you going to evaluate what they've done if you don't use rankings, when rankings are in - this is a central university document? If that's in the central university area, why would you not use rankings?'

In terms of the formal use of ERA journal rankings, evidence was provided that these have been incorporated into:

- The metrics developed by institutions to measure research performance of staff.
- Benchmarks or standards of research performance augmented at the university or faculty-wide level.
- Individual performance reviews, and documents such as statements of expectation.

These kinds of uses of ERA journal rankings can be distinguished in these contexts. The first is for the purposes of establishing a minimum publication expectation defined through reference to the ERA journal ranking list. This was often connected to the definition of 'research active' or the basis to acquire a proportion of research allocation.

The second was in terms of providing financial incentives for A* and A publications, with departments or faculties providing additional in-kind, and in certain instances monetary, support to research staff for each A* or A journal publication. As stated by Sam:

SAM: Going back to the basics, everybody in the department who is rated as a researcher gets a base amount of money to research. So somebody who is a lecturer or an Associate Professor, they all get a base amount of money for them to do their research. And then on top of that they get an amount of money when they evidence they've actually had some output. I'm loath to use the word 'reward for performance' because it sounds like, well, anything will do. We're talking about in the ERA rankings B, A star and A journals. So you're only talking X journals in our code that you're going to get any money for. It's pretty tough to get.

The third was defined by more explicit impositions upon freedom of intellectual inquiry, through university documents that sought to codify expectations about the number of B and C star journal publications permitted for each researcher. One such faculty document provided a certain number of fractional points for research outputs based on the abandoned ERA journal rankings, for which B and C journals attracted fewer points. The document also clearly states that the allocation of points ends at a certain number

of publications in the B and C rankings. Scott was highly critical of such a practice:

SCOTT: I've published in a widely read journal that is ranked B. It was a good article that has triggered ongoing discussion in my discipline. It said something new about something that mattered. However, because it was a B journal it has used up a quarter of my quota of B and C journals for the next six years! Apparently, one can apply for special permission to publish above your allotted quota, but clearly, the position is that B and C publications are a bad outcome for the department, and thus for you as an individual. This (is) an absurd situation, but I would emphasise that it is primarily the fault of the ARC for setting the signals and incentives to produce this type of outcome.

For workplaces where the ERA journal rankings had been abandoned, there was often an acknowledgment that this provided opportunities to demonstrate the quality of a researcher's publication record framed by other quality indicators such as the Thomson ISI or H-index, or even purely by the intended target audience.

5.2.2 Field of Research (FoR) codes as disciplines

The Field of Research (FoR) codes were originally established by the ARC to provide some administrative certainty to the allocation of research grant applications to its peer reviewers, a task that precedes the existence of the ERA and, aside from seeking to cover the breadth of possible university research, does not construct itself as definitive of existing discipline groupings.

One major implication in the manipulation of the ERA process was that following the 2012 ERA National Report, the ERA scores in Units of Evaluation were taken up by particular institutions as a basis to judge the quality of research in disciplinary areas, or even to reallocate funding or to target for restructuring. In light of the expansion of managerial processes that establish internal competition through the introduction of internal markets this is not entirely surprising. However, the limited coherency between FoR codes and the school or departmental structure of any institution for particular disciplines has dangerous implications for the quality of research:

DAVID: It's my understanding that where you had certain outputs hived off into other codes rather than the one discipline, or whatever was thought was appropriate, it had an impact on the ranking, the overall ERA ranking of that particular discipline because a lot of their work was counted in others...

REBECCA: But they're not disciplines…

JANINE: They're not disciplines.

DAVID: … or FoRs or whatever the case may be, yes.

JANINE: The ERA scores don't rank according to discipline.

REBECCA: No, but again, people do – they rank it.

BARBARA: That's right, yes. I think the importance of what's happened is certainly at a senior level. Something I often argue against is the talk about a discipline code as if it is a discipline, which is ludicrous.

This could leave research areas that were predominantly interdisciplinary, or that did not match well against a limited number of FoR codes, at the margins when internal decisions about research investment and support were determined on the basis of the university's ERA scores. As participants at one off-main campus focus group stated:

BARRY: Because a lot of the publications, as Francis mentioned, just got siphoned off. I publish in a science discipline as well as public health. So all of mine are actually counting to what this discipline at the main campus would claim as their publications, when in fact they actually belong here with me.

LEE: So it's fine if you're a nice, neat academic unit, like you're a psychology department and you want to know how you've done, but for anything that's multidisciplinary you are heavily disadvantaged because (your research output) gets split.

BARRY: But even in departments like that, even in psychology, I might still publish in journals that are related to science but wouldn't necessarily be scientific. Some of those might even come under sciences - I think that the splintering of output just makes it very murky.

In one instance, the perception that a departmental structure could be aligned to an FoR code led to fairly important constraints placed upon the scope of scholarly publication. As claimed by Lance:

LANCE: I'd also suggest that in my disciplinary area we are being told to publish to a specific line in the ERA group, one of the FoR categories. We are discouraged from publishing in the remaining categories, and then being found to be research inactive or poor researchers because we are actually only playing to an internal view of one of those five options. The university still gets paid for all five, but if you are sufficiently dumb to publish outside your little box, the university gets rewarded but you don't. And I'd say that we've been told to publish in this category whereas there's more research available (in others).

At another institution, one research manager, Sam, demonstrated how an institutional imperative to tie FoR codes to departmental structures could cause unfair disadvantage to some disciplines compared to others:

SAM: Because we are a standalone discipline, anything that's not X (FoR) doesn't help us. So we've got professors and associate professors and all sorts of people who publish across the board. For every journal that they publish in outside of our department, it's not helping us because the publications are counted. Let's just say there's 100. But if 25 of those are not in our discipline that's 25 that can't be counted, but we still have been told, 'Well, you've got Y number of journals'. ...So we would be better off we were the department of blah with a sub discipline for our department because this other discipline has several hundred journals. We could claim all of those journals as being in our area. That would mean that a lot more of our staff would have more opportunities to publish. If you've only got Y number of journals to publish - you can start doing the stats.

The outcome of this kind of logic is a competition for scarce funding between academic units within an institution, not only for the scarce funding that might be allocated through a funding instrument like the SRE, but the internal support of the central financial and planning groups within the university, such as the Vice-Chancellery, in an environment in which restructures and the revision of strategic plans are affected by annual variations in student demand.

5.3 Workplace implications of increasing competition on research performance

Auranen and Nieminen provided warnings about the excessive reliance upon quasi-market instruments and the success of funding incentives for research performance. They argued that 'the idea of output and competition-based incentives promoting productivity in science is more complex than policy-makers seem to believe. Even though the countries with a competitive funding environment for university research (the UK, Australia and Finland) appear more efficient than the rest, they have not been able to increase their efficiency in publication output'.[111] They pointed out that university systems with less competitive funding environments are either almost as efficient (Denmark) or have been able to increase their efficiency despite low levels of competition for funding (Sweden and Germany). Others such as Hicks have warned about the dangers of a highly unstable or unreliable funding system if competition in fact means that research funding can be removed from underperforming universities.[112]

Certain elements of the adaptation undertaken by universities to the ERA infer significant risks to the sustainability of publicly funded research undertaken by Australian universities, and these perceptions are already evident and well articulated in the perceptions of university staff. Common concerns related to:

- The detrimental effects upon academic freedom and the depth and breadth of Australian research.
- The privileging of research over teaching through performance funding being attributed exclusively to research.
- New barriers to sustaining research training in Australia caused by institutions anticipating the link between the ERA and the RTS, including administrators making decisions about the capacity to support prospective HDR students, not on the basis of the existence of supervisors with appropriate expertise, but because of concentrations of research performance.

Nonetheless, to focus this section, the major adverse implications that will be portrayed explore institution-based managerialism that has resulted from the intensification of research performance.

5.3.1 Performance knowledge hierarchies

One of the key consequences is the deepening of *performance knowledge hierarchies* which situate senior administrators and research managers at the centre of the research ecosystem, and with researchers who were once otherwise largely and autonomously responsible for the creation and publication of research are pushed further to the periphery. To begin with, this is mediated by changes in the rules and procedures of external bodies such as the ARC and DIISRTE, meaning that from assessment to assessment, refinements in the methodology need to be understood in terms of the institution's submission. In addition, the imposition of internal research performance expectations occurs hierarchically, even when this is devolved to the faculty level, and is often mediated by select groups responsible for strategic research investment or budget allocation within the university.

Another consideration is the fact that the quality of communication shared amongst researchers tends to be implicit and informal, not only because the means of communication are often poor but because some institutions have dampened information about the ERA assessment – sometimes with the intent of preventing or minimising researcher game-playing, sometimes to limit knowledge about the adaptive behaviours and practices of the institution.

Most importantly, the creation of scores as a proxy for quality effectively replaces the peer evaluation that would originate from other experts. These are useful not only for non-experts in other disciplinary fields but for non-academics altogether, who may be involved with making judgements about performance or strategic investment. As considered by Rebecca, 'That's the danger of it that you turn very complicated things into very simple things that people latch onto and use', or as stated by Francis, 'I think it's because it's easier to count frankly. I think it comes

down to the government wanting - and I think it did come from the government and then it's been passed down through the university, at a policy level, that they wanted something quick, and simple, and easy, to define quality and enforce a system based on that'. As a consequence, with the increasing competition around research performance, researchers are becoming de-professionalised, and the freedom of intellectual pursuit established through an institution's culture of research is increasingly subjugated to the imperatives of research concentration. This was evident in Carol's concerns:

CAROL: When that filters down to producing research as an individual academic, there's a kind of a downgrading of what you do, and an inability to compete for achievements that are hooked into promotion and work performance measures by management at universities. So even though it starts off as the government trying to, say, prioritise particular areas such as sciences, what it actually does is have a real effect on the ground on how individual academics can materialise what they need to be able to go for promotion.

5.3.2 Research performance benchmarks

In the efforts of institutions to lift research productivity with the creation of minimum benchmarks or standards, universities are often imposing conditions and expectations on the application and promotion expectations laid out in union collective agreements or existing university promotion policies. Whether these benchmarks in fact satisfy the purposes for which they are established is less demonstrable, according to the perspectives of many participants. In institutions where this has been established, participants commented on the lack of provision for professional development for staff who did not reach the stipulated benchmarks. Others commented that the benchmarks were not sufficiently low to ensure that the majority of staff were performing at that level, and thus were in fact an alternative means to discipline staff. As suggested by Ross:

ROSS: It's explicit. It's in documents. It's on our websites. Almost no one lives up to it. Almost everyone lives in fear. And I think that's the point. The point is to have the bar raised so high that almost no one lives up to it. ...It's also a way of resolving conflict. If you have a conflict over an issue that has nothing to do with (performance) and you appeal it to the Dean. And then the Dean still doesn't get back to me and it goes to HR. Our documents say at that point that HR will have recourse to these minimum publication outputs as to whether or not to provide support to staff. …This may not be an academic issue. This could be an issue of whether you deserve to take your vacation this month or not. Whatever it might be this is a real misuse of publication rankings.

What this ultimately represents is an insidious use of the ERA, impacting on researcher behaviours in an arena which is meant to be free from market incentives. This means researchers are compelled for professional and career purposes to be interested in shaping and impacting upon the way their research contribution to the ERA is described. As stated by Glaser and Laudel, 'The two major conditions of action that drive researchers' behaviour are the tenure and promotion policies and the conditions of applications for external grants. Researchers need publications to get grants, and they need publications and grants to get tenure and to get promoted. These powerful incentives form a cycle of their own which is relatively independent of the RES'.[113]

On the basis that universities are locked into a competitive struggle to lift research capacity, and that many research active or research intensive staff are looking for greater clarity about career progress, the NTEU believes there should be explicit underpinning considerations that frame performance benchmarks. On the basis of this study, research performance standards or benchmarks should include the following principles:

- Fit for purpose (the vast majority i.e. 95% of staff must already satisfy these requirements).
- Staff negotiated.
- Career progress and research opportunity sensitive.
- Able to detail the professional development that will assist staff who have not achieved these performance expectations.
- Consistent with the principles of intellectual freedom of inquiry.
- Consistent with the industrial agreement and all other legal requirements binding the tertiary education institution.

5.3.3 Performance-focused staff conversions

There are many inadvertent ways in which early career pathways have been affected by the intensification of research performance, but an important one is through universities seeking to alter the proportion of active researchers at that institution, either through restructures, or the conversion of staff out of 'research active' positions. This is in part being driven by research funding, which is calculated on a per 'research active' (or research only and research and teaching academic) staff basis.

It emerged in the focus groups and interviews that at some institutions academic and research staff were being converted to HEW positions. As stated by Jill:

JILL: This is something that's happening progressively with quite a few of us in our centre, sort of one or two here or there, you know. A while back (the directors) moved all our RAs onto the HEW scale. Gradually they're catching up with the rest of us. But my directors met with someone from HR central, I don't know who, and said, 'Look, is there anything we can do about this? What's going on?' And they were just told, 'You've got no

choice. This is what's happening and it's just got to happen'. So there was no kind of debate about the merits of, you know, demoralising all the staff and the implications for the staff. It was just, you know, 'This is what the university is doing, you don't have a choice'.

Where conversion into teaching only positions may in fact have legitimate purposes in relation to the actual role performed by staff, the conversion of academics into professional staff positions involves much greater institutional risk. These kinds of managerial practices produce new kinds of reputational risk, particularly where the position descriptions of HEW staff ignored the fact that those staff were involved in academic work such as teaching, course coordination, data collection and the supervision of HDR students:

KERRY: I was flicked over at the commencement of my contract in 2010 and that was still true to the academic job. Then when I had the new casual contract, it just said administrative duties, even though I'm not doing administrative duties. I mean, it's part of my job, but I do fieldwork, data collection, all that sort of stuff, 'Oh yes but'. What is always is put to you, 'Oh yes, but you know it's just easier for us to put it through to this. It will take forever. We've got to do, this, this'. It's always just excuses. Always an excuse as to why the PD won't necessarily match your job which is usually that, 'It would take too long. We might have to advertise it externally if we do that.'

JILL: That's exactly what they say every time we have to do a job description in our unit.

LEAH: That's right and I have real problems signing a PD that doesn't have any relationship to what I'm doing, particularly when it misrepresents me in terms of what the classification should be.

In such circumstances, there are also career implications that reduce the attractiveness of a university-based research career. The harshness of these arrangements were further discussed by this group:

SARAH: The other person that I teach the Masters subject with is in the same position. She's been forced over onto the HEW scale, and HR have said to her 'Look, sorry, you are going to be financially disadvantaged, because of the level that you were on, on the academic scale. We can't'. I think they could match it the first year, but then she's (had) nowhere to go.

JILL: If they match it, you don't get the scheduled pay rises until the pay levels overtake where you're matched at, so you stop getting pay rises immediately until they catch up.

KERRY: That's right, and that's what happened to a colleague of mine who's actually been doing the same job for more than five years but on a one-year renewal basis. There's no excuse because it's recurrent funding. This situation happened too and (my colleague) said, 'Oh yes, but it's a new contract'. So after her transfer, after that contract concluded and when she questioned why she was getting a salary decrease, she was told, 'Oh yes, but it's a new contract'. It's that catch up thing until the level over time matches.

Reducing the number of research active staff did not affect ERA scores, as this was calculated on the basis of research output. Nonetheless, the importance of this phenomenon arose in relation to the distribution of the SRE funding, with the allocation formula preceding the introduction of an Excellence Index (Ei) dividing research output (or weighted publications) by the number of what have been called 'research active' staff.

5.3.4 Nourishing managerialism

Managerialism has a range of tacit meanings within tertiary education but it is most often defined by attempts to impose managerial techniques associated with 'for profit' businesses onto public sector and voluntary organisations. Managerialism infers a range of workplace-based techniques including 'the use of internal cost centres, the fostering of competition between employees, the marketisation of public sector services, and the monitoring of efficiency and effectiveness through measurement of outcomes and individual staff performances'.[114]

To a number of participants, the power of central planning and funding bodies in monitoring and changing performance expectations around research were the most important adverse outcomes of the ERA. Dale, a senior research manager, for instance, raised the reduction of harm as one of his key concerns and managerialism as an unintended consequence of the ERA assessment:

DALE: The intention is very noble but like any attempt to measure (a) social system, inevitably it seems that this is a moving target. From the moment that you use measurement, the behaviour of the species changes, because they know they're being observed. They know that they're being measured and as a result (you) have a feedback (loop). That happened, as you're well aware, and the ranking of journals came back as an unexpected consequence in changing the behaviours all across Australia. Academics are being rewarded with money, with financial incentives to change their behaviour, and the way that they publish. That was totally unexpected. And in all fairness to the government, they did try to rectify that in 2012 when they saw that. But I want to emphasise that these kinds of games of (on the one hand) trying to measure yourself, seriously measure yourself, and (on the other hand) measuring a social system (where) there is feedback loops,

(this) is a very vicious form that I don't think is easily resolvable. I can see that. I've talked to a lot of academics on campus. I can see the pain in their faces. I can see the anguish whenever promotion is coming up. But until we've actually worked out a better way, or a more thoughtful way that we can do this thing of measuring ourselves, in all seriousnesss, (the best thing) is to try to minimise that feedback loop and the disruption created as a result. I don't have the answers, but at the coalface of the bureaucrats in this institution, I can see two sides of the story.

Other researchers, particularly a number in biomedical fields looking at translational research, described how precariously support for research quality depended upon expert peer judgment and open-minded research management, in the context of ARC grant applications and in faculty support. One scientist highlighted how the emphasis on performance indicators such as research income was detrimental to his own research, which did not require large sums of money for testing. Another scientist, Ian, in explaining the different kinds of research conducted by the university, emphasised that the ERA should not become the determinant of the university's research budget:

IAN: To measure something you have to be put into a little category. It really depends how much weighting is given to the ERA, relative to the other things, because in our field, to make the transformational discoveries, we have to work with the physicists, and the chemists, and the mathematicians. ERA doesn't encourage that necessarily. So we do that, and we would do that anyhow, but there's the strength of the discipline and then there's also what you might call the grand challenges of research. The grand challenges have to be done to a large extent collaboratively. If you're a pharmacologist, you have to have a discipline in pharmacology, but if you want to work on novel ways of cancer therapy you don't work alone. You may work with a radiologist, and that means with the physicists, with the chemists, the mathematicians. So you can do clinical trials on smaller numbers of patients, all those sort of things. I don't think they're contradictory, but you just have to make sure that ERA is not the determinant of the budget at the university.

From the perspective of others, managerialism and the embedding of managerial cultures was a key outcome of an environment increasingly focused on the intensification of research performance. As claimed by Travis:

TRAVIS: Managerialism uses ERA as a justification for the things it wants to do. One example, one of our Schools had a kind of a 'spill and fill' and they chose to say that you have to have a PhD in order to re-apply for your job, and the justification for having a PhD is you have to ultimately have the potential to become research active or engage in research and teaching. It's absolutely ridiculous to think of this particular school requiring a PhD, and indeed 20 years ago the university agreed it would never do that. Now I don't mind these things in one way. I disagree with them profoundly, but what I don't agree with is ERA providing another rung in a ladder to step in the direction you don't want to go, and I assume (the fact) that it plays into the hands of managerialism is an unintended consequence.

The perception of participants was generally that these kinds of managerial instruments were poorly designed and lacking robust justification:

BARBARA: We do have a sledgehammer approach to most things, you know. There are a few people who are not going to function well, but we've set up a whole system… The major systems that are put in place are to manage a few people. If we actually said, 'Look, most people (are) fine, and let's identify the ones that need some help and either improve their thing, or help them out if that's not the right place for them'.

KATE: I think it's based on this idea that if everybody says, 'All we want is excellent research' then somehow you can turn human beings into excellent researchers. All human beings are not excellent researchers. All human beings are not excellent academics. We're a community of scholars. Some will be better than others. What you want to do is support the environment to grow people as best as possible. But you don't spend your time trying to weed out (the weakest), or spend all your accountability time, all your management resources, on finding the ones that aren't doing their job well enough and forgetting to support the 90 per cent who are.

DAVID: You don't set up systems to demoralise your staff, in psychological terms, to encourage staff to think less of the institution that they're working for. You want people to psychologically invest in it, to not see it as a place that constantly hits them over the head, and convey a message that they're not trustworthy and they can't be depended upon. We have to have all these systems to monitor and control them, and that they're basically r incompetent or lazy or nasty or what have you. ...I mean that's a very bad message to send to employees. It's just an outrageous personnel practice, and at odds with what anyone in management would say is the way to run a large complex organisation, where your most important resource should be your

human resources, and you should value them rather than hit them over the head.

An important qualification about the significance of the ERA is that, even without the ERA or SRE, other research block funding programs that support performance indicators would remain. In discussion with a number of senior administrators, their conversations with central planning and finance about research performance of their departments, schools and faculties were more often related to indicators expressed through the Joint Research Engagement (JRE) scheme or current RTS, such as research income, student load, HDR student completions, and publications benchmarked against other quality indicators such as the Thomson's ISI or the H-Index. The variable relevance of the ERA scores in terms of publication was reflected in diverse rationales imposed by universities:

BARBARA: We're given two messages… from the university. One is we've got the HERDC dataset and we get more money from their publications. So the more publications we get from HERDC, the more money we bring in. And then we've got this other thing (the ERA) which is about quality. So we're giving two messages to staff. We're saying to them, 'Write as much as you can, because we get more money if you write more' and 'Don't write in the wrong journals, get quality'.

SAM: So this is part of the problem. It's not only (that) the university is marching to two different drums; HERDC and ERA - and of course their own agenda - but you've also got faculties then interpreting and making requirements which are even harder sometimes.

Lesley reported that the majority of processes related to research performance at her institution were established before the ERA:

LESLEY: What's interesting sitting over here is, of course, that I was involved in ERA from the first second. What's interesting is that actually listening to Jennifer's account, for example - because of ERA there are now these measures. This is (about) how many things you have to produce, and so on, whereas in fact that had already happened. That wasn't actually connected with ERA. Things happen in the same time period, and the thing that everyone hears about, because everyone rattles on about it all the time, is that we came first in Australia in this discipline, blah, blah, blah. So ERA is out front (because at the moment we've done well), but in fact all the measures about how many things you must produce were in place anyway.

The problem in terms of any recommendation about the ERA assessment exercise is the potential conflation of the existence of the ERA assessment instrument and the behaviours and practices that have developed in order to intensify the quality of research performance understood through ERA scores and indicators.

In terms of an overarching analysis, it is clear that the introduction of any research assessment system would have fundamentally changed the behaviour of universities, in the same way that the Research Quantum's 'Composite Index' did in the mid-1990s. Game playing is a fundamental implication of setting standardised rules and developing proxies of research quality and performance. Furthermore, now that it has been introduced the residual influence of the ERA on the sector's behaviour will remain profound whether it is repeated or not. The next point, however, is that the incentives to 'game play' for universities are both reputational and economic.[115] As stated by Dale:

DALE: There are these two aspects of ERA. One is financial. One is reputational. And since the release of the results of 2010, certainly the university had to look at the result very carefully, in terms of divvying up the money that we got from the Federal government, the SRE money. All I can describe is this. There's a dogfight going on amongst the schools to get the biggest share of SRE money. So make no mistakes about it, this is a finite sum, again, when it comes to money, everyone is interested in getting their share.

As argued by Hicks, reputational competition is considered by many New Public Management (NPM) scholars as sufficient to drive behaviour towards greater research intensity and selectivity.[116] Competition for funding allocation predominantly enlarges the incentive and prerogative for universities to centrally direct resources. As a result, research concentration becomes about not only enlarging investment in particular areas of the university, but also divesting others.

On this basis, institutions have and will continue to alter and adapt institutional practices to maximise competitive advantage. As claimed by Daphne:

DAPHNE: I think no matter what system we have there'll be a (research performance) system. So before ERA there were RQFs, and before that there were other ways in which we were measured. I mean, I was one of the people who fought really hard for the recognition and equivalence metrics being set up for the creative arts, for example, to actually have somewhere that linked into the system so (that) those items, those creative practices and outputs, are actually acknowledged and measured, and so on. That goes back 20 years. So this stuff has been around for a long, long time and I presume before that there was other metrics. So I think no matter what we do we're going to be measured.

In interviews it was clear that many individual administrators and managers exerted agency to resist the more managerial

aspects of institutional processes, or to assist researchers in exercising agency in achieving performance goals. Nonetheless, the centre of agency in relation to research quality is persistently shifted from individual researchers to senior university leaders, administrators, heads of schools or departments and line-managers. While they may or may not exert influence by encouraging competitive behaviour between researchers or disciplines, their influence will also not always be exerted in a rational way. This has been bluntly described by some scholars as managerialism. From the research conducted, it is apparent that many academics consider it has evolved into something more arbitrary and thus much worse.

5.4 What is the institutional capacity for minimising risk created by adverse research performance measures?

It is important to acknowledge that there are many important structural factors that limit institutions from assessing and minimising risk in relation to managing research performance.

Firstly, in the Australian context institutions have unhampered access to staff information in relation to research output. Though the ERA publishes quality scores at the Field of Research (FoR) rather than the individual level, each institution has the responsibility for collecting and submitting data for the ERA submission. Furthermore, there are no conditions placed upon eligible institutions in relation to the use of this data. In the New Zealand PBRF, the Tertiary Education Commission (TEC) takes individual data and assigns them 'Component Scores' and then a rating in six 'Quality Categories'. These scores are described as 'personal information' by the NZ TEU and provision of this personal information to the relevant employer has been interpreted as a breach of privacy (without the permission of the individual concerned).[117]

Secondly, in Australia the outcome of over two decades of corporatisation in university research has been the replacement of collegial, committee-based models of governance with hierarchical management models characterised by increases in the number of professional management appointees.[118] In the organisational structures and decision-making bodies that have arisen around how institutions plan research performance and strategic investment, what is notable is the extent to which traditional decision-making bodies such as university councils and academic boards have also been marginalised and replaced by appointed committees.[119] While senior administrators often sit on these kinds of committees, organisational planning about research performance largely mirrors the changing dynamics of university governance and the decreasing presence of elected or staff representative positions in decision-making fora. This represents an erosion of the productive involvement of stakeholders functioning within the research system.[120] This also means that the constituencies represented by decision-makers are often focused at institutional or external interests.

The lack of staff engagement around the development of research performance measures was routinely reflected in the perspectives of focus group participants. For instance, Sam confirmed that researchers were marginalised in decision-making processes in his faculty;

SAM: They've not been consulted. There would be no need to consult because the faculty determines what is 'research active'… They come up with a description, then they take it to the Heads of Departments meeting, and they discuss it there. If it's all agreed - the Heads of Departments take it back to their executive meeting or whatever forum they have. Report back and it all goes through.

In the feedback from participants, the development of benchmarks and metrics rarely considered the professional interests of those who work under those performance accountability processes.

The concern for the majority of university staff will be that the introduction and modification of research performance expectations are intimately tied to the employment relationship. They will impact significantly upon workplace culture and upon the professional and industrial interests of university staff. In most instances, the introduction of performance benchmarks overlay existing academic promotion policies, and, depending upon the wording of the collective agreement, may in certain instances be explicitly at odds with provisions and clauses about academic promotion and performance review in the university's collective agreement. Internal adaptation of ERA requires an industrial as much as a policy based response, and in particular the development of strategies that will protect the integrity of academic promotion and performance review systems.

In an international context, the full extent of university adaptation around research performance is being progressively addressed, with concerns about the misuse of research evaluation systems shared by sister organisations in New Zealand and the UK where the operation of highly intrusive RES's are well established. In the UK, the University and College Union (UCU) in March 2012 told members that 'any assessment of staff contribution should be in relation to an agreed set of expectations associated with a job role or description, employment contract and academic role profile and not in terms of grading exercises such as the REF'.[121] In NZ, where the Tertiary Education Commission (TEC) is the repository for individual PBRF quality scores, the New Zealand Tertiary Education Union (TEU) has also issued privacy advice to members about limiting instances where a staff member believes her or his information is being distributed or used in a manner that breaches the TEC guidelines.[122]

The use of research evaluation indicators as a basis to re-profile an institution's research workforce, to create additional performance benchmarks, or to create conditions around the conduct of research, is a persistent issue where the establishment of research evaluation systems have been tied to the allocation of scarce resources. Some expert commentators have described the maximisation of resource

use on a more limited range of disciplines as 'specialisation' or 'differentiation'.[123] This poses a concern for professional and industrial bodies such as the NTEU, which must ensure the interests of researchers and university staff are not endangered through the misapplication of ERA indicators. This also should pose a challenge to Australian university administrators and government policy makers, with the emergence of incredibly detrimental modes of adaptation that have established new system-wide risks to the conduct and quality of Australian research.

The purpose of research quality assessment must in part be to ensure that Australia's systems of research evaluation includes the capacity to assess systemic risk, and that representative bodies are ensured key roles in identifying and preventing misuse of research assessment instruments.

Conclusion: Managing the risk to Australia's research future

Media attention surrounding the release of the ERA 2012 National Report highlighted that the ERA has triggered changes in institutional behaviour, including the shift towards stronger concentrations of research activity, as was long anticipated by the sector.[124] This current study highlights that there needs to be greater attention to the implications of relevant public policy settings and resource allocation for the internal culture of universities. The ERA has accelerated detrimental changes in relation to research performance, impacting upon:

- Institutional and management behaviours and practices - from the institution-wide down to the intra-departmental level, in both formal and informal ways;
- The ways professional associations, disciplinary groups, and other groupings that can be generalised as 'communities-of-practice', function;
- The capacity for university staff to exercise not only autonomy, but basic precepts of academic freedom;
- Career pathways - ranging from the opportunity for graduate students to commence higher degree research to the career progress of early to mid-career researchers;
- The character, breadth and inter-disciplinarity of Australian research, and in demonstrated instances, the prospects for translational science and policy-oriented research.

An important factor for policy makers to consider is the extent to which resource allocation legitimises poorly considered, risk-taking management behaviours. Though reputational competition was the primary basis for reinforcing these processes and behaviours, the allocation of performance-based research funding represents a powerful measure that can legitimate and entrench institutional misuse.

The importance of evaluating the effects upon researchers and the capacity for research is in part underpinned by principles defined through the National Research Investment Plan (NRIP).[125] The NRIP articulates a reframed approach to investment in Australia's research system, importantly highlighting a role for national coordination in building long-term sustainability of research capacity. It has developed a continuum of investment priorities that endorse the full spectrum of research. This is expressed through the notion of the 'research fabric', which looks to research capability in five broad and interdependent domains. The description of Australia's system of research as a 'research fabric' begs questions about the contexts in which principles of competition and contestability are suitable, and when they might in fact come at the expense of the capacity to support breadth, depth and diversity in knowledge creation.

If we consider, as previously outlined by the OECD, that 'serendipity plays a role in scientific and technological achievements and that important breakthrough can come from unexpected sources', and also that publicly funded research systems 'need capabilities across a broad spectrum of research in order to absorb knowledge generated elsewhere and to generate complementary knowledge needed to advance innovation in priority areas', there are critical risks for the breadth and diversity of Australian research that need to be managed in relation to the exigencies that drive institutions towards greater competition.[126]

This study contends that greater unmediated investment in performance-based funding such as SRE and RTS is likely to exaggerate managerialism. This is likely to undermine both the credibility and confidence held by the sector in ERA, as well as the capacity of the Australian tertiary education sector to sustain its research performance. The management of these risks can be assisted by funding incentives for sustainable and responsible management practices. Notions of sustainable research quality might look to fewer metrics-based performance indicators, they might focus on benchmarks through identifying best practice systems, or more appropriate input factors such as investment in professional development programs and output factors such as the extent of involuntary staff turnover.

Institutional adaptation to the ERA measures of research performance are likely to have profound effects on Australian universities and the character of Australian research, long before 2015 when the next ERA has been proposed.[127] The research demonstrates that the measurement of research performance undermines basic precepts of intellectual freedom. A key principle in the rules and expectations around the conduct of publicly funded research should be that university academics and researchers must be supported to conduct research in academic disciplines they have expertise in, and in an environment in which freedom of intellectual inquiry is encouraged and protected. Just as important is the need to build greater clarity amongst researchers about the ERA. Stronger communication strategies will ensure individual researchers approach the adaptation of particular institutions with factual and reliable information about the ERA and SRE's design and policy intent.

The assessment of risk in relation to the misuse of performance indicators used to measure research quality should be an explicit component of research quality assessment. With changes to the governance of universities over the last twenty years the role of the NTEU as the industrial advocate and representative of university staff and other regulatory bodies is required to ensure independent oversight of the implications for the sector and Australia's capacity to build and sustain its research efforts.

In light of the many concerns expressed by participants in this study, the NTEU cannot entertain support for any performance based funding implications flowing from the ERA. It is not in the interests of the sector to support additional funding tied to the ERA unless it is confident that government has established strong disincentives against detrimental behaviours and practices that are already damaging the character, breadth and inter-disciplinarity of Australian research, damaging Australian universities as workplaces, and undermining the professional interests and employment conditions of university and research staff.

Appendix A: Survey questions to senior administrators on ERA and research performance (23 April 2012)

1. Has your institution issued any formal communication to academic or research staff, or implemented university-wide policy changes that acknowledge the ERA journal rankings have been formally abandoned?

2. Does your university continue to use journal rankings (ERA or alternative) in relation to the professional development or career progress of academic or research staff?

3. Does your university administer research metrics to assess the performance of academic or research staff? If so:
   i. What metrics are used?
   ii. Do they vary by faculty or discipline?

4. Does your university set specific performance targets for these measures for:
   - appointment
   - probation
   - performance management
   - promotion

Appendix B: Discussion points for focus group participants

1. Purpose of ERA:
   - What is ERA and what do you understand it is meant to do?

2. Quality of information about ERA:
   - Do you think the quality of information you receive from your university about ERA is adequate?

3. ERA journal rankings:
   - How much emphasis does the academic unit you work in place on ERA journal rankings?

4. Universities and research metrics:
   - How does your university manage research performance and what purpose do ERA journal rankings play?
   - What other ways has ERA impacted upon the way the university operates?

5. Implications of ERA:
   - What are the key implications of ERA for your professional interests as an academic or researcher?
   - What effect will ERA have upon the Australian higher education sector in the long term?

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Endnotes

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6. See NBEET (1996) *Patterns of research activity in Australian universities (Commissioned Report 47)*, Australian Government Publishing Service (AGPS): Canberra; Senate Committee on Employment, Workplace Relations, Small Business and Education (2001) *Universities in Crisis: report into the capacity of public universities to meet Australia's higher education needs*, AGPS: Canberra.
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8. See F. Larkins (2011) *Australian Higher Education: Research Policies and Performance 1987-2010*, Melbourne University Press: Carlton, Melbourne, p.265.
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10. Expert Advisory Group for the RQF (2005) *Research Quality Framework: Assessing the quality and impact of research in Australia*, Department of Education, Science and Training: Canberra, p.2.
11. DIISR (2009) *Powering Ideas: An innovation agenda for the 21st century,* Attorney General's Department: Canberra, ACT, pp. 6, 33
12. K. Carr, (2011) Speech to Universities Australia Conference, 2 March 2011, Retrieved 21 August 2011, http://archive.innovation.gov.au/ministersarchive2011/Carr/Speeches/Pages/UNIVERSITIESAUSTRALIAHIGHEREDUCATIONCONFERENCE.html
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14. DIISR (2011) *Defining Quality for Research Training in Australia: A Consultation Paper*, Attorney General's Department: Canberra, ACT, p.5. See also DIISR (2011) *Focusing Australia's Publicly Funded Research Review: Maximising the Innovation Dividend, October 2011*, Attorney General's Department: Canberra, ACT, p. 78.
15. The Group of Eight for instance claims that this has had 'incentives, reputational as well as financial, for universities to address areas of weak research performance and build on their research strengths' and has led to 'buying in star researchers and expanding doctoral student enrolments, especially international students'. See Go8 (2012) *Go8 Backgrounder 31 - Higher education financing*, Go8: Turner, ACT, Retrieved 6 December 2012, http://www.go8.edu.au/university-staff/go8-policy-_and_-analysis/2012/go8-backgrounder-31-higher-education-financing
16. OECD (2010) *Performance-based Funding for Public Research in Tertiary Education Institutions: Workshop Proceedings*, OECD Publishing, p.10.
17. C. Evans (2012) 'Record investment lifts university research rankings', 6 December 2012, Retrieved 8 December 2012, http://minister.innovation.gov.au/chrisevans/MediaReleases/Pages/RecordinvestmentliftsuniversityresearchrankingsaspX
18. M. Phillips (2012) *Research universities and research assessment*, League of European Research Universities (LERU): Leuven, Belgium, p.3, 14. This kind of evaluation is also consistent with good public policymaking. See C. Althaus, P. Bridgman and G. Davis (2007) *The Australian Policy Handbook (4th edition)*, Allen & Unwin: Sydney, pp. 179-90.
19. L. Georghiou and P. Larédo (2005) *Report on the Berlin International Workshop on the Evaluation of Publicly Funded Research*, 26/27 September 2005, p. 9.
20. K. Carr (2012) *Media Release - Improvements to Excellence in Research Australia (ERA)* , 30 May 2011, Retrieved 21 April 2012, http://archive.innovation.gov.au/ministersarchive2011/Carr/MediaReleases/Pages/IMPROVEMENTSTOEXCELLENCEINRESEARCHFORAUSTRALIA.html
21. The capacity to interrogate changes in university practice and behaviour required methodologies that embraced 'close-up research' typified in relation to education research by C. Prichard and P. Trowler (eds) (2003) *Realizing Qualitative Research into Higher Education*, Ashgate Publishing: Aldershot. This was not only to describe social identities and subjectivities but also to report and document the perception of social processes or phenomena.
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24. See C. Arup (2008) 'Research assessment and legal scholarship', *Legal Education Review*, vol 18, No. 1 & 2, pp. 31-54; N. Haslam and P. Koval, (2010) 'Possible research area bias in the Excellence in Research for Australia (ERA) draft journal rankings', *Australian Journal of Psychology*, vol.62, no. 2, pp. 112-14.
25. See M. Pearson (2011) 'A poor fit for journalism Research'; M. Meadows (2011) 'The meaning of life: journalism research and ERA 2010', *Australian Journalism Review*, Vol. 33, No. 1, pp.9-15; G. Turner (2011) 'The ERA and journalism research', *Australian Journalism Review*, Vol. 33, No. 1, pp.5-7. Also R. Clarke (2009) 'A Citation analysis of Australian Information Systems Researchers: Towards a new ERA?', *Australasian Journal of Information Systems*, Vol. 15, No. 2, pp. 23-44; J. Lamp (2009) 'At the Sharp End: Journal ranking and the dreams of academics', *Online Information Review*, Vol. 33, No. 4, pp. 827-830; J. Lamp and J. Fisher (2010) 'ERA distribution

of Information systems journals', *Australasian Journal of Information Systems*, Vol. 16, No.2, pp.5-17.

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29. S. Cooper & A. Poletti (2011) 'The new ERA of journal ranking: The consequences of Australia's fraught encounter with 'quality'', p.61; see also G. Redden (2008) 'From RAE to ERA: Research Evaluation at Work in the Corporate University'.
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58. DIISR (2011) *Sustainable Research Excellence: Consultation Paper on Options for the Inclusion of ERA in SRE Funding Allocation Model*, Commonwealth of Australia: Canberra, ACT.
59. DIISR (2012), *2012 SRE Process Calculations.*
60. D. Kemp (1999) *Innovation and Knowledge*, p.17
61. DIISR (2011) *Defining Quality for Research Training in Australia*, p.5.
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63. In contrast to the ERA, the ATN/Go8's EIA trial, was more directly derived from the UK's REF and relied upon Socio-economic Objective (SEO) codes devised by the Australian Bureau of Statistics (ABS) instead of FoR codes, and a rating scale between A and E. See ATN/Go8 (2012) *Excellence in Innovation for Australia Trial - Excellence in Innovation for Australia*, Retrieved 20 October 2012, http://www.go8.edu.au/university-staff/programs-_and_-fellowships-1/atngo8-excellence-in-innovation-for-australia-trial-excellence-in-innovation-for-australia-eia
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70. A. Geuna and B. R. Martin (2003) 'University Research Evaluation and Funding: An International Comparison', p. 278.
71. C. L. S. Coryn, J. A. Hattie, M. Scriven and D. J. Hartmann (2007) 'Models and Mechanisms for Evaluating Government-Funded Research: An International Comparison', *American Journal of Evaluation*, No.28, pp. 437-57 at 440.
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74. N. Von Tunzelmann and E. K. Mbula, *Changes in Research Assessment Practices in other countries since 1999: Final Report*, 2003, http://www.grs.sund.ac.uk/grsstaff/Roberts2/changingpractices.pdf, Retrieved 10 April 2009. The first is a *performance-based* approach in which RES are used, at least in part, to distribute state funds. This is most clearly espoused in the UK's RAE but versions exist in New Zealand, Australia and Taiwan. The second approach continues to place much greater focus upon *student numbers* rather than focusing upon an assessment of research quality. This was the largest group and included Germany, Italy, the Nordic countries and Hungary. In the third, funding allocations were described as *open to 'negotiation'* (Austria and France). In the fourth, research assessment and funding were clearly *separate* (Netherlands, US and Canada).
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78. L. Georghiou, L. and P. Larédo (2005) *Report on the Berlin International Workshop on the Evaluation of Publicly Funded Research*, p. 9.
79. M. Phillips (2012) *Research universities and research assessment*, p. 3.
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82. The 2012 ERA journal indicator displayed a table listing all of the journals in which the articles submitted to that Unit of Evaluation (UoE) were published. Journals in this table were ordered by number of articles rather than the old ERA journal ranking, so that the journal containing the greatest number of articles appeared at the top of the table, and the journal with the least number of articles at the bottom. See ARC (2012) *Frequently Asked Questions ERA 2012 Submission*, Reviewed 10 Sept 2012, http://www.arc.gov.au/era/faq.htm#refinements
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84. As has been argued by CRC President Tony Peacock, "The cost of the ERA and the innovation trial are far too high". A. Trounsen (2012) 'ERA attacked for being too expensive, too detailed and too frequent', *The Australian*, 8 December 2012.
85. For instance, the ARC *2012 ERA Submission Guidelines* at p.7 which states, 'For each four-digit FoR that is subject to ERA peer review, institutions must nominate 30% of all research outputs for peer review'.
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94. ARC (2011) *2012 ERA Submission Guidelines*, p.12.
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96. See Mike Calford, 'ERA effect will change the emphasis to research outcomes not incomes', *Campus Review*, 7 February 2011; 'Tactical moves ahead of ERA II', *The Australian*, The, Mar 16, 2011; J. Hare and A. Trounsen (2012) 'Academic recruit lifts audit rating', *The Australian*, 12 December 2012.
97. ARC (2012) *Frequently Asked Questions ERA 2012 Submission*.
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99. ARC CEO Aiden Byrne has publicly recognised that institutions have actively sought to reposition outputs into other areas, potentially responsible for much of the fall of 100 units of assessment compared to 2010. See A. Trounsen (2012) 'Quantity deserves reward in ERA,' *The Australian*, 12 December 2012, p.30.
100. J. Hare and A. Trounsen (2012) 'Academic recruit lifts audit rating'.
101. Underpinned by a construction of university governance as a relational concept that has traditionally been caught by a tension between 'horizontal academic decision-making and hierarchical administrative traditions', existing academic literature posits a range of conditions impacting upon institutional governance, particularly in relation to centralised and decentralised decision making between top administrators and faculty-based leaders. For instance, P. Maassen (2005) 'Shifts in Governance Arrangements: An Interpretation of the Introduction of New Management Structures in Higher Education', in A. Amaral et al. (eds.), *The Higher Education Managerial Revolution?*, Springer, pp. 35-58.
102. D. Hicks (2012) 'Performance-based university research funding systems', p.259.
103. R. Neumann and J. Guthrie (2002) 'The Corporatization of Research in Australian Higher Education', p. 722.
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105. In 2012, the Australian Government implemented the student demand-driven model. Caps on Commonwealth-funded undergraduate places have been abolished and universities are able to increase the number of Commonwealth supported places in response to employer and student demands. Prior to 2012, the Commonwealth provided funding to eligible higher education providers for an agreed number of Commonwealth supported places in a given year. During 2010 and 2011, the 'cap' on funding for over-enrolments was lifted to 10 per cent, allowing universities to significantly enrol above their agreed funding targets.
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111. O. Auranen and M. Nieminen (2010) 'University research funding and publication performance - An international comparison', p. 831.
112. D. Hicks (2012) 'Performance-based university research funding systems', p.258.
113. J. Gläser and G. Laudel (2005) 'The Impact of Evaluations on the Content of Australian University Research', *Conference Paper to the TASA Conference*, pp.1-11 at 11, Retrieved 10 September 2012, http://repp.anu.edu.au/papers/2005_TASA.pdf.
114. R. Deem (1998): 'New managerialism' and higher education: The management of performances and cultures in universities in the United Kingdom', *International Studies in Sociology of Education*, Vol. 8, No.1, pp. 47-70 at 49. See also S. Marginson and M. Considine (2000) *The Enterprise University* and A. Amaral, G.A. Jones, B. Karseth (2002) *Governing Higher Education: National Perspectives on Institutional Governance*, Kluwer Academic Publishers: The Netherlands.
115. Group of Eight (2012) *Go8 Backgrounder 31 - Higher education financing*, p.11.
116. D. Hicks (2012) 'Performance-based university research funding systems', p.258.
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119. For instance at the University of Sydney the Senior Executive Group (SEG) convenes a series of committees including a Research Committee composed of the DVC-R, senior executive members, some faculty representatives and Associate Deans of Research. At the University of Melbourne the DVC-R convenes two committees, an Advisory Group focused at research investment and a Committee of Associate Deans Research.
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