

The **Allen Consulting** Group

# Recognising the full cost of university research

Issues Paper

September 2008

Report to Department of Innovation, Industry, Science and Research

---

# The Allen Consulting Group

The Allen Consulting Group Pty Ltd  
ACN 007 061 930, ABN 52 007 061 930

## Melbourne

---

Level 9, 60 Collins St  
Melbourne VIC 3000  
Telephone: (61-3) 8650 6000  
Facsimile: (61-3) 9654 6363

## Sydney

---

Level 12, 210 George St  
Sydney NSW 2000  
Telephone: (61-2) 8272 5100  
Facsimile: (61-2) 9247 2455

## Canberra

---

Empire Chambers, Level 2, 1-13 University Ave  
Canberra ACT 2600  
GPO Box 418, Canberra ACT 2601  
Telephone: (61-2) 6204 6500  
Facsimile: (61-2) 6230 0149

## Perth

---

Level 21, 44 St George's Tce  
Perth WA 6000  
Telephone: (61-8) 6211 0900  
Facsimile: (61-8) 9221 9922

## Online

---

Email: [info@allenconsult.com.au](mailto:info@allenconsult.com.au)  
Website: [www.allenconsult.com.au](http://www.allenconsult.com.au)

### Disclaimer:

While The Allen Consulting Group endeavours to provide reliable analysis and believes the material it presents is accurate, it will not be liable for any claim by any party acting on such information.

© The Allen Consulting Group 2008

---

## Contents

Chapter 1	1
<i>This study</i>	<i>1</i>
1.1 Background to the study	1
1.2 Terms of Reference	2
1.3 Approach of the study	2
Chapter 2	4
<i>University research in Australia</i>	<i>4</i>
2.1 Introduction	4
2.2 Guidelines for costing and charging university research	6
2.3 The ABS's survey of university R&D expenditure	7
2.4 Funding sources and coverage of infrastructure costs	10
Chapter 3	12
<i>Overseas funding of university research</i>	<i>12</i>
Chapter 4	14
<i>University research funding issues</i>	<i>14</i>
Appendix A	15
<i>References</i>	<i>15</i>
Appendix B	16
<i>Funding schemes - 2008 Australian Competitive Grants Register</i>	<i>16</i>
Commonwealth Schemes (by portfolio)	16
Non-Commonwealth	18

## Chapter 1

# This study

### 1.1 Background to the study

In progressing consideration of mission-based compacts for universities, a key issue relating to funding for the research and research training activities within universities that will need to be addressed is whether funds provided for research cover the actual costs involved. Quantifying the full (direct and indirect) cost of research in Australian universities will facilitate negotiations with universities on compacts for future funding.

Universities in Australia (AVCC 1996) and overseas have long expressed concerns that research grants do not cover administrative, technical and other overheads. Recently, Universities Australia and the Group of Eight (Go8) have raised the issue again in their submissions to the Australian Government's Review of the National Innovation System (Go8 2008). Other submissions have also addressed this matter (ANU 2008, IRUA 2008).

The Go8 universities feel this problem particularly acutely because they receive more than seventy per cent of funding under Australian Competitive Grant Programs (ACGPs). One estimate for 2003-4, put the gap between the cost of research and the direct funding provided by ACGPs, and the full cost, at \$450m of which the Go8 share would have been about \$330m (Fell *et al.* 2004, Go8 2008). Similarly the ATN (Australian Technology Network of Universities Australia) has indicated that this gap in university funding could be as high as 1:3 for its members (ATN 2008). This suggests that the gap between the cost of research and direct funding may be systemic.

Various approaches have been adopted to address this issue. Many OECD countries operate dual funding schemes, where competitive grants are supplemented by separate block funding schemes to meet infrastructure and indirect costs. One approach is to provide supplementary funding, based on competitive grant income received by individual universities. In Australia this is achieved, in part, through the Research Infrastructure Block Grants (RIBG) Scheme.

In the USA, government funding agencies make contributions towards overhead costs on a negotiated formula basis (which may vary from university to university). The United Kingdom and some other countries have adopted a full cost accounting approach, with government funding agencies taking measures to meet the full costs of research.

Each of the above approaches has advantages and disadvantages. For example, it has been argued that the formula approach can reward universities with high management costs, at the expense of others whose management structures are leaner.

There is debate about the adequacy of the block funding provided through schemes such as RIBG. There is evidence to suggest that the growth of RIBG has not matched the growth of ACCGs over the past decade. In any event, establishing whether this type of approach provides an equitable outcome, *and* meets the costs of research, requires knowledge of indirect costs that can legitimately be attributed to research projects.

## **1.2 Terms of Reference**

The Terms of Reference of this project are to:

- identify as far as practical the direct and indirect costs involved in undertaking research and research training in Australian universities from competitive research grants by;
  - identifying key criteria for categorising indirect and overhead costs associated with research and research training;
  - identifying the variation in the way universities collect and report on R&D expenditure;
- identify and describe (where possible) how the direct and indirect costs of performing research and research training are included in competitive research grants;
- identify ways of closing the gap between the actual cost (direct and indirect) of conducting research and research training and competitive grant-based research funding (based on indicative international benchmarks where possible); and
- highlight the steps necessary for establishing a new method for allocating research funding.

## **1.3 Approach of the study**

This study adopts a case study approach for examining the full cost of university research. A case study approach is considered to be an effective means of first recognising and then attributing certain indirect costs to the total cost of research, in the absence of systematic sector-wide data.

Key points of reference that will guide the research and analysis of this project include:

- a representative set of case studies of the direct and indirect costs of research in Australian universities. These case studies are also intended to highlight the approximate cost of higher degree research training as a proportion of project costs;
- the existing guidelines for costing and charging university research;
- the survey data collected by the ABS on R&D expenditure;
- the rules governing indirect and infrastructure costs of the main competitive research funding schemes; and
- the experiences of other countries in attempting to recognise indirect costs and address short-falls in research funding.

The selection and development of case studies has been based on:

- key institutional variations between universities (caused by differences in research intensity, locality, asset-base, and the number of campuses operated by some universities);
- key variations between the different disciplines undertaking grant-based research; and
- the availability of robust university-level data that can be used to inform evidence-based policy making.

The data will be examined at both whole-of-institution level and specific research project level data with universities:

- two universities from the Group of Eight;
- one from the Australian Technology Network of Universities;
- one from the Innovative Research Universities of Australia; and
- two non-aligned universities.

This data will be supplemented by a desktop review of key documents and surveys. These could include:

- university submissions to the Review of the National Innovation System (Cutler Review), and other relevant recent reviews;
- surveys and research reports (i.e. Group of Eight's 2007 Infrastructure Condition Survey of facilities managers) previously undertaken by universities;
- ABS data on the capital components of Higher Education Research Degree (HERD) – although this data does not commonly include expenditure on capital maintenance;
- reports from Cornell University (Zuiches and Valley 1987), the RAND Corporation (Goldman *et. al* 2000), and the General Accounting Office which undertook a project with MIT, analysing federal spending on scientific research at US universities; and
- other relevant documentation and evidence developed by universities, governments and public research funding bodies.

## *Chapter 2*

# University research in Australia

### **2.1 Introduction**

Research in Australia's universities is funded through a 'dual funding' model. The two components of this model are competitive grants and block grants. Of particular relevance to this study are those grants listed on the Australian Competitive Grants Register (ACGR) and the Research Infrastructure Block Grants (RIBG). A summary of ACGR, RIBG and other block grants follows.

#### ***The Australian Competitive Grants Register***

The qualifying criteria for inclusion in the ACGR are:

- funds must be provided on a nationally competitive basis and clearly be for research only;
- the funding scheme must be nationally advertised and available to universities throughout Australia;
- the funding scheme must have a well-defined mechanism for competition and selection by a well-qualified panel;
- funds must be provided through direct transfer from the funding agency to the higher education institution;
- grants in kind, such as the use of facilities, equipment etc. or subsidised travel or accommodation, are not eligible;
- funding schemes used exclusively to fund student scholarships are not eligible;
- schemes that provide funding wholly or mainly for infrastructure purposes are not eligible.
- the funding body must agree to provide funding data to the Department of Education, Employment and Workplace Relations and the data must be up to date; and
- for non-Commonwealth research funding schemes, the total annual budget in 2006 must be at least \$200,000.

The Department of Innovation, Industry, Science and Research (DIISR) reviews the ACGR annually. Schemes must continue to meet the ACGR listing criteria to stay on the Register. The current list, which applies to competitive grants paid in 2007, can be found at Appendix B.

#### ***Research Infrastructure Block Grant Scheme***

The second component of the Australian dual funding model comprises block grants, primarily the Research Infrastructure Block Grants (RIBG) (\$208 million in 2008). The RIBG Scheme is intended to:

- enhance the development and maintenance of research infrastructure in higher education institutions for the support of high quality research in all disciplines;
- meet project-related infrastructure costs associated with Australian Competitive Grants;
- remedy deficiencies in current research infrastructure; and
- ensure that areas of recognised research potential, in which higher education institutions have taken steps to initiate high quality research activity, have access to the support necessary for development.

RIBG grants, paid to higher education institutions, are determined on the basis of their relative success in attracting research income from competitive funding schemes listed on the Australian Competitive Grants Register (ACGR).

### ***Institutional Grants Scheme***

The broad purpose of the Institutional Grant Scheme (IGS) (\$308 million in 2008) is to maintain and strengthen Australia's knowledge base and research capabilities by developing an effective research and research training system in the higher education sector. Under the scheme, block grants are provided, on a calendar year basis, to eligible higher education institutions to support research and research training activities. Institutions have discretion in the way they spend their IGS grant provided it is used to fund any activity related to research.

The key elements of the Scheme include:

- the requirement that all IGS funds are shared out amongst all eligible institutions;
- the allocation of IGS funds on the basis of institutional performance as measured by research income and publications averaged over previous two years and HDR student load for the most recent year; and
- a safety net, which means that the most an institution can lose is 5 per cent of funding from year to year.

### ***Research Training Scheme***

The Research Training Scheme (RTS) is the largest of the block grants in support of research and research training (\$585 million in 2008). Under this scheme, block grants are provided to higher education institutions on a calendar year basis to support research training for students undertaking doctorates and masters degrees by research. RTS students are entitled to a maximum of four years full-time equivalent study if undertaking an eligible Doctorate degree by research or a maximum of two years full-time equivalent study if undertaking a Masters degree by research. In policy terms, the RTS aims to improve the training environment, reduce attrition rates and encourage timely completions for students.

The key elements of the scheme include:

- the requirement that all RTS funds are shared amongst all eligible institutions;

- an institutional share of the RTS performance index (i.e. a 50 per cent HDR completion rate, a 40 per cent allocation on the basis of research income and a 10 per cent allocation based on publication rates) is calculated using data averaged over the previous two years;
- the allocation of 25 per cent of the total RTS funds available each year on the basis of institutional performance; and
- a safety net, which means the most an institution can lose is 5 per cent of funding from year to year.

## **2.2 Guidelines for costing and charging university research**

The 1996 Guidelines issued by the then Australian Vice Chancellors' Committee (AVCC) for the costing and charging of university research provide an important reference point for this project. The guidelines are significant because they reflect the AVCC's belief that:

universities should be committed to a general policy of fully costing all externally funded research. Special care should be taken to ensure that all allowable items of expenditure are included in budget estimates. Universities must, however, be able to be flexible when determining the price to be charged and thus the actual funding they require (1996, p. 8).

They are also important because they have been one of the key criteria upon which universities have estimated the direct and indirect costs of research when applying for competitive grants.

The definitions outlined in the Guidelines include:

- **Total Direct Payroll Costs:** are the salary and salary on-costs of all professional staff directly involved with the project;
- **Direct Project Costs:** are the costs of consumables, travel and equipment etc, for the work of the contract or project;
- **Direct Costs for Specific Services:** are the total direct payroll costs of support for people for the time that they are dedicated to the project;
- **Major Capital Costs:** are the costs of large items of equipment and facilities, provided wholly or substantially for the project; and
- **Infrastructure Costs:** are the costs of providing overheads and general support for the work such as the contribution to libraries, general workshop and administrative support (AVCC 1996, p. 13).

Examples of the types of costs under each category are outlined in Table 2.1.

Table 2.1

**AVCC'S 1996 GUIDELINES FOR COSTING AND CHARGING RESEARCH**

Major cost category	Examples
Total direct payroll costs	<ul style="list-style-type: none"> <li>• salaries of all professional staff (including fractional time) involved in the project;</li> <li>• all relevant salary on-costs including advertising, payroll tax, superannuation, workers compensation, long service leave, leave loading, other leave, training, travel, appointment and relocation costs;</li> </ul>
Direct project costs (consumable materials and supplies)	<ul style="list-style-type: none"> <li>• materials, supplies and component parts;</li> <li>• equipment costs specially required for the project such as freight, installation, minor works and maintenance;</li> <li>• travel and field expenses;</li> <li>• reporting expenses including printing, photocopying and binding costs;</li> <li>• project management services;</li> <li>• animals;</li> <li>• sample survey reports; and</li> <li>• special library materials</li> </ul>
Direct costs for specific services	<ul style="list-style-type: none"> <li>• secretarial and technical support; and</li> <li>• external professional services</li> </ul>
Major capital costs	<ul style="list-style-type: none"> <li>• special space requirements (usually charged at commercial rates);</li> <li>• building works; and</li> <li>• provision of major capital</li> </ul>
Infrastructure costs	<ul style="list-style-type: none"> <li>• general technical support;</li> <li>• accounting and administration services;</li> <li>• building maintenance and running costs;</li> <li>• ICT and communications;</li> <li>• library and information services;</li> <li>• workshops;</li> <li>• use of existing equipment;</li> <li>• office support and secretarial services;</li> <li>• office and laboratory space; and</li> <li>• amortisation of buildings</li> </ul>

Source: AVCC 1996.

**2.3 The ABS's survey of university R&D expenditure**

The survey of research and development in Australia's higher education sector (undertaken by the Australian Bureau of Statistics<sup>1</sup>) currently stands as the only source of sector-wide data relating to the direct and indirect costs of university research.

In the most recent survey (2006) the ABS found that higher education expenditure on research and development (HERD) was \$5.4 billion. Of this, \$359.3 million was capital expenditure and the remainder, of just over five billion dollars, was current expenditure. This was a significant increase from 2004 in current and real terms, and as a proportion of GDP.

<sup>1</sup> See 8111.0 - Research and Experimental Development, Higher Education Organisations, Australia, 2006: [www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/AE02B963FB1D51B2CA2571B60075B1C0?opendocument](http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/AE02B963FB1D51B2CA2571B60075B1C0?opendocument)

The ABS survey data includes a breakdown of expenditure on research and development by state and territory, and by type of expenditure. This data is aggregated as follows:

*Capital expenditure*

- Land, buildings or other structures
- other capital expenditure

*Current expenditure*

- labour costs
- scholarships
- other current expenditure

ABS data includes expenditure on research and development by source of funds in each state and territory. This includes the following attributes:

- Australian competitive grants (Commonwealth and other schemes)
- general university funds
- other Commonwealth government
- state and local government
- business
- donations, bequests and foundation
- other Australian
- overseas.

ABS data also includes expenditure on research and development by type of research activity in each state and territory (i.e. pure basic research; strategic basic research; applied research and experimental development).

The ABS survey seeks estimates of indirect costs (overheads) associated with university research. It specifically asks higher education institutions whether these costs have been estimated by multiplying direct staff costs by 0.6. However, the ABS also accepts other estimates of indirect costs. For example, these can be derived by comparing R&D-related personnel to the total numbers of personnel; R&D expenditure to total expenditure; or floor space devoted to R&D as a fraction of total floor space.

Finally, data is provided for expenditure by: research field (22 categories); socio-economic objective (five major categories); and human resources (by academic staff, postgraduate students and 'other' staff). Research and development collected by the ABS is defined in accordance with the OECD standard, as specified in the Frascati Manual (OECD 2002).<sup>2</sup>

---

<sup>2</sup> This can be purchased from the OECD or downloaded from [europa.eu.int/estatref/info/sdds/en/rd/rd\\_frascati\\_manual\\_2002.pdf](http://europa.eu.int/estatref/info/sdds/en/rd/rd_frascati_manual_2002.pdf)

### *The Frascati Manual*

The Frascati Manual deals exclusively with the measurement of human and financial resources devoted to research and experimental development. It provides recommendations and guidelines on the collection and interpretation of established research and development (R&D) data. The Frascati Manual was developed to ensure that OECD and other countries use the same definitions of R&D, thus facilitating comparisons between countries. The Frascati Manual characterises R&D and indirect support activities as shown in Table 2.2.

Table 2.2

#### **R&D AND INDIRECT SUPPORT ACTIVITIES**

<b>Activity</b>	<b>Treatment of R&amp;D</b>	<b>Location in the institution carrying out the R&amp;D</b>		<b>Categories</b>	<b>Activities in each category</b>
R&D activities	In R&D personnel & in R&D labour costs	In the R&D-performing unit	R&D units (formal R&D) plus other units (informal R&D)	Direct R&D	Carry out experiments, build prototypes, etc
				Acquisition and treatment of specific information	Drafting, typing & reproducing R&D reports, in-house libraries, etc
				Specific R&D management	Planning & managing S&T aspects of R&D projects
				Specific administrative support	Bookkeeping, personnel administration
Indirect support activities	Not in R&D personnel or in R&D labour costs but in "other current costs" as overhead	Elsewhere in the performing institution (firm, agency, university, etc) (or contracted out)	Central finance or personnel services & on-site consultants	Central administration	R&D share of finance, personnel and general operations
			S&T-related support services	Direct centralised support services	R&D share of support provided by computer departments, libraries, etc
			Other ancillary services	Indirect centralised support services	Security, cleaning, maintenance, canteen, etc
Not involved in performance	Excluded	Outside the performing institution n.e.c.	Regional & national authorities, international agencies, etc		Collection & distribution of R&D funds

Note: n.e.c. means not elsewhere classified

Source: OECD, current.

The Frascati Manual provides the technical basis upon which the ABS survey of university R&D expenditure has been constructed. For example, the nature of research-related activities and their treatment as a direct or overhead cost are derived from the definitions in the Manual.

## 2.4 Funding sources and coverage of infrastructure costs

The bodies responsible for allocating the large proportion of competitive university research grants provide strict guidelines as to what items of expenditure can be included in, and therefore, funded by competitive research grants. While some of these bodies operate schemes that specifically contribute to the equipment costs of research, they do not contribute to the ongoing capital and wider infrastructure costs associated with university research. There is some variation between competitive grants schemes in regard to what can be funded.

Table 2.3 provides an overview of the allowable costs under some ARC and NHMRC research grants schemes. These schemes do not generally contribute to indirect costs, but also do not often meet the full direct costs of projects. For example, grant applications are often only partially funded. In some cases, the extent to which the applicant is providing funding from other sources may be a consideration in awarding a grant (e.g. the Cooperative Research Centres Program).

Table 2.3

### INDICATIVE FUNDING SOURCES AND COVERAGE OF COSTS

Funding source	Infrastructure covered under the grants	Infrastructure not covered under the grants
National Health and Medical Research Council (NHMRC) – Infrastructure Support		
Enabling Grants	<ul style="list-style-type: none"> <li>The scheme supports excellent facilities and/or activities where there is a clearly demonstrated national need for the particular facilities and/or activities in order to underpin aspects of the national health and medical research effort.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Infrastructure Grants	Payments support the following types of overhead infrastructure used to support research activity: <ul style="list-style-type: none"> <li>Funding of non-capital aspects of facilities (e.g. libraries, laboratories, computing centres, animal houses, herbaria and experimental farms).</li> <li>Equipment purchase, installation, maintenance, hire and lease.</li> <li>Salaries of research support staff (including research assistants, accounting and administrative staff and technicians).</li> </ul>	<ul style="list-style-type: none"> <li>Capital works (i.e. construction of buildings).</li> <li>Rental of accommodation.</li> <li>Salaries of research staff and supporting staff.</li> <li>Travel.</li> </ul>

Table 2.4 Cont'd

**INDICATIVE FUNDING SOURCES AND COVERAGE OF COSTS**

Funding source	Infrastructure covered under the grants	Infrastructure not covered under the grants
<b>Australian Research Council Competitive Grants</b>		
ARC – Discovery Projects, Indigenous Discovery Research Development, Federation Fellowships	<ul style="list-style-type: none"> <li>• Not covered.</li> </ul>	<ul style="list-style-type: none"> <li>• Capital works and general infrastructure.</li> <li>• Salaries of Chief Investigators and Partner Investigators.</li> <li>• Basic facilities such as accommodation, access to workshops, access to film and music editing facilities, access to basic library collection, standard reference materials, provision of computers and software, and the use of photocopies, telephones, mail, fax, email and internet.</li> <li>• Publications costs.</li> </ul>
ARC – Linkage Projects, ARC Research Networks, Linkage International	<ul style="list-style-type: none"> <li>• Not covered.</li> </ul>	<ul style="list-style-type: none"> <li>• Capital works and general infrastructure.</li> <li>• Rental of accommodation.</li> <li>• Salaries of Researchers and support staff.</li> <li>• Basic facilities such as accommodation, access to workshops, access to film and music editing facilities, access to basic library collection, standard reference materials, provision of computers and software, and the use of photocopies, telephones, mail, fax, email and internet.</li> <li>• Publication costs.</li> <li>• Minor equipment.</li> </ul>
Linkage Infrastructure, Equipment and Facilities	<ul style="list-style-type: none"> <li>• Infrastructure, equipment and facility purchases, construction and installation.</li> <li>• Major computing/data facilities, animal houses, herbaria and experimental farms.</li> <li>• Salaries directly associated with creating and installing infrastructure, equipment or facilities</li> <li>• Consortium membership costs, travel to the facility and secretariat costs in the case of Australia's participation in the use of significant international-scale research facilities.</li> <li>• Library and research information infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>• Capital works and general infrastructure.</li> <li>• Salaries of Researchers.</li> <li>• Basic facilities such as accommodation, access to workshops, access to film and music editing facilities, access to basic library collection, standard reference materials, provision of computers and software, and the use of photocopies, telephones, mail, fax, email and internet.</li> <li>• Publication costs.</li> </ul>

Source: various sources

This practice of funding agencies seeking leverage results in the relevant schemes paying less than the full costs of research. Chronic under funding can also have longer-term implications for institutions that are successful in winning competitive grants, and threatens the sustainability of research in our leading universities.

### *Chapter 3*

## Overseas funding of university research

The full costing of university research has also been a pertinent issue in the United Kingdom, Europe and North America. The experience from overseas provides indicative benchmarks for both identifying and attributing indirect research costs and for the strategies (methodologies) funding agencies use in addressing funding gaps.

### ***The United Kingdom***

The introduction of a full costing methodology known as TRAC (Transparent Approach to Costing) in the United Kingdom during early 1990s (see the study by JM Consulting 2001) aimed to provide a consistent costing framework across the entire university sector. The TRAC approach involves:

- activity based costing and analysis of all costs as reported in financial statements;
- accounting for use of academic staff time;
- use of robust cost drivers (FTE, income, m<sup>2</sup>) to attribute library and space costs and all other direct and indirect costs;
- representation of the costs of investment and risk through special cost adjustments for infrastructure and the costs of capital employed;
- calculation of indirect cost rates for teaching, research and other; and
- calculation of the charge-out rates for Research in the areas of estates, major research facilities and laboratory technicians (Go8 2008, p. 66-67).

In return for additional funding, universities were asked to:

- establish and recognise the full costs of research;
- manage their research on a sustainable basis;
- secure better prices for research;
- improve project management and cost recovery; and
- invest in research infrastructure.

The UK has subsequently extended this approach to university teaching costs.

### ***Europe***

The requirement for full costing of research proposals by the European Commission's Framework Program is resulting in increased interest by European countries. Finland and the Netherlands are already moving to address the issues involved. For example, the Netherlands has implemented a system of flat rate calculations for determining overhead costs (between 40 per cent and 75 per cent per research grant) that is based on the size of individual universities (VSNU 2009).

### **Canada**

Canada moved to begin funding overheads on research federally funded research projects in 2000. Canada's approach is complicated by the Canadian provinces' role in funding infrastructure, which is much greater than that of Australia's state governments.

### **New Zealand**

In 2003, the New Zealand Government developed Principles for Full-Cost Funding of University Research. In 2006, the New Zealand Government agreed to a program of negotiated investment to provide research with longer term funding support.

New Zealand's Tertiary Education Commission (TEC) is responsible for several research funds: the Performance Based Research Fund (PBRF); Centres of Research Excellence (CoREs); Building Research Capability in the Social Sciences (BRCSS); and Building Research Capability in Strategically Relevant Areas (BRCSRA).

### **The United States of America**

In the USA, US Government Accounting Circular A-21<sup>3</sup> provides the main vehicle for determining funding for university research overheads. Circular A-21 sets out what may be included in indirect costs and two federal agencies have been given the role of negotiating overheads for individual universities. It provides a two-tier system that caps funding for indirect costs at 26 per cent, but provides supplementary funding to universities for special cases. The main advantages of this system are seen to be:

- systematic calculation of an indirect cost rate for each university, reflecting differences in the cost structure of each institution;
- clear relationship between indirect costs and individual projects;
- university responsibility for the distribution of indirect costs; and
- external audit and review of indirect costs that provides stakeholders with data that can be compared to other universities.

---

<sup>3</sup> <http://www.whitehouse.gov/omb/circulars/a021/a021.html>.

## Chapter 4

# University research funding issues

The argument for moving to a model of full costing for university research is that universities must be able to perform research of quality on a financially sustainable basis.

The key issues relating to a model of full cost of university research are:

- the basic principle that research undertaken by universities should be fully costed and funded, and not cross subsidised from other sources of revenue – ensuring that universities are sustainable and competitive in the longer term;
- the need to support dual system funding for research including through enhanced research block grant funding to support competitive grant programs;
- the current backlog of deferred maintenance – the estimated level of deferred maintenance backlog as part of a university’s Capital Asset Management Plan, which involves capital maintenance that has been delayed or not performed when it should have been or when it was scheduled;
- the condition of the higher education estate – anecdotal evidence suggests that research equipment, infrastructure and space are severely stretched in all universities as indexation of grants and funding levels have not kept pace with the growth of university research; and
- declining capital expenditure on R&D – ABS data shows a significant trend of declining investment in R&D capital relative to total R&D expenditure (IRU Australia 2008, pp. 1-3).

The full cost of university research project aims to identify and evaluate the evidence underlying these issues, which have been identified in the numerous submissions to the Review of the National Innovation System and in the UK Transparency Review.<sup>4</sup>

---

<sup>4</sup> Transparency Review of Research: Proposals for a new uniform approach to costing of research and other activities in universities and colleges in higher education. Report to the Science and Engineering Base Coordinating Committee, June 1999.

## *Appendix A*

### References

ANU (Australian National University) 2008, 'Submission to the Review of the National Innovation System', April 2008.

ATN (Australian Technology Network of Universities) 2008. 'Quantifying the Full Cost of University Research', ATN.

AVCC (Australian Vice-Chancellors' Committee) 1996, 'University Research: Some Issues', February, AVCC: Canberra.

Fell *et al.* 2004, *Evaluation of Knowledge and Innovation Reforms*, report to DEST.

Goldman, C., T. Williams, D. Adamson and K. Rosenblatt 2000, *Paying for University Research Facilities and Administration*, RAND Corporation.

Go8 (Group of Eight) 2008, 'Adding to Australia's Capacity: the Role of Research Universities in Innovation', Submission to the Review of the National Innovation System, April 2008.

IRU Australia (Innovative Research Universities Australia) 2008, 'Funding the Full Cost of Research: Supplement to the IRU Australia Submission to the Review of the National Innovation System, May 2008.

JM Consulting 2001, *Under Investment in University Research*, UK.

VSNU (Association of Universities in the Netherlands) 2007, 'Dutch Universities and the Implementation of a Full Cost System', VSNU, Amsterdam.

Zuiches, J. and R. Vally 1987, *Accounting for the Full Cost of Research. A study of indirect costs*, Cornell University.

## *Appendix B*

# Funding schemes - 2008 Australian Competitive Grants Register

### **Commonwealth Schemes (by portfolio)**

#### **Agriculture, Fisheries & Forestry**

Australian Centre of Excellence for Risk Analysis  
Australian Egg Corporation Limited - Egg Industry Research and Development Program  
Australian Pork Ltd.  
Australian Wool Innovation  
Cotton Research and Development Corporation  
Dairy Australia  
Fisheries Research and Development Corporation  
Forest and Wood Products Australia Ltd.  
Grains Research and Development Corporation  
Grape and Wine Research and Development Corporation  
Horticulture Australia Ltd – General Call  
Land and Water Australia – Innovation Call  
Meat and Livestock Australia - Research Program  
Rural Industries Research and Development Corporation  
Sugar Research and Development Corporation

#### **Attorney-General's Department**

Criminology Research Council - Criminology Research Fund

#### **Broadband Communications and the Digital Economy**

Telecommunications Research Grants

#### **Defence**

Army History Unit - Army History Research Grants Scheme

#### **Education, Employment and Workplace Relations**

##### **National Centre for Vocational Education Research Ltd (NCVER)**

- National Vocational Education and Training Research and Evaluation Program (NVETRE)
- Adult Literacy Research Program

#### **Environment, Water, Heritage and the Arts**

Australian Biological Resources Study – National Taxonomic Research Grants Program

#### **Australian Antarctic Division**

- Australian Antarctic Science Grants
- Australian Centre for Applied Marine Mammal Science (ACAMMS) Grants
- Commonwealth Environment Research Facilities (CERF)
- Marine and Tropical Sciences Research Facility (MTSRF)
- The Great Barrier Reef Marine Park Authority – Science for Management Award

#### **Families, Housing, Community Services and Indigenous Affairs**

Social Policy Research Service Agreements

#### **Foreign Affairs and Trade**

Australian Centre for International Agricultural Research (ACIAR) – R&D Programs  
AusAID - Australian Development Research Awards

### **Health and Ageing**

Anti-Doping Research Program  
Australian Centre for Hepatitis and HIV Virology Research

### **Cancer Australia**

- Priority Driven Collaborative Cancer Research Scheme
- Support for Cancer Clinical Trials – Existing National Cooperative Oncology groups
- New National Co-operative Oncology Groups

National Drug Law Enforcement Research Fund (NDLERF)

### **National Health and Medical Research Council (NHMRC)**

- A Healthy Start to Life for Aboriginal & Torres Strait Islander Children
- Ageing Well, Ageing Productively
- Australian-European Union Health Research Collaboration
- Australian Health Ministers Advisory Council – Priority Driven Research program
- Capacity Building in Population Health Research
- Career Development Awards
- Centres for Clinical Research Excellence
- Dementia Research Grants
- Development Grants
- Electromagnetic Energy Research
- General Practice Clinical Research Program
- Health Services Research Program
- International Collaborative Indigenous Health Research Partnership
- International Collaborative Research Grant
- National Asbestos Centre
- NICS Fellowship
- Oral Health
- Palliative Care
- Post-doctoral Fellowships for Palliative Care Research
- Practitioner Fellowships
- Preventative Healthcare and Strengthening Australia's Social & Economic Fabric
- Program Grants
- Project Grants
- Research Fellowships
- Special Program Grants in Type 1 Diabetes
- Training Fellowships
- Urgent Research – Pandemic Influenza

Primary Health Care Research, Evaluation and Development (PHCRED) Strategy – Research Fellowships

### **Innovation, Industry, Science and Research**

Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) - Research Grants

### **Australian Research Council**

- ARC Centres of Excellence
- Discovery - Federation Fellowships
- Discovery - Indigenous Researchers' Development
- Discovery - Projects
- Linkage - International
- Linkage - Projects
- Special Research Centres
- Thinking Systems

### **CSIRO**

- Flagship Collaborative Research Program - Clusters
- Flagship Visiting Fellowship

### **Infrastructure, Transport, Regional development and Local Government** Australian Transport Safety Bureau - Road Safety Research Grants Program

### **Prime Minister & Cabinet**

- National Security Science and Technology Unit - Research Support for Counter Terrorism (RSCT) Program

### **Non-Commonwealth**

- Alcohol Education and Rehabilitation Foundation - AER Research Grants

### **ANZ Trustees**

- Judith Jane Mason & Harold Stannett Williams Memorial Foundation
- The J.O. & J.R. Wicking Trust
- Arthritis Australia (Arthritis Foundation of Australia) - National Research Program
- Australian Coal Research Ltd - Australian Coal Association Research Program (ACARP)
- Australian Housing and Urban Research Institute (AHURI) - Research Funding Scheme
- Australian Institute of Nuclear Science and Engineering - AINSE Awards

### **Australian Primary Health Care Research Institute**

- Stream 3
- Stream 4
- Stream 5
- Stream 6
- Australian Rotary Health Research Fund
- Australian Stem Cell Centre - Australian Stem Cell Centre Grants Scheme
- Brain foundation - Annual Research Awards
- Cystic Fibrosis Australia - Australian Cystic Fibrosis Research Trust
- Dairy Innovation Australia Limited – Dairy Innovation Processes and Products
- Diabetes Australia Research Trust - Awards and Research Grants
- Diabetes Vaccine Development Centre - Programs
- Kidney Health Australia - Medical Research Program

### **Juvenile Diabetes Research Foundation**

- Research Grants
- Islet Transplantation Program in Australia
- Leukaemia Foundation - National Research Program
- Multiple Sclerosis Research Australia – Investigator Project Grants

### **National Breast Cancer Foundation**

- Collaborative Breast Cancer Research Grant Program
- Concept Awards
- Project Grant (Formerly known as Kathleen Cunningham Research Grant)
- Pilot Study Grants
- National Food Industry Strategy – Food Centres of Excellence

### **National Heart Foundation of Australia**

- Fellowships (Biomedical, Clinical, Public Health, Overseas, Career Development)
- Grants-In-Aid (Biomedical, Clinical and Public Health)
- Ophthalmic Research Institute of Australia Research Grants

**Pfizer Australia**

- Cardiovascular and Lipid Research Grants
- Neuroscience Research Grants
- Pfizer Australia Research Fellowships

Pharmacy Guild of Australia - Investigator Initiated Grants

RANZCO Eye Foundation - National Collaborative Project

Sea World - Research & Rescue Foundation

Sylvia and Charles Viertel Charitable Foundation - Medical Program

The Australian and New Zealand College of Anaesthetists – ANZCA Research Grants

The Financial Markets Foundation for Children

The Garnett Passe & Rodney Williams Memorial Foundation - Project Grants

The Geoffrey Gardiner Dairy Foundation - Innovation and Biotechnology Program

The Hermon Slade Foundation