House Standing Committee on Industry, Science and Innovation
Inquiry into research training and research workforce issues in Australian universities

Australian Government Response to Committee report:
"Building Australia's Research Capacity"

1. Overview

1.1 Background

An inquiry into research training and research workforce issues in Australian universities was referred to the House of Representatives Standing Committee on Industry, Science and Innovation (the Committee) by Senator the Hon Kim Carr in April 2008. The Terms of Reference of the inquiry were for the Committee to consider the contribution that Australian universities make to Australian research training, and the challenges Australian universities face in recruiting, training and retaining quality research staff in Australia.

The Committee received 106 submissions and 6 supplementary submissions, drawn from a wide range of stakeholders, including individual universities, university and academic representative bodies, student advocacy bodies and individual academics. The Committee additionally held 14 public hearings, covering most states and territories.

The Committee tabled its interim report on 24 October 2008 and its final report *Building Australia's Research Capacity* on 1 December 2008.

Building Australia's Research Capacity was undertaken in parallel with two major reviews in 2008, the Review of the National Innovation System (the Cutler review) and the Review of Australian Higher Education (the Bradley review). The Government released final reports from these reviews in September and December 2008 respectively. The relevance of specific recommendations of these reviews and the more general need to consider university research and research training within the wider innovation and tertiary education systems in which they are embedded, required the response to the *Building Australia's Research Capacity* report to be deferred until the Government had appropriately considered and responded to these reviews. With the release of *Powering Ideas: An Innovation Agenda for the 21st Century* and the announcement of significant reforms to Australia's higher education sector in the context of the 2009-10 Budget[1], the Government has responded to key findings in the Cutler and Bradley reviews.

The Government's reform agenda will, among other things, build the highly trained human capital that will sustain Australia's research workforce into the future.

[1] Transforming Australia's Higher Education System,
http://www.deewr.gov.au/HigherEducation/Pages/TransformingAustraliasHESystem.aspx

1.2 The Australian Government's response to Building Australia's Research Capacity – key issues and themes

Given the key issues identified in *Building Australia's Research Capacity,* the Government has chosen to outline its response under three broad themes:

1. Meeting Australia's current and future workforce needs;
2. Maintaining the quality, competitiveness and reach of Australia's research training system; and
3. Facilitating transitions and providing career pathways beyond the formal research training experience.

Key actions and directions against these themes are set out briefly below. Responses to individual recommendations falling under each theme are set out in **Section 2.**

1.21 Meeting Australia's current and future workforce needs

Building Australia's Research Capacity outlined a number of specific recommendations aimed at:

- improving understanding of Australia's research workforce needs into the future;
- ensuring financial support for postgraduate students;
- minimising Higher Degree by Research (HDR) student non-completions; and
- encouraging further demand for and uptake of HDR qualifications by industry.

The Government recognises the vital importance of Australia's research workforce to its success in the increasingly competitive and knowledge-driven global economy. It has recently outlined its intent to develop a research workforce strategy to 2020 to ensure that Australia is capable of meeting future demand for researchers in its academic and wider workforce. Work is currently being undertaken in the Department of Innovation, Industry, Science and research (DIISR) to analyse supply and demand in this context.

The Government has already put in place a number of incentives to encourage the best and brightest Australian and international students to undertake HDR in Australia and to encourage demand through enhanced linkages with business. In line with the recommendations of *Building Australia's Research Capacity* and the Cutler and Bradley reviews, the Government has announced in the 2009-10 Budget, an increase in the stipend provided under the Australian Postgraduate Award (APA) and will give further consideration to several other recommendations. The Government considers that if the attainment targets outlined in response to the Bradley review are achieved it will significantly increase the pool of candidates available to undertake HDR in the future.

1.22 Maintaining the quality, competitiveness and reach of Australia's research training system

Building Australia's Research Capacity outlined a number of specific recommendations aimed at:

- maintaining the quality and competitiveness of Australia's research training system; and
- expanding the reach of Australia's research training system.

The Government is committed to strengthening the capacity of Australian universities to deliver world-class research training in world-class research environments. Its response to the Cutler review, *Powering Ideas: An Innovation Agenda for the 21st Century* included a significant injection of new funding targeted at achieving this goal. Among the many reforms outlined in this document, the Government's commitment to increase indexation for research block grant schemes from 2012, including the Research Training Scheme (RTS) and student scholarships,

provides additional support to universities to meet the actual costs of their research and research training activities. It also ensures that support to students more accurately reflects the real costs of living.

1.23 Facilitating transitions and providing career pathways beyond the formal research training experience

Building Australia's Research Capacity outlined a number of specific recommendations aimed at:

- improving the flexibility in HDR programs for further research and employment; and
- facilitating career pathways and transitions.

The Government recognises that the HDR student cohort in Australia is crucial to the innovative capacity of the future workforce. In the 2008-09 Budget the government announced that the number of APAs would rise steadily over time from 1,584 in 2008 to 3,500 by 2012. Recent years have seen an increased number of international students and flexible visa arrangements to support these students to undertake HDRs are already in place. The Government intends to implement further measures to enhance flexibility.

The Government further recognises that the research training experience does not end with the award of a degree and that graduates need additional support to consolidate and (where appropriate) broaden their research experience in the early stages of their careers.

The Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC) already provide a number of postdoctoral fellowship awards for research in the academic sector, whilst the recently introduced DIISR Researchers in Business scheme provides complementary support for researchers to undertake research in a business environment. The Government also announced in the 2009-10 Budget that a new Super Science Fellowship scheme, to be managed by ARC, to support researchers in areas of identified national research strength would be established.

Acknowledging the difficulties that early to mid-career researchers may face in accessing funding and in line with the recommendations of *Building Australia's Research Capacity*, the Government will examine the scope within existing schemes to increase support for such researchers and ensure that Australia is able to attract and retain the best researchers at all stages of their careers.

2. Summary of Recommendations by Theme

Theme 1: Meeting Australia's current and future workforce needs

Theme 1a – Identifying researcher workforce needs into the future (i.e. supply of HDR graduates required to meet academic work force needs – for example in the context of anticipated age related retirements in the next decade - and broader demand) *(Recommendations 1, 3 & 10)*

Theme 1b - Ensuring financial support for postgraduate students *(Recommendations 9, 15, 16, 18, 19, 20, 21, 27, 28, 29 & 31)*

Theme 1c – Minimising HDR non-completions *(Recommendations 13, 14, 17 & 23)*

Theme 1d – Encouraging further demand for and uptake of HDR graduates by industry: Linkages and development of appropriate skill-sets *(Recommendations 7 & 8)*

Theme 2: Maintaining the quality, competitiveness and reach of Australia's research training environment

Theme 2a – Maintaining quality and competitiveness *(Recommendations 2, 4, 5, 6, 11, 12 &22)*

Theme 2b – Extending reach *(Recommendations 24, 25 & 26)*

Theme 3: Facilitating transitions and providing career pathways beyond the formal research training experience

(Recommendations 30, 32, 33, 34, 35, 36, 37 & 38)

3. Response to Recommendations

Theme 1: Meeting Australia's current and future workforce needs

Theme 1a – Identifying researcher workforce needs into the future

Recommendation 1
That the quality of teaching and infrastructure at Australian primary and secondary schools be improved, particularly in the fields of maths and sciences. The Committee further recommends that the Australian Government and COAG investigate innovative measures taken overseas to address this particular concern.

Action: The Australian Government supports enhancing the quality of teaching and infrastructure at Australian schools
The Government is investing significantly to enhance the quality and infrastructure of Australian primary and secondary schools:

- On 29 November 2008 COAG agreed to unprecedented reforms to improve the quality of school education.
  - Funding of $47.4 billion to all schools through the National Education Agreement and the Schools Assistance Act.
  - This includes over $2.6 billion in National Partnerships, comprising NPs for improving principal leadership development and teacher quality ($550 million), improving educational outcomes in low SES school communities ($1.5 billion over 7 years), and literacy and numeracy ($540 million). Also included are National Partnerships for the Trade Training Centres ($2.5 billion over 10 years) and Digital Education Revolution ($2 billion over 4 years).
- The Government is also investing $16.2 billion in school infrastructure under *Building the Education Revolution.*

The Government has initiated the development of a rigorous and world class national curriculum from Kindergarten to Year 12, starting with the key learning areas of english, mathematics, the sciences and history. A national curriculum will be implemented in all Australian schools from 2011.

The *National Partnership for Literacy and Numeracy* is providing $540 million for state and territory literacy and numeracy reform in the key areas of teaching, leadership and the effective use of student performance information. The *National Partnership* will promote effective literacy and numeracy strategies, including those that have proven successful internationally. Of this funding, $40 million will be invested in strategic research and development initiatives that will improve the collective national understanding of what literacy and numeracy strategies work. Through promoting and supporting strategic research, it is expected that the teaching capacity of Australian literacy and numeracy practitioners will be improved.

In the case of mathematics and science a range of initiatives have been introduced; a number of which draw on successes in educationally high-performing countries. Initiatives designed to improve the quality of science and mathematics teaching and learning in schools include: the *Primary Connections: linking science with literacy* program, which aims to improve primary students' knowledge and understanding of science while also focussing on the development of

their literary skills; the *Science by Doing* project, which is developing an inquiry-based approach to science education in junior secondary years; and the *Scientists in Schools* project which is establishing partnerships between schools and working scientists.

Recommendation 3
That the Australian Government determine and fund the number of Research Training Scheme places that will be required to meet current and future research training needs.

Action: The Australian Government supports quality research training through the Research Training Scheme

Through the RTS, the Government supports the provision of quality research training in Australia's higher education institutions. The RTS currently provides funding for 21,000 full-time HDR places.

The Government is currently developing a research workforce strategy that will consider the current and future needs of the research workforce and DIISR has commenced work on the future supply of and demand for HDR qualifications.

Recommendation 10
That the Australian Government introduce a National Priority Postgraduate Research Scholarship Scheme that provides competitive stipends to outstanding students in areas of national significance and skills shortage.

Action: Requires further examination through the research workforce strategy

The Government wants to ensure that priority is given to supporting research in areas of identified national need. Part of the development of the research workforce strategy will involve an examination of issues relating to the incentives in higher education that attract and retain researchers in areas of current and future skills need.

Scholarships to support research in areas of skills shortage would require careful consideration due, among other things, to the difficulties in predicting future skills shortages. The Government's preference is to consider in the first instance the scope for changes within the current envelope of scholarship schemes. However, given the rapidly evolving nature of the labour market and the long lead times involved, there is a high risk of producing graduates in areas for which there is no longer a need. Consideration would also need to be given to the potential adverse impact on students in non-priority areas – e.g. fewer incentives to participate in HDR studies in areas not identified as having national significance could lead to a resulting loss of supply of future researchers in some discipline areas.

The Government intends to consult further with the sector on this issue.

Theme 1b - Ensuring financial support for postgraduate students

Recommendation 9
That the Australian Government attach additional funds to research training scheme places that are secured by minority and under-represented students. This funding is for universities to provide the additional necessary assistance for minority and under-represented students throughout their candidature.

Action: The Australian Government supports equality of opportunity in higher education

The Government supports measures to remove barriers to HDR participation and completion that may be faced by low socio-economic status and other disadvantaged students. However equity issues experienced by these students may be addressed through the availability of additional academic support and particular living allowances.

The Government recognises the barriers to participation and completion in tertiary education. In this context, the Government has announced the ambition that by 2020, 20 per cent of higher education enrolments at undergraduate level should be of people from low socio-economic backgrounds. This target will be supported by an increase in higher education equity funding for teaching and learning grants

The increased funding will deliver:

- A new partnership program to link universities with schools, vocational education and training (VET) providers and adult education. This is intended to increase aspirations of students to higher education and increase the rates of higher education attainment of low SES, Indigenous, regional and remote students.
- A student-related loading based on numbers of low SES students enrolled at institutions.

In addition, performance funding, announced as part of the 2009-10 Budget, will also encourage universities to target their efforts in ways that improve outcomes for students from under-represented groups. Under this initiative, universities will be required to enter into an agreement with the Government to meet individual performance targets for teaching and learning, as well as the attainment and participation targets in relation to those students who are currently under-represented in higher education.

The initiative is intended to create a strong incentive for universities to provide the best possible learning opportunities for their students and to invest the effort necessary to help under-represented students achieve their further study goals.

In the longer term, these initiatives to boost participation and attainment at the undergraduate level will flow through to increased participation and attainment at the post-graduate level, including in research higher degrees.

Recommendation 15
That the Australian Postgraduate Award stipend value be increased by 50 per cent.

Action: The Australian Government has supported an increase in the Australian Postgraduate Award stipend

The Government is committed to providing appropriate financial support to domestic postgraduate students of exceptional research potential through the APA scheme. In the 2009-10 Budget, the APA stipend was increased by 10 percent from $20,427 in 2009 to $22,500 in 2010, bringing it above the Henderson Poverty Line. The APA stipend will, from 2012, be indexed by the new HESA indexation rate.

Recommendation 16
That the APA stipend be fully indexed with CPI

Action: The Government supports maintenance of existing arrangements for indexing the APA Stipend.

The APA Stipend is indexed according to movements in the Higher Education Indexation Factor (HEIF). The Government announced in this year's budget that the Safety Net Adjustment component of the HEIF will be replaced by a professional wage and salary cost index (discounted by 10 per cent).

Recommendation 18
Access to Youth Allowance, Austudy or ABSTUDY be extended to all students enrolled in a higher degree by research, noting that:

- *access to those schemes does not determine eligibility;*
- *candidates in receipt of a scholarship or other source of income above a determined assessment threshold would be ineligible; and*
- *access to those schemes should be regarded as secondary to access to a scholarship or award with an adequate living stipend.*

Action: Not supported

Youth Allowance and Austudy provide support for full-time study up to and including the post graduate diploma level, on the basis that support to this level enabled individuals to gain the qualifications required for entry to professional level employment. On 1 January 2008, student income support was extended to professionally oriented coursework masters programs approved by the Minister for Education. Courses are listed on the Student Assistance (Education Institutions and Courses) Determination 2008 (No. 1) which is issued under the *Student Assistance Act 1973*.

The Bradley Review recommended extending Youth Allowance and Austudy to eligible full-time students in all coursework masters programs. This recommendation was accepted by the Government in the 2009-10 Budget with implementation to take effect from 1 January 2012. Further extension of income support to higher degree research studies would have significant budgetary implications and is not supported at this time.

Recommendation 19
That the Australian Government work with State Governments to support postgraduate students through the reduction of certain living expenses, in particular, through the provision of concessions for public transport travel. Access to transport concessions should be made available to all full-time tertiary students, regardless of type of enrolment or the level of course in which they are enrolled.

Action: This is a matter for State and Territory Governments

The Government provides support to postgraduate students to assist with general living expenses (for example, through Rent Assistance, Austudy, and the APA support). Transport remains an area of state and territory responsibility and suggestions for transport concessions should be considered at State or Territory government level.

Recommendation 20
That postgraduate research scholarships be exempt from assessable income for taxation, including part-time awards.

Action: Not supported
In general, scholarships, bursaries, educational allowances and educational assistance are currently tax exempt where they are provided to a full-time student at a school, college or university.

Part-time scholarships are generally subject to income tax. As many part-time students also undertake paid employment, the provision of a tax exemption for part-time scholarships would result in those taxpayers receiving tax free scholarship income regardless of their total income. It is a principle of Australia's personal tax system that tax should apply to an individual's income from all sources, and it may be considered inequitable to impose tax on only part of the income of some taxpayers.

Payments which are not provided principally for education purposes are not considered to be a scholarship and are generally subject to income tax. This integrity measure prevents researchers being artificially engaged on 'scholarships' to reduce employment costs. Similarly, scholarships conditional on working for the scholarship provider would also not be eligible for a tax exemption.

We have brought this recommendation to the attention of the Australia's Future Tax System Review Panel, for their consideration. The Review Panel is due to report by the end of 2009.

Recommendation 21
A full remission of the HECS-HELP debt for successful research PhD graduates and a partial (50 per cent) remission for successful research Masters graduates, awarded upon conferral, and a tax deduction for successful research graduates who have already paid their HECS-HELP fees.

Action: Not supported

The Australian Government provides significant assistance through the HELP system. Students receive concessional loans which are only paid back once their income exceeds a minimum threshold. Further, the Government provides benefits for students in particular fields.

In recognition that there is a shortage of mathematics and science graduates, the Government has introduced the HECS-HELP Benefit. Eligible mathematics and science graduates may apply for a reduction in their compulsory HELP repayment of up to $1500 a year (around half on average) if they take up related occupations. This may benefit graduates who then undertake higher degrees by research and take up occupations relating to mathematics or science.

In the 2009-10 Budget, the Government also introduced a HECS-HELP reduction for nursing and teaching graduates working in those professions which will encourage students to enter and remain employed in the fields of teaching and nursing.

Students whose places are funded under the Research Training Scheme do not pay fees for their research degrees. Most postgraduate by coursework students pay full fees for their courses.

There is a specific provision in section 26-20 of the *Income Tax Assessment Act 1997* of the income tax law that denies an income tax deduction for student contributions (formerly 'HECS') and HECS-HELP repayments. This provision has existed since 1989 and reflects the significant public subsidies for university education. The Government would not support any proposal to revise the provision at this time.

Recommendation 27
A doubling in the annual number of IPRS awards to accommodate a greater number of international students.

Action: Requires further examination as part of the development of the research workforce strategy

The Government is committed to taking action to attract top quality international postgraduate students to undertake HDR studies in Australia's higher education institutions. The Government will consider options to increase the number of international HDR students against other competing Government priorities.

The Government will examine this recommendation further, drawing on evidence gathered as part of the development of its research workforce strategy, which includes an examination of supply of and demand for international HDR students and consultation with the higher education sector.

Recommendation 28
That the value of the IPRS be increased to fully fund the tuition fees for each course of study.

Action: This is a matter for individual universities

Universities are provided a grant to support International Postgraduate Research Scholarships (IPRS) places covering tuition and health cover for students and health cover for their families. As costs vary, universities fund the maximum number of IPRS places possible within their allocated grant each year.

Recommendation 29
That Endeavour international postgraduate scholarships be rationalised and simplified for greater accessibility and competitiveness.

Action: Supported

The actions proposed in this recommendation have already been taken. In 2008, postgraduate scholarships available through the Endeavour Awards program were rationalised from 14 Awards to 2 Awards, thus simplifying the program and resulting in both greater accessibility and competitiveness.

Recommendation 31
That the Australian Government work with the States to ensure that the dependants of all international higher degree by research students enrolled at Australian universities are subject to the same fee levels as local students at government primary and secondary schools.

Action: To be referred to Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA)

School fee policies are a matter for state and territory governments.

The Deputy Prime Minister will refer the issue of school fees for dependants of international HDR students to MCEECDYA for consideration.

Theme 1c – Minimising HDR non-completions

Recommendation 13
That the Australian Research Training Scheme PhD candidature period include the option of a six-month extension.

Action: Requires further examination as part of the development of the research workforce strategy

Consideration needs to be given to factors which may support the option of such an extension, and any unintended consequences that may follow. In addition, this will need to be considered against other competing Government priorities. Deliberation of this recommendation will also be made within the context of the Government's research workforce strategy.

Recommendation 14
That the duration of all federal postgraduate awards with stipends for PhD students be increased to three and a half years (full-time equivalent) with the option of two six-month extensions.

Action: Requires further examination as part of the development of research workforce strategy

The Government will examine this matter further as part of its broader research workforce strategy and it will need to be considered against other competing Government priorities.

Recommendation 17
That the Australian PhD candidature period be nominally extended beyond thesis submission until the time at which the student is informed that they will be awarded their degree.

Action: This is a matter for individual universities

The period from submission to award of a HDR may take a significant amount of time. It is the Government's view that the matter of efficiencies between thesis submission and degree conferral should be addressed at the institutional level.

Recommendation 23
That the Commonwealth Scholarship Guidelines be amended to give award recipients greater flexibility in undertaking all or part of a higher degree by research on a part-time basis.

Action: Requires further examination

The Government will examine this matter further as part of its broader research workforce strategy. Whilst there is an expectation that APA recipients complete their degrees as full time students, the Government recognises that there may be a number of factors which prevent students from achieving this. The key issue is to maximise the Australian Government's investment in the potential supply of future researchers and some flexibility around timelines to completion may be required to support this.

Theme 1d – Encouraging further demand for and uptake of HDR graduates by industry: linkages and development of appropriate skill-sets

Recommendation 7
That the Australian Government retain the Commercialisation Training Scheme, currently in place until 2011, and evaluate the effectiveness of the scheme during the latter part of that period, with a view to extending the scheme.

Action: The Australian Government supports an evaluation of the Commercialisation Training Scheme

The Government supports the provision of high quality research commercialisation training to ensure that up and coming new researchers are equipped with the necessary skills to bring research innovations to market. It believes that the Commercialisation Training Scheme (CTS) contributes to commercialisations through encouraging further demand for and uptake of HDR graduates by industry, through supporting linkages and development of appropriate skills sets.

The Government will conduct a review of CTS in 2010. The review will be conducted in consultation with the sector. Decisions about the future of the CTS will take into account the outcomes of that review.

Recommendation 8
That the Australian Government develop and implement additional industry partnership programs, possibly modelled on Knowledge Transfer Partnerships, that will further facilitate connection between business and research institutions.

Action: The Australian Government supports enhanced connections between business and research institutions

The Government currently administers a number of programs to facilitate connections between business and research institutions. To add to this suite of programs and further facilitate connection between business and research institutions, the Government launched the Researchers in Business program on 5 March 2009. As a key election commitment, the program is part of the broader Enterprise Connect initiative which commenced 21 May 2008. The Researchers in Business program supports the placement of researchers from universities or public research organisations into businesses where it is identified that such a placement will help to develop and implement a new idea with commercial potential.

The Researchers in Business program aims to:

- help break down the cultural divide between business and the research sector (the researcher may be from a university or research agency);
- speed the dissemination of expertise;
- accelerate the adoption of new ideas and technologies; and
- increase competitiveness of firms.

The program is modelled on the UK Knowledge Partnerships program.

Theme 2: Maintaining the quality, competitiveness and reach of Australia's research training environment

Theme 2a – Maintaining quality and competitiveness

Recommendation 2
That the Australian Government increase funding for research and development by raising incrementally the Gross Expenditure on Research and Development (GERD) as a percentage of Gross Domestic Product over a ten year period until it equals the Organisation for Economic Cooperation and Development average.

Action: Not supported

Australia's Research and Development (R&D) policy must have regard to Australia's circumstances, including comparative advantage, social and environmental challenges, industry structure, and fiscal position. It should not be determined by the policies of other countries.

It is important to note that GERD is only one input to the Australian innovation system. In May 2009, the Government announced its Innovation Agenda in *Powering Ideas: An Innovation*

Agenda for the 21st century and it has also articulated ambitions for innovation, science and research - both take a more holistic and systemic approach to the Australian innovation system.

GERD, as a percentage of Gross Domestic Product was 2.01 per cent in 2006-07, close to the OECD average of 2.26 per cent for the same period. The Government has significantly increased the amount of funding available for R&D in the 2009-10 Budget. Specifically, Science and Innovation outlays (which are predominantly for R&D) will be increased by 25 per cent to $8.6 billion in 2009-10.

Recommendation 4
That the Australian Government fund the full cost of each higher degree by research program at Australian universities through the Research Training Scheme and within all national competitive grant funding programs. This funding should take into account:

- *the removal of the high-cost/low-cost funding differential that currently exists between research disciplines, subject to interim arrangements to ensure that no discipline is disadvantaged;*
- *the travel and accommodation needs of students for research collaboration, regardless of geographic location; and*
- *the provision and maintenance of a minimum standard of supervision and resources.*

Action: Not supported

It is not possible that the full costs of research, including the full cost of research training can be met by the Australian Government alone. The funding of HDR training is a shared responsibility between the Government and the university sector, and individual institutions need to develop and provide support for their own research training activities in addition to Government funding,

The Government provides funding through the RTS to higher education providers to improve the research training environment, reduce attrition rates and encourage timely student completions. It also provides funding to meet the direct costs of research through its national competitive grants schemes, particularly those run through the ARC and NHMRC, and the indirect costs of competitive grant research, through the Research Infrastructure Block Grants (RIBG) scheme.

In the 2009-10 Budget the Government committed $512 million between 2009-10 and 2012-13 through the *Sustainable Research Excellence in Universities* initiative. This will assist universities to better meet the indirect costs of research by augmenting RIBG, with the aim of raising the average level of support to 50 cents per dollar of direct competitive grant funding by 2014.

The Government plans to examine a range of options to further enhance the quality of research training provision. This work may include further consideration of the high/low cost funding differential and of appropriate minimum standards for resourcing and supervision.

Recommendation 5
That the Australian Government amend the current indexation measures for research training block grant schemes, to reflect real costs.

Action: The Government supports maintenance of existing arrangements for indexing Research Block Grants.

Research Block Grants funded under the *Higher Education Support Act 2003* (HESA) are indexed according to the Higher Education Indexation factor (HEIF). The Government

announced in this year's budget that the Safety Net Adjustment component of the HEIF will be replaced by a professional wage and salary cost index (discounted by 10 per cent).

Recommendation 6
That research training funding be disbursed, partially prospectively, to institutions according to a staggered formula: 50 per cent on enrolment, 20 per cent at a specified benchmark during the course of study, and 30 per cent at the point at which the student is informed that they have been awarded their degree.

Action: Not supported

This recommendation is not supported in its current formulation as it does not provide a mechanism for enhancing the quality of research training for students nor does it give sufficient focus on student completions.

However, the Government will consider options to revise the RTS funding formulae that increase the focus on quality and completions. The Government proposes to consult with the higher education sector over the coming year to take forward consideration of this issue. In addition, the Government wants to ensure that any changes to existing performance funding arrangements reduce, rather than add to, the administrative complexity and compliance burden on higher education institutions.

Recommendation 11
That the Australian Government increase the funding pool for Australian Research Council and National Health and Medical Research Council grants to enable a minimum success rate for applicants of 40 per cent.

Action: Not supported

The Government does not believe that application of a minimum success rate is the best approach. It ignores the fact that success rates reflect the interaction of a number of factors (including number of grants and grant size as well as the amount of funding available) and that funding is awarded on the basis of the excellence of the research and researchers involved as determined by a rigorous peer review process.

The Government will continue to monitor the funding arrangements for Australia's research and innovation system in the future.

Recommendation 12
That the Australian Government specify that competitive grants, in particular all National Health and Medical Research Council grants, fund the full cost of research in each program to which a grant has been awarded. (ARC, DIISR, NHMRC)

Action: Not supported

Both the *ARC* and *NHMRC* schemes are explicit in their intent to partially fund the cost of research projects. Both bodies are clear in their expectation that institutions will make significant contributions to the projects being funded.

ARC and NHMRC projects cover the costs of the projects and research support for the project but exclude administration, infrastructure and capital costs which are borne by institutions and other partners in the research project. The ARC funds salaries for its fellowship schemes, which

have been significantly boosted with several new schemes in the past year. Many of these fellowship positions are accompanied by a project that is also funded.

If the ARC and NHMRC were to cover a greater range of research costs there would be a decrease in success rates for all schemes and fewer projects would be successful in obtaining funding.

As part of the 2009–10 Budget, the Government announced that it will commit an additional $512 million through *Sustainable Research Excellence in Universities* between 2009–10 and 2012–13 to augment funding of $882 million provided through the RIBG over the same period. The additional funding, together with the existing RIBG funding, will ensure that institutions are better placed to meet the cost of research activities that are not entirely met by the competitive grants programs. Consultations will be held during 2009 on the detail of the funding model.

The projected increase in the RIBG block funding will help institutions to address indirect costs such as infrastructure capital costs and other research support costs including provision of central services. Furthermore, the forthcoming compacts process will provide institutions with further scope to negotiate additional funding to also help fill the remaining gaps.

Recommendation 22
That the Research Training Scheme guidelines be amended to enable higher degree by research students to enrol jointly at two institutions, with student load and completion credited to both institutions.

Action: Requires further examination as part of the development of the research workforce strategy

The Government will give further consideration to this recommendation. Currently, neither the DIISR Higher Education Research Data Collection nor the DEEWR Higher Education Information Management System database can support joint enrolment. Both these collections are used to calculate RTS and other block grant funding. The impact of any change on both program delivery and grant amounts must be carefully assessed.

Theme 2b – Expanding reach

Recommendation 24
A review of the ranking criteria for Research Training Scheme places and Australian Postgraduate Awards for greater consistency and to account for diverse backgrounds and entry points.

Action: This is a matter for individual universities

Ranking criteria, along with extending the reach of Australia's research training environment, are matters for individual universities.

Recommendation 25
That the Australian Government introduce a scheme to fund relocation costs for students who choose to undertake research training in regional universities.

Action: Not supported

The Government recognises that HDR students may need to relocate in order to take up placements at their university of choice, and provides for this expense through a $325 allowance built into each APA place.

The Government supports the important role played by regional universities both in supporting their local communities and economy and in delivering research targeted at regional priorities. However, HDR students should chose their placement based on the unique strengths and capabilities of individual universities. Excellence should be the primary driver in a student's choice of university.

The Collaborative Research Networks program announced in the 2009-10 budget will assist regional universities to build up their research capacity by developing partnerships with research intensive universities in areas of national importance. This will improve the capacity of regional universities to attract HDR students.

Recommendation 26
That the Australian Government develop and implement appropriate measures to encourage the recruitment of Indigenous, regional and rural Australians to higher degrees by research.

Action: The Australian Government supports equality of opportunity in higher education

The Government supports measures to improve access for low socio economic status and disadvantaged students. Admission to an HDR is contingent on excellent results at undergraduate level, and the Government is focussing its equity interventions at the undergraduate level. Over time, this will impact on the number of students from these backgrounds entering into an HDR.

The Government supports a review of the effectiveness of measures to improve the participation of Indigenous students in higher education in consultation with the Indigenous Higher Education Advisory Council.

Theme 3: Facilitating transitions and providing career pathways beyond the formal research training experience

Recommendation 30
That international Student visa policies relating to higher degree by research programs be amended to allow greater flexibility for further research and employment.

Action: Supported in principle

The Government supports in principle Recommendation 30, noting that the policies relating to HDR already offer greater flexibility than other student policies.

Student visa regulations already provide more flexible arrangements for visa holders applying for or studying a postgraduate degree course, with applicants having to meet lower threshold requirements than other student visa applicants.

In addition, dependants of Student visa holders who have commenced a Masters or Doctorate course are not subject to the same work limitations that apply to other student visa holders.

The Department of Immigration and Citizenship (DIAC) intends to make further policy changes to make arrangements more flexible for international research students undertaking fieldwork or research outside Australia, as an assessable part of their registered course.

Further, DIAC will review assessment criteria for the grant of Student visas to HDR students.

Recommendation 32
That the Australian Government waive Fringe Benefits Tax incurred by businesses or institutions that employ staff undertaking higher degrees by research.

Action: Not supported

Fringe Benefits Tax (FBT) plays an important role in maintaining the fairness and integrity of Australia's taxation system. It places employees with access to fringe benefits on a more even footing with employees whose remuneration consists entirely of salary or wages. The introduction of FBT was designed to remove a serious gap in the income tax law and ensure that all forms of remuneration paid to employees bear a fair measure of tax. The FBT system also facilitates including fringe benefits in an employee's income for means testing benefits such as family tax benefit, ensuring that families are treated equally.

FBT applies to virtually all employers, including Government and is designed to be as inclusive as possible in the coverage of benefits received by employees in respect of their employment. Allowing an FBT exemption for businesses or institutions that employ staff undertaking higher degrees by research would facilitate flexible salary and benefits packaging. However, it would result in inequitable tax treatment between employees who take cash salaries, and those who are paid in-kind benefits. Further, the extent of the benefit gained from salary sacrificing using an FBT exemption would depend on that individual's marginal tax rate, with that employee effectively paying no tax on the amount that is salary sacrificed in return for the fringe benefit. An FBT exemption would undermine the provision which specifically denies a deduction to HECS-HELP payments. As students studying through the HECS-HELP already receive significant Commonwealth subsidy, there is no tax deduction allowable to employers for HECS-HELP expenses. However, students studying through FEE-HELP, such as full-fee paying undergraduate students, and postgraduate students, do not receive a Government subsidy for their fees. As such those payments are deductible to an employer and hence no FBT is payable. This recommendation has been brought to the notice of the Australia's Future Tax System Review Panel for its consideration. The Review Panel will report by the end of 2009.

Recommendation 33
That the Australian Government, in conjunction with universities and research institutes, follow the example of successful advocacy programs overseas and implement a national research career campaign to market the value of research training to schools, communities and industry, and raise the profile of research careers in Australia.

Action: Not supported

A national research career campaign would not add anything to current Government measures already in place.

The Government supports research careers through its *My Future* and other programs and undertakes a range of activities to promote the value of a career in research through initiatives such as Questacon and the Scientists in Schools program (CSIRO).

It is expected that, in the long term, the Excellence in Research for Australia (ERA) initiative will play an important role in raising the research profile of Australian higher education institutions and promoting the breadth of research performance of disciplines within institutions. This in turn will inform potential research students of institutions' disciplinary research strengths. The researcher career pathway will also be examined within the Government's research workforce strategy.

Universities and university peak bodies also undertake a variety of measures for promoting the value of research training.

Recommendation 34
That the Australian Government implement a postdoctoral fellowship scheme targeted at early-career researchers who are up to five years out from PhD completion.

Action: Supported

The Government is already supporting a number of postdoctoral fellowships schemes.

Under the National Competitive Grants Program (NCGP), administered by the ARC, the Government funds Australian Postdoctoral Fellowships (as part of the Discovery scheme) and Australian Postdoctoral Fellowships Industry (as part of the Linkage scheme). Both fellowships are awarded to researchers within three years of the award of PhD, and are of up to three years duration. From funding provided in the 2008-09 Budget, the Government has funded 150 fellowships, including 30 aimed at building industry linkages.

As part of the 2009–10 Budget, the Government announced, that in addition to the above Fellowships, the Government will provide $27.2 million over four years to run two rounds of three-year fellowships at the postdoctoral level. The new Super Science Fellowships, which are to be administered under the Discovery element of the NCGP, will be offered in three areas of existing research strength – space science and astronomy; marine and climate science; and future industries research (biotechnology and nanotechnology).

Through the NHMRC, the Government also supports Australian health and medical researchers early in their career. Career Development Awards (Level 1) are awarded to applicants with more than 2 and less than 7 years postdoctoral experience while Training Fellowships are open to applicants with not more than two years of postdoctoral experience. Both fellowships are of 4 years duration. For funding beginning in 2008, the Government funded 44 Career Development Awards (Level 1) and 133 Training Fellowships.

The Government recognises the critical importance of human capital to the success of Australia's research endeavours and looking to the future has outlined a policy ambition to renew and enlarge Australia's research workforce. As input to this process the Government will develop a research workforce strategy aimed at meeting the expected shortfall in the supply of research-qualified university staff in the period to 2020.

Recommendation 35
That the Australian Government implement a quota of 10 per cent of ARC and NHMRC successful grants to be allocated to early-career researchers who are first-time awardees.

Action: Not supported

As noted in the response to Recommendation 34, the Government supports the need for renewal of researchers.

The Government currently provides for the development of early career researchers through a range of initiatives. Under the NCGP, for example, the ARC identifies a target level of funding within the *Discovery Projects* scheme for projects on which all listed researchers are early-career researchers (that is, within five years of the award of their PhD). In most recent funding round under *Discovery Projects*, early-career only proposals represented 12.5 per cent of the total proposals funded.

Similarly the New Investigator grants administered by the NHMRC are aimed at providing an avenue for less experienced researchers to access NHMRC Project Grant funding. Those who are eligible to apply include those returning to the workforce or those returning from overseas who are not named as a Chief investigator on a previously supported NHRMC project grant and have not received a competitive research grant of greater than $60,000 from another source as Chief Investigator or equivalent.

Recommendation 36
That the Australian Government implement a scheme that funds 25 per cent of the first two years of salary of postdoctoral researchers in industry areas of national skills priorities in order to promote the value of research graduates to industry.

Action: The Australian Government supports researchers in industry through the Researchers in Business Scheme

The Government Enterprise Connect program operates a *Researchers in Business* Scheme which funds up to 50 per cent of salary to a maximum of $50,000 for eligible researchers employed in eligible small and medium sized business for a period of 2 to 12 months.

The Scheme commenced in February 2009 and is designed to help breakdown the cultural divide between business and the research sector and spread the dissemination of expertise.

To be eligible researchers must have, or be enrolled in, a Masters by Research Degree or a PhD program. To be eligible firms must be engaged in activities covered by the Enterprise Connect network.

Recommendation 37
That research Centres of Excellence schemes, such as the ARC Centres of Excellence and other research networks be expanded to continue stimulating research and industry links in areas of national importance across Australia.

Action: The Australian Government supports stimulating industry and research links in Australia

The Government agrees that stimulating research and industry links is critical to Australia's future and recently announced an ambition to double the level of collaboration between Australian businesses, universities and publicly funded research agencies over the next decade.

Research Centres of Excellence, such as the ARC Centres of Excellence, are an important element of the Government's commitment in this area. They have been shown to act as a hub for the development of collaborative networks of research expertise across Australia and internationally as well as for the development of the scale and focus of research in areas of priority.

In addition to ARC Centres of Excellence, the Government provides support for Cooperative Research Centres (CRC) Program. In November 2008, the Minister for Innovation, Industry, Science and Research released guidelines for the new re-invigorated CRC Program and announced the 11th CRC selection round. The guidelines for the new CRC Program responds to the recommendations of the review of the Program conducted during 2008, including the reinstatement of public good (social and environmental benefits) as a key objective of the Program.

Recommendation 38
An expansion of fellowship schemes targeted specifically at expatriate and international researchers that offer competitive salaries and sufficient start-up support to establish research projects prior to competing for national competitive grants.

Action: The Australian Government supports outstanding researchers

The Government currently has a strong suite of initiatives in place to encourage outstanding researchers to establish themselves within Australia. In the 2008–09 Budget the Government fulfilled an election commitment to establish the *Future Fellowships* scheme. Over a five-year period (2009–2013) the scheme will offer four-year fellowships to 1,000 outstanding international or Australian researchers in the middle of their career. In addition to salary support, each researchers' Administering Organisation will receive funding to support related infrastructure, equipment, travel and relocation costs.

For more senior researchers, both the *Australian Laureate Fellowships* scheme administered by the ARC and the *Australia Fellowships* scheme administered by the NHMRC are open to applications from outstanding international as well as Australian researchers. Under the *Australian Laureate Fellowships* scheme Fellows are eligible for Project Funding in addition to a salary supplement and salary-related (on-cost) support while under the *Australia Fellowships* scheme a one-line budget of $800,000 per year is provided. To encourage international applicants under the *Australia Fellowships* scheme, the funding rules for the most recent selection round were adjusted to enable them to apply at any time during the funding year – an acknowledgement that international and Australian funding calendars may not be synchronised.

In addition to the schemes above, fellowships awarded through the *Discovery Projects* scheme administered by the ARC are also open to Australian and international researchers. The Endeavour Research Fellowships, administered by the Department of Education, Employment and Workplace Relations (DEEWR) provide financial support for postdoctoral fellowships from participating countries to undertake short-term research (4-6 months), in any field of study, in Australia.

The Government believes that international collaboration is the key to stimulating Australia innovation, and in addition to fellowship support, is committed to facilitating the development of

international partnerships. To this end, the Government has extended the International Sciences Linkage Program and removed restrictions on the use of ARC funding for travel by international collaborators.