Mechanisms for Building Research Capacity in Indonesia's Knowledge Sector through Australian Universities

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Executive Summary

Under the New Order, only a relatively small group of Indonesian academics – the majority located in a handful of major universities – had opportunities to feed policy-relevant research into government decision-making processes, and then only in selected disciplines. Since decentralisation and the introduction of the good governance agenda, local governments across the archipelago have increasingly called upon academics to undertake research on policy-related issues. Serious questions remain, however, about (a) the quality of much of that research; and (b) the extent to which it actually informs the policy-making process.

University-based research capacity is a vital component not only in the *supply* of policy-related knowledge, but also potentially in the *generation of demand* for that knowledge. Whereas NGOs and other commercial and semi-commercial suppliers of policy-relevant knowledge depend on the existence of a market for their products, universities have a key role to play in the generation of demand by virtue of their unique role in the education of decision-makers. As a consequence, the lack of a strong academic research base not only compromises the quality of university-based contract research. It also undermines Indonesia's capacity to generate a critical mass of consumers who have a commitment to evidence-based policy.

Research excellence must therefore be promoted in the university sector if there is to be any hope of achieving long-term, large-scale change in Indonesia's knowledge sector. At the same time, the size and complexity of Indonesia's tertiary education system means that it is impossible to hope for anything but incremental change at a systemic level. The best way to achieve such change is not to invest indiscriminately across the whole system, but to foster disciplinary pockets of research excellence that can generate demand among policy-makers for quality research, but also serve as examples of best practice for other Indonesian institutions and a source of opportunities for scholars from those other institutions to develop their skills.

As research is very much a process of learning by doing, long-term international collaborations that involve deep engagement at all stages of the research process, from research design to publication, offer a very practical way to foster research excellence. Australia is a natural partner in such an endeavour for three reasons. First, Australia performs well in international rankings and has enormous disciplinary expertise in areas of policy interest to Indonesia. Second,

although the number of Indonesianists in Australia is diminishing, it nevertheless has a critical mass of Indonesia specialists. Third, the Australian government is deeply committed to its relationship with Indonesia, and claims to see people to people contacts, including collaborations between academics, as an important part of that relationship. It should be possible to harness this commitment to support long-term research initiatives involving Indonesians and Australians.

This diagnostic (a) addresses some of the major elements of research capacity building in the social sciences through a comparative perspective on the role of universities in the Australian knowledge sector and (b) reflects on the strengths and weaknesses of a range of initiatives that have sought to enhance research capacity in Indonesian universities. Building on this analysis, it suggests the following suite of measures to support the development of pockets of research excellence which will not only serve as engines of systemic change within the tertiary education sector but also maximise the sector's capacity to contribute effectively to Indonesia's knowledge sector.

Demand Side:

1. That demand for quality policy-relevant research among Indonesian institutions be stimulated by the generation of its supply through the development of centres of pockets of research excellence in Indonesian universities.
2. That Indonesia-based foreign consumers of policy-related research include academic research excellence, as evidenced by an international track record, in their criteria for recruiting academic contractors.

Enabling Environment:

3. That AusAID offer technical assistance to the Indonesian government to revise university incentive structures, including promotion criteria, with a view to recalibrating the balance between research and teaching and decreasing academics' reliance on contract research.
4. That AusAID offer technical assistance to DIKTI, to be delivered by the ARC, with a view to improving selection criteria and selection processes for DIKTI-funded grants.
5. That AusAID offer support and technical assistance for the establishment of an elite, internationally peer-reviewed national journal in each discipline to function as a stepping stone to publication in international

journals. These journals should be published in Indonesian, be run independently of any particular campus and be freely available online.

6. That AusAID offer support and technical assistance for the establishment of a functioning, searchable database, in which all nationally accredited journals be required to deposit their contents as a condition of maintaining accreditation, and access to the contents of which are freely available online.
7. That AusAID provide technical assistance for the establishment of a searchable register of research strengths both of departments but also of individual researchers using verifiable performance indicators.

Universities' Intermediary Functions:

8. That selected recipients of AusAID scholarships be provided with internship opportunities with Australian government departments and international organisations, complemented by formal instruction on how to transform academic research into policy briefs, as part of a post-submission program to be offered in one of a small number of locations in Australia for students who submit within four years of commencing their candidacy.

Supply Side (Research Readiness):

9. That academic applicants for Australian scholarships be given priority over bureaucrats at the Research (Masters) and PhD levels.
10. That AusAID leverage its scholarship program to build research readiness through a five to six month purpose-specific, fully-funded, intensive research training program (effectively the equivalent of an Honours degree, but with additional focus on research methods and critical academic reading and writing) to be offered in a small number of locations in Australia after language training but before a student's candidature for all students enrolled in a higher research degree. The completion of this program would serve as an exit point for students who do not show sufficient research promise to go on to a higher research degree.
11. That AusAID include within its scholarships for research higher degrees a three to four month post-submission program focused on extracting academic publications from their theses, along with the policy engagement described above, to be offered in a small number of locations

in Australia for students who submit within four years of commencing their candidacy.

12. That scholarships be extended and flexibility be introduced within the student visa system to allow submitting candidates to remain in Australia for this purpose and subsequently, if the opportunity arises, for postdoctoral work.

Supply Side (Research Excellence):

13. That AusAID fund a scheme promoting a small number (5-10) of substantial long-term, collaborative research projects in areas of broad policy relevance but not tied to particular policy initiatives, to be administered by the ARC.
14. That applications to this scheme be initiated by a host department or research institute within an Indonesian university (public or private) involved in social science research and be developed in conjunction with a cross-institutional team of Australian researchers selected by that university on the basis of research fit.
15. That the scheme include provisions for the following:
    a. Funds for a series of joint research projects.
    b. Fellowships to enable a number of members of the Australian component of the team to be embedded for a period of one year each for successive years in the host department/research institute.
    c. Funds to buy out a team of researchers in the host department/research institute from their teaching responsibilities.
    d. Funds to provide opportunities for up to two promising early career researchers from a targeted pool of regional universities in Indonesia to undertake an extended sabbatical at the host university and to participate in the research team.
    e. Funds to support international participation (not limited to Australian partners) in a series of academic workshops run by the host department/research institute, on the condition that they result in an English-language, edited volume published by a reputable publisher outside Indonesia.

1. Introduction

Under the New Order, only a relatively small group of Indonesian university academics – the majority located in a handful of major universities – had opportunities to feed policy-relevant research into government decision-making processes, and then only in selected disciplines. Since decentralisation and the introduction of the good governance agenda, local governments across the archipelago have increasingly called upon academics to undertake research on policy-related issues. However, serious questions remain about (a) the quality of much of that research; and (b) the extent to which it actually informs the policy-making process.

The provision of a quality university education underpins not only the quality of the evidence base available for evidence-based policy making, but also the extent to which that evidence base is drawn upon. In world-class knowledge economies, university-based research makes a direct contribution to innovation, not only in the hard sciences but also in the areas of social, political and economic policy. According to the World Bank (2006, cited in Welch 2011), Indonesia scores much lower on innovation indices than not only Singapore, but also Malaysia, Thailand and the Philippines. However, it also has a unique role in generating (as opposed to simply meeting) demand for policy-relevant research.

Whereas NGOs and other commercial and semi-commercial suppliers of policy-relevant knowledge depend on the existence of a market for their products, universities have a key role to play in the generation of demand by virtue of their unique role in the education of decision-makers. When graduates go on to become decision-makers in the public and private sectors, the quality of their university education largely determines their capacity to engage in innovation and the extent to which they value evidence-based decision making. As a consequence, the lack of a strong academic research base not only compromises the quality of university-based contract research but also undermines the capacity to reach a critical mass of consumers who have a commitment to evidence-based policy making.

It is therefore necessary to promote research excellence in the university sector if there is to be any hope of promoting long-term, large-scale change in Indonesia's capacity to produce the quality research needed for good evidence-based policy making. And research capacity and research culture within universities are key to both of these functions. The difference between post-secondary vocational education and university education lies in universities'

commitment to knowledge creation (as opposed to the mere transmission of knowledge and skills) and its expression through the teaching-research nexus. There are far-reaching consequences if the commitment to knowledge-making is weak, poorly resourced or undervalued. Not only is the quantity and quality of research greatly diminished, but the teaching-research nexus is threatened, undermining the institution's capacity to equip graduates with the skills required to contribute to the knowledge sector, particularly in the area of social science-based policy making.

As it stands, Indonesian universities seriously underperform in terms of research output. In 2008, higher education contributed just 4.6 per cent to research and development in Indonesia, just one-third of the contribution the sector made in that year in Malaysia and less than one-sixth of that made by higher education institutions in Thailand (Asian Development Bank 2008). Any serious attempt to build Indonesia's capacity in the area of social science-based policy making must, therefore, engage in a deep and sustained way with the university researchers, whose work underpins universities' capacity to engage in knowledge-making and to expose their students to research-led teaching. Given the size and complexity of Indonesia's tertiary education system, the task at hand is anything but simple. However, it is necessary if there is to be any hope of promoting long-term, large-scale change in Indonesia's capacity to produce the quality research needed for effective evidence-based policy making.

This diagnostic (a) addresses some of the major elements of research capacity building through a comparative perspective on the role of universities in the Australian knowledge sector and (b) reflects on the strengths and weaknesses of a range of initiatives that have sought to enhance research capacity in Indonesian universities. Building on this analysis, it then suggests a broad suite of measures, including a range of forms of collaboration, to address some of the key the challenges that are widely recognised as limiting universities' capacity to contribute effectively to Indonesia's knowledge sector.

2. Methodology

This diagnostic was commissioned by AusAID's Tertiary Education and Knowledge Sector Unit as part of the Australia Indonesia Partnership initiative entitled 'Revitalising Indonesia's Knowledge Sector for Development Policy'. The Knowledge Sector initiative focuses on building Indonesian capacity in the area of economic and social science policy making through targeted interventions in

the arenas in which development policy advice is sought, generated and communicated.

This analysis contributes to planning for the Knowledge Sector initiative by focusing on the role of universities as a key supply side institution. Its terms of reference were to:

a) Provide an analytical overview of Australia's knowledge sector landscape, including a mapping of the organisations involved in the production of policy-relevant research (including private sector organisations); government initiatives for funding public research on social development policy; mechanisms for fostering international research cooperation; and an assessment of how knowledge organisations communicate their research to stakeholders;

b) Assess previous and current strategic points of cooperation between Australian and Indonesian universities and identify new strategic mechanisms that could be fostered; and

c) Recommend areas where AusAID can support research capacity building initiatives involving Indonesian and Australian universities.

The diagnostic was conducted by Associate Professor Michele Ford, a university-based consultant with extensive experience of the Australian and Indonesian tertiary sectors and previous AusAID-funded initiatives involving Australian universities and Indonesian researchers.[1] Associate Professor Ford, who is based in the Department of Indonesian Studies at the University of Sydney, was assisted by Ms Elisabeth Kramer, a PhD candidate in the same department. Ms Kramer has an MA in Development Studies, and experience working in the Australian government and on development programs in Afghanistan with a sub-contractor to USAID.

[1] Since 2006, Ford has sat on the Advisory Board of the Indonesia Project. From 2006 to 2009, she was the University of Sydney representative within the consortium of Australian universities that ran Aceh Research Training Institute (ARTI). She was involved in the Australia Indonesia Governance Research Partnership (AIGRP) as a grant recipient but was also commissioned to prepare participants in the Young Scholars Program to present their papers at the AIGRP Annual Forum and to act as a resource person in the first of the two workshops held for Australian early career researchers and junior academics from Eastern Indonesia. Ford had no role in the initial design of either ARTI or AIGRP.

Data was collected for this diagnostic through a range of techniques. The overview of the Australian knowledge sector, and the role of universities in it, relied primarily on a desk study, supplemented by in-depth interviews with university academics and a small sample of non-university suppliers and intermediaries of policy-related research, including NGOs, think-tanks and government and non-government bodies with an intermediary function related to the commissioning and transmission of university-generated policy knowledge. These included the Australian Research Council, Universities Australia and the Academy of the Social Sciences in Australia, and the Northern Territory's Research and Innovation Unit.

The analysis of previous AusAID-funded research capacity-building initiatives drew on a desk study of the evaluations of those initiatives, along with interviews with the individuals responsible for their development and implementation. In addition, several academics (Australian and Indonesian) who had participated in them were interviewed. A desk study was also conducted of a sample of initiatives funded by multilateral and other bilateral donors, supplemented by interviews conducted with Jakarta-based informants, including representatives of private foundations such as the Ford Foundation and multilateral institutions such as the Asian Development Bank and the World Bank. In almost all cases it was possible to speak to Indonesian staff as well as expatriates at these institutions.

Data on less structured past and current initiatives, as well as possibilities for future initiatives, was gathered through individual and group interviews. The first sample consisted of 78 non-Indonesian academics from 20 disciplines in the social sciences and three disciplines in areas of the humanities that have some policy engagement based at Australian universities, all of whom have experience of collaboration with Indonesia-based academics. The disciplines represented in this sample included economics, politics, political economy, international relations, sociology, demography, anthropology, development studies, public policy, industrial relations, gender studies, education, public health, social work, psychology, environmental studies, geography, business, law, agriculture, history, linguistics and cultural studies. Indonesia constitutes the primary research site for a significant proportion of those interviewed, while others were disciplinary experts who had undertaken one or more collaborative research projects in Indonesia. These interviews were conducted at 16 universities over a period of three weeks in March and April 2012 in Sydney, Canberra, Melbourne, Adelaide, Darwin, Brisbane and Perth.

The second cohort consisted of Indonesian academics at various stages of their careers, who were interviewed in both Australia and Indonesia. Ten of these informants were Indonesians who completed their first degree in Indonesia and their PhD overseas, and now hold academic positions in Australia. A further 10 interviews were conducted with young Indonesian academics currently undertaking doctoral work in Australia and the Netherlands. Fifteen more interviews were conducted with junior Indonesian academics employed at public and private Indonesian universities in Jakarta, Bandung and Yogyakarta. A small sample of senior Indonesian academics was also interviewed in these cities. In total, these 40 respondents represented over a dozen public, private and Islamic universities located in several Indonesian cities, most in Java but also a number in the outer islands. These interviews were supplemented by attendance at two conferences on higher education in Indonesia, one sponsored by AusAID and the other by the Department of Innovation, Industry, Science and Research. At the latter, Associate Professor Ford presented a paper summarising her findings about research collaborations and the barriers to collaboration, to which the 120 participants from 80 Indonesian universities then had a chance to respond.

In addition, interviews were conducted with just under a dozen Australian scholars engaged in research collaborations in the Pacific and elsewhere in Southeast Asia and a number of Thai and Vietnamese scholars employed by universities in their home countries, who were interviewed in Hanoi. Finally, a small number of Dutch, US and North Asian researchers with experience collaborating with Indonesians and with knowledge of their own country's research schemes were interviewed in order to strengthen the comparative perspective of the study.

Interviewees were encouraged to be full and frank in their assessments of the benefits and challenges of research collaboration, and the role of collaboration in research capacity building. Indonesian respondents were also invited to reflect on the academic culture of their home institutions, the level of importance accorded to research within that academic culture, the different kinds of research they engaged in and the extent to which that research contributed to policy making and public discourse around policy making in Indonesia. In order to facilitate this process, respondents were guaranteed individual and institutional anonymity, except in the description of models of collaboration, where institutional identity is necessarily revealed.

3. Australia's Knowledge Sector

The **knowledge sector**, as conceptualised by AusAID, consists of the institutional structures through which development policy advice is sought, generated and communicated. Although narrower in its focus, the concept draws from the World Bank's model of a 'knowledge economy', which it defines as having four pillars, namely:

- an economic and institutional regime to provide incentives for the efficient use of existing and new knowledge;
- an educated and skilled population to create, share and use knowledge well;
- an efficient innovation system of firms, research centres, universities, consultants and other organisations to tap into the growing stock of global knowledge, assimilate and adapt it to local needs, and create new technology; and
- technology to facilitate the effective creation, dissemination, and processing of information.[2]

The brief overview that follows examines supply side actors, intermediary strategies used by different organisations and barriers on the demand side in the Australian context before looking more closely at the funding mechanisms for university research and the structures that promote international research collaboration in that context. This overview provides both background and a comparative perspective for the discussion of collaborative initiatives involving Australian and Indonesian scholars that constitutes the bulk of the diagnostic.

3.1 Supply Side Actors

The supply and intermediary functions within the Australian knowledge sector involve many types of institutions, which produce and mediate the policy-related knowledge consumed by government institutions and the general public (see

[2] Every year, the World Bank ranks countries on a 'Knowledge Economy Index', based upon their performance in relation to each of these four pillars. Traditionally, the countries of Northern Europe, in particular Sweden, Norway, Denmark and Finland dominate the index. In 2012, Sweden was ranked number one, followed by Finland, Denmark, the Netherlands and Norway. Indonesia was ranked 108 of a total of 146 countries, while Australia was ranked ninth overall (World Bank 2012).

Table 1). Universities, NGOs, lobby groups, think tanks and private companies and, in some sectors, international organisations, play an important role as suppliers and intermediaries of research that feeds into governments' policy making processes. Within this broad milieu, universities are the primary source of Australia's knowledge base, producing some 78 per cent of all Australian research.[3]

Yet, despite a reputation for high quality research, the Australian university sector's level of influence on public policy is relatively low. There are significant limitations within the enabling environment – the policies, regulations, and procedures that govern how the supply and demand sides operate and interact – when it comes to academic engagement in applied research. Universities characteristically encourage contract research insofar (a) that it has the potential to increase the impact of the university sector on public policy; and (b) on the condition that it does not interfere with the academic's core duties. However, it is considered to be of lesser status than academic research, and counts for less in terms of academic career progression. Moreover, research funds accessed for contract research are not recognised fully in the government funding formula used to calculate block grants, which privileges funding obtained through nominated national competitive grant schemes over other kinds of research funding.[4] This distinction also largely determines the career benefits accruing to Australian researchers as a result of obtaining different kinds of research funding.

[3] For a detailed discussion of Australia's research capacity, see House of Representatives Standing Committee on Industry, Science and Innovation (2008).

[4] Four categories of funding are treated differentially in the calculation of block grants. Category 1 grants (Australian competitive grants listed on the Australian Competitive Grants Register) attract the most additional support. Category 2 grants include other public sector income, whether it be non-Category 1 support from the federal government, support from a lower tier of government or a government business enterprise, or income from a CRC where the reporting higher education provider is not a named 'researcher' or 'participant'. Category 3 grants include industry or other research income, including donations and bequests, along with competitive peer-reviewed research grant income obtained overseas (International A), contract research by non-Australian bodies and overseas bequests (International B) or support for international students' higher degree by research places that is not provided by the Commonwealth (International C). Finally, Category 4 income includes CRC research income, where the higher education provider is a named participant.

Table 1. Suppliers and Intermediaries in the Australian Knowledge Sector

Institution	Example	Contribution to Knowledge Sector	Strategies to Influence Policy	Effectiveness
Universities	There are 39 universities across Australia, the vast majority of which are state funded.	Universities develop students' research skills through exposure to research-led teaching and through structured research exercises. Students who wish to further their skills are given the opportunity to undertake Masters or PhD level courses to further refine their research skills. Junior university staff have access to formal and informal mentoring, including opportunities to conduct research with more senior colleagues. Academic research published in high ranking journals is most valued. Contract research is valued where it is undertaken in addition to core academic work, not when it replaces it.	Academic research may be solicited by government for express use in decision-making. Unsolicited research requires different strategies to bring this knowledge to the attention of policy makers. Merely publishing findings is generally insufficient, as they need to provide information that is targeted and easily comprehensible to a non-academic audience. The use of the media is one means for broadcasting research. Personal networks in government are another means encouraging decision-makers to take account of academic research.	Although universities are the primary source of knowledge production, their influence on public policy is often limited. Difference in purpose and in communication styles constitutes a major barrier to better incorporation in the policy evidence base, as do the demands of real-politik on public policy formulation.
Learned Academies	The Australian Academy of Social Sciences.	Academies aim to promote their study interests to a range of stakeholders.	The Academy of Social Sciences has a workshop committee that also provides advice to the government, as well as a policy and advocacy committee. They also publish work by members, for example, 'Beyond a 'White Australia' looking at issues of racism in Australian society.	Academies are not well known outside of the academic community, which limits their influence.

Institution	Example	Contribution to Knowledge Sector	Strategies to Influence Policy	Effectiveness
Think Tanks	Examples include: Australian Strategic Policy Institute, Centre for Independent Studies, Evatt Foundation, Grattan Institute, Lowy Institute	Think tanks produce and disseminate research on topics in their area of policy interest. Several think tanks have internship programs designed for current students or recent graduates, exposing them to a broad range of research topics and transferring skills including data collection and report writing.	Think tanks produce publications designed to inform decision-makers and broader society. They also utilise political connections to influence policy. Some are connected to political parties, while others have influential board members. In addition, think tanks use the media to promote their agenda and focus attention upon their research.	The quality of research produced by each institution needs to be assessed in terms of its aims and agenda. Some think tanks are very influential while others are not. Which political party holds power affects the uptake of a particular think tank's research, depending on how their agenda aligns with that of the government.
NGOs	Some of the core NGOs working on social development research include CARE Australia, Australian Red Cross, AUSTCARE, Caritas, Oxfam, Plan International Australia, Save the Children, The Asia Foundation and World Vision.	Some NGOs act as suppliers of knowledge, although many adopt more of an intermediary function. Some NGOs implement programs that are specifically designed to build the capacity of people in their target locations, which may include research capacity. Other projects may expose people to different ways of thinking to providing more generic skills such as data analysis and report writing.	NGOs generally work in specific field(s) and can contribute to policy through research and campaigning. While different from academic research, the investigative research undertaken by NGOs can expose issues, weaknesses in policy, and can be used to garner public support.	There is significant variation in the extent to which NGOs seek to, or succeed in, influencing policy. The political connections of NGOs play a crucial role in the effectiveness of their research. A successful campaign can result not only in generating public interest and policy changes, but also in financial benefit for the organisations itself, which can then be used to fuel further work.
Trade Unions	The National Tertiary Education Union (NTEU).	Unions usually have a research arm that undertakes studies in relation to issues of interest to the union membership.	Unions function on a highly political level; traditionally they have been associated with the Australian Labor Party so they have many direct connections to decision makers when the ALP is in power. They also use the media to publicise their research.	Difficult to generalise, particularly in relation to their research and information. Unions have a range of tactics for getting their demands heard and acted upon, and research and report production would be a small part of a much broader process.

Institution	Example	Contribution to Knowledge Sector	Strategies to Influence Policy	Effectiveness
Lobby Groups	Research Australia, a national not-for-profit alliance of organisations and companies committed to making health research a higher national priority.	Like unions and NGOs, lobby groups aim to influence government policy in favour of their cause. In order to do so they invest in research and knowledge production but also have an intermediary function.	Lobby groups seek to make connections with policy makers and to garner public support through media campaigns.	Lobby groups act in self-interest, so their research will reflect that bias. Research produce by such groups needs to be critically examined if it is to be used to make policy decisions.
Consulting Firms	Key consulting firms in social development include Coffey, Cardno-Acil, Deloitte, GRM, Mott MacDonald Australia, Sinclair Knight Merz and SMEC International.	Consulting companies engage expert consultants to complete research commissions and evaluations. They have little capacity to do knowledge work in-house.	Research by consulting firms is generally solicited by government, not driven by the companies themselves, which work on commercial principles and do not try explicitly to influence policy. However, because their work is commissioned, their findings can have a considerable influence on policy direction. Choice of consultants is thus a variable that may shape policy outcomes.	The quality of research produced by consulting firms can vary. Boston (1994) argues that the increased reliance on tenders and the private sector to provide policy advice can lead to a decrease in quality as consulting firms engage in increasingly opportunistic behaviour in order to win contracts and maximise profits.
Government Institutions	Australian Research Council (ARC), National Health and Medical Research Council (NHMRC), Cooperative Research Centres (CRC)	These institutions are the Australian Government's main administrative body for channelling funding for research and for linking research with 'end-users'. The ARC manages the Australian Postgraduate Award for PhD students, as well as the National Competitive Grants Program. The NHMRC administers funding for health and medical research.	The ARC and NHMRC fund a range of research projects, many of which have policy relevance.	These institutions are directly linked to government and are responsive to government needs and areas of interest, but their primary criterion is excellence. The key challenge is to ensure that the profile of research is maintained and distributed to all stakeholders in government to inform policy, not just those in power.

The not for profit and private sectors play a much smaller role in the Australian knowledge sector than in that of, say, the United States of America. Some NGOs use research as their primary lobbying tool. While different from academic research, the investigative research undertaken by NGOs can expose weaknesses in public policy and can be used to garner public support. Other NGOs work primarily as program implementers.[5] This second group, too, engages in public debates around their particular areas of interest and make submissions to relevant government bodies, some of which draw on the work of academic researchers. Trade Unions are another category of not for profit organisations that make a significant contribution to policy discussions in Australia, particularly around industrial relations, but also on other social policy issues. Trade unions work directly as supplier of policy-related research, as well as in conjunction with academics and through labour movement think tanks such as Catalyst Australia (http://www.catalyst.org.au/).

There are some 30 think tanks registered in Australia, which seek to influence public debate and government decision-making on social, political and economic issues. Many of these produce or commission research in the course of their work. As Appendix A indicates, these organisations receive funding from a variety of sources including government, political parties, universities, private companies and individuals, which they use to fund research, to publicise their findings and to work with elements within government to influence public policy. According to one informant, Australian think tanks perform well because there is a constant circulation of personnel to and from the universities. One example of this is the Lowy Institute, Australia's premier international relations think tank. Lowy's current director previously ran the Griffith Asia Institute, while the former director of Lowy's East Asia Program now heads the School of International Studies at Flinders University.

A number of purpose-specific lobby groups also work to influence public policy through research, though many NGOs and think tanks also undertake lobbying work. One example of a purpose-specific lobby group is Research Australia, which, according to its website (http://researchaustralia.org/), 'is a national not-for-profit alliance of organisations and companies that are committed to making health research a higher national priority', which offers research grants from $5000-$500,000 and has an advocacy arm that has contributed submissions on

[5] Some NGOs try to form links with academics. For example, ACFID has actively engaged with the university sector, although not in a systematic way.

national programs such as the Pharmaceutical Benefits Scheme and the Health and Medical Research Strategic Review. Another example is Universities Australia (http://www.universitiesaustralia.edu.au/), which serves as a lobby group for higher education, and whose work includes research into issues affecting the sector.

Private enterprise is involved in the supply functions of the knowledge sector through the support they provide to NGOs, think tanks and lobby groups. Specialist consultancy firms also act as intermediaries when they are commissioned to manage research, evaluations and report-writing for government agencies. Many of the major consulting companies are structured as an umbrella company with a number of arms (e.g. engineering, construction, development, IT etc.), each of which outsource to an army of sub-contractors (see Appendix B). Based on the premise that these consultants provide 'expert' input with targeted recommendations, such information plays a highly influential role within particular segments of the Australian knowledge sector.

Finally, while their influence on local decision-making itself is not strong, international organisations including the UN agencies, the World Bank and the Asian Development Bank and private international organisations such as the Bill and Melinda Gates Foundation fund research on a range of development issues which feeds into Australia's foreign and development aid policies. In the development sector, in particular, such organisations act as both suppliers and intermediaries of policy-relevant research.

3.2 Communication of Research Results

The transfer of knowledge from 'suppliers' to 'consumers' occurs through many different processes, some direct and others involving intermediaries. There are three main formal channels through which knowledge is disseminated by groups that work outside of the government in Australia, namely publications, face-to-face forums such as seminars and conferences and the media. Many organisations produce publications, such as thematic reports, in the hope that they will be read by, and influence, decision-makers. Face-to-face forums are used both to relay research findings, and also provide a means for bringing stakeholders together to discuss and debate the issue at hand. In addition, many organisations produce media releases, have a 'media' link on their website, contribute op-ed pieces in newspapers or magazines, or even have their own columns. By providing traction in the public arena, the media can focus policy makers' attention on specific information and issues, and are generally far more effective than face to face forums.

In terms of communication of research results, a distinction needs to be made between commissioned and unsolicited research. Government agencies may cultivate a direct link with a university or think tank, or commission a report from an organisation with the explicit purpose of using the information gathered to inform policy. Irrespective of relative quality, information transmitted through these direct links has much greater immediate influence than research that is driven by the organisation itself (or by individuals with a specific research interest), which may or may not be picked up by policy makers. Organisations that produce unsolicited research generally need to work harder to have their research brought to the attention of policy makers. They can, however, have greater impact if they do achieve breakthrough than commissioned work, the outputs of which tend to be strongly influence by the terms of reference provided, and therefore, while more user-friendly, also more predictable.

Informal links are also an important channel for knowledge transfer. Having a direct, personal relationship with someone in government, or with an intermediary who has that kind of relationship, can facilitate an exchange of information that would take longer through official means, or may not occur at all. NGOs and lobby groups work hard to find an 'in' with Members of Parliament and their staff in order to promote their causes. Additionally, organisations such as NGOs and think tanks often invite influential individuals to join their boards of directors in the hope that this will increase their credibility with policy makers. Conversely, if decision-makers trust and respect a certain person within an organisation, they may approach them informally for information to assist in policy development.

While academics make use of formal channels of dissemination for unsolicited research, they are under-represented in the production of commissioned research, and generally do not have the same kind of resources, or institutional imperatives as NGOs and lobby groups have to cultivate informal channels of influence. There are heated debates in Australia about policy uptake and the impact of university-based research. As noted by the former Secretary of the Department of Prime Minister and Cabinet, Peter Shergold (2011), many in government and policy making remain sceptical about the relevance of academic research, which tends not to be responsive to the immediate needs of government nor necessarily presented in an accessible form. At the same time, universities differ from other supply-side organisations in that the primary focus of their research endeavours is academic rather than policy-driven. This poor immediate fit is actually a strength of university-based research, which provides a rigorous, considered and sufficiently broad knowledge base to respond to

emerging, unpredictable challenges rather than simply providing information and analysis around established policy priorities.

In recognition of this, Shergold argues that the onus lies with both policy-makers and academics to bridge the communication gap. One attempt to improve the accessibility of academic work in Australia has been the establishment of the Conversation (http://theconversation.edu.au), an electronic media platform which describes itself as 'an independent source of analysis, commentary and news from the university and research sector'. Owned by a not-for-profit company, the Conversation was set up by a consortium of universities in Sydney and Melbourne in collaboration with the CSIRO. Several other universities have since joined as financial members of the consortium. As of May 2012, its team of editors has worked with over 2,900 academic authors from 180 universities to make their work accessible to the public and to policy makers. The site claims to attract 350,000 readers per month.

3.3 Barriers on the Demand Side

In terms of the demand side, Australian government departments tend to work largely in isolation when commissioning and considering research input into policy making. In many cases, even different sections within a single department can be oblivious to the fact that they have commissioned, or are responding to, research on the same questions. Critics also charge that Australian government agencies rely overly on internally generated research and on commercial consultancies, with the effect of limiting critical input into the policy-making process.[6]

Bureaucrats are aware of these limitations, and recognise the need both for 'joined up government' and for the better use of universities' research expertise. The Northern Territory government offers one example of how government agencies have worked to overcome these barriers. Its Research and Innovation unit, which sits within the Department of Business and Employment but has a 'whole of government' function, is working to build networks across departments involving all those responsible for commissioning research in an attempt to maximise the returns on the NT government's investment in research. While the NT government also makes use of consulting firms like Deloitte, it has

[6] For a discussion of the importance of quality and institutional independence, see Australian Government Productivity Commission (2009).

a peak agreement with Charles Darwin University, under which government departments can commission research from the university.[7] The NT government also provides grants of A$ 50,000-60,000, which are designed to seed applications for ARC Linkage grants, in which it then participates as a partner. These initiatives are aimed at growing the research sector in the Territory by helping academics be more responsive to the needs of the public sector, but also to promote evidence-based policy making.

3.4 Funding Mechanisms for Tertiary Research

There is a bipartisan recognition in Australia that (a) university research should be better integrated into policy making; and (b) that it underpins other forms of capacity to produce policy-relevant research within government and in the non-government sector. This recognition is reflected in the funding of university research, both through block grants and through targeted schemes such as those run by the Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC). Some academics also engage in contract research for the not for profit sector or for private enterprise. However, as far fewer private sources of funding are available for research than in the European Union, the US, Japan or Korea, Australian researchers in the social sciences are heavily reliant on the government's competitive grant schemes and on smaller competitive and non-competitive grant schemes funded by their own universities.

The ARC is a statutory authority within the Innovation, Industry, Science and Research portfolio, which provides advice to the Australian government on research matters and manages the National Competitive Grants Program. The ARC's competitive grant schemes account for around 8 per cent of the Commonwealth Government's total research spend. The NHMRC, its direct counterpart, funds fundamental and applied health and medical research, and provides advice on health issues for the Australian community and ethical advice on health and medical research to the Australian government. Public health research is funded through the NHRMC; however, the bulk of social science research (along with research in the basic and applied sciences) is funded through the ARC.

[7] Although NGOs contribute to policy making through public consultation processes in the Territory, the NT government does not generally commission research from them.

The ARC focuses primarily on blue-sky excellence. In terms of policy relevance, it works on the premise that excellent research – as opposed to overly targeted research – brings the best outcomes in terms of policy impact, even if uptake is lower. National benefit is weighted differently in the selection criteria for different schemes, and some, like the ARC Linkage scheme, emphasise industry partnerships. In a small number of cases, a competitive scheme will be established to seed a special research initiative. All ARC schemes have nominated priority areas, and fund a significant amount of applied research with policy implications. However, in all schemes, excellence rather than policy relevance is the primary criterion for selection.

The ARC effectively funds a bottom-up process, where academics, sometimes in conjunction with industry partners, identify areas of research interest. By contrast, most of the direct research spend by individual government departments is outlaid on direct commissions in areas of immediate policy need. In addition, however, some government departments, including AusAID and DFAT, support competitive research schemes, which are more focused than those of the ARC. These schemes have included the Australian Development Research Award (ADRA) and the Australian Centre for International Agricultural Research (ACIAR) grant schemes. The Australian government also funds a series of Cooperative Research Centres (CRCs), which bring together publically funded researchers and 'end users' in areas like climate change, health and infrastructure.

3.5 Mechanisms to Foster International Research Links

International collaboration brings benefits not only in terms of the quality of research output, but also in terms of soft diplomacy. The benefits of academic diplomacy have been clearly demonstrated by the Universities Australia shadowing program for senior university administrators, known in China as the 'lucky program', because a string of past participants have gone on to take senior positions in government.[8] However, the geopolitical impact of this and other kinds of academic engagement are dependent on sustained and long term engagement. Anything less runs the risk of being perceived as self-serving, which undermines not only high-level objectives but also the willingness of target country academics to collaborate with Australians.

[8] An Indonesian pilot of this program is running in 2012.

Although Australia has long been a significant player in Southeast Asia in terms of scholarship provision, it is not seen as a reliable partner in the knowledge sector space. Low-level and ad hoc research partnerships have abounded, but there has been no sustained structural support for research collaborations of the kind provided by Singapore or a number of European governments. Australia's traditionally strong reputation in terms of area studies knowledge and research capacity building is also coming under increasingly threat as governments in Northeast Asia pour money not only into scholarships and academic networking schemes in the region but also into Southeast Asian Studies centres in their own countries, such as that hosted by Sogang University in South Korea and Chi Nan University in Taiwan.[9]

In recognition of the academic benefits of international collaboration, since 2007 there has been a push from the Australian government for greater internationalisation, with the aim of encouraging more Australians to become involved in international collaborations and more international researchers to contribute to Australian research. In conceptual terms, this is a fundamental shift. Previously the ARC and NHMRC funding mechanisms were extremely inward looking, especially when compared to those of similar sized countries like the Netherlands, which provides a wide range of schemes designed to promote collaboration in centres of research excellence but also in countries that receive Dutch international development aid. Now, as part of the internationalisation push, the NHRMC has opened its schemes to topics of regional interest, which public health and medical academics say has greatly expanded possibilities for research collaborations in Southeast Asia and the Pacific. The ARC Discovery grant scheme now includes provisions for funding of collaborator visits to Australia, although it still requires partners to make a significant cash or in-kind contribution to funded projects, which can act as a barrier to collaboration in the region.

Outside these still relatively peripheral measures to improve international collaboration through the major competitive grant schemes, funding for research internationalisation remains woefully low. The Australian government has no

[9] According to one Korean academic, the South Korean government is supporting Southeast Asian students and Southeast Asian Studies because it believes the region to be playing an increasingly important mediating role in regional geopolitics with the rise of China, and thus perceives there to be an important strategic dimension in academic engagement in the region. Note also that the German education ministry has funded a well-resourced network of Southeast Asian Studies centres in recent years.

equivalent of the the Fulbright scheme, which funds academics from the US to spend up to a year overseas, and foreign scholars to spend a year in the US.[10] The Endeavour scheme, run out of the Department of Innovation, Industry, Science and Research provides mobility awards for up to six months for PhD students and postdoctoral fellows, and shorter awards for 'executives' (including high achievers in the education sector), but on a much more limited basis than those available under the Fulbright scheme. Australia's learned academies also provide some support for academic mobility. For example, the Australian Academy of Science (http://www.science.org.au/ academy/) has bilateral activities with institutions in China, France, Japan, Chile and Singapore among others, including Indonesia's RISTEK. The Australian Academy of Social Sciences (http://www.assa.edu.au/) fulfils a similar function, and has an international program, which aims to facilitate international research linkages. These are, however, very small-scale schemes with limited capacity to promote sustained international collaboration. By contrast, the Royal Netherlands Academy of Arts and Sciences has a standing call for applications from individual researchers involved in a Dutch research project to apply for funding for periods of up to three months in the Netherlands, which is open to academics from any country.

In terms of private sector funding, Australian researchers have some access to overseas schemes – particularly those that promote academic mobility to North America, but also Japan and Taiwan – but there is not the same tradition of private sector support for academic endeavour at home.

Finally, most universities have some form of in-house mobility schemes, which are generally run out of their international offices but also sometimes out of individual faculties or research centres. The size of these schemes and the extent to which these fund collaborative research varies considerably depending on university priorities and available resources. Some universities have quite large programs, but most offer little or no support for sustained international collaboration.

[10] Fulbright has since its inception been an especially successful example of US public diplomacy, both in familiarizing foreign academics with US higher education and in building links with developing country academies.

4. Indonesia's Research Capacity

Universities' capacity to produce quality, policy-relevant research is a function of (a) internal factors, including research culture and importance accorded to research training; and (b) aspects of the enabling environment that influence their operation as teaching and research institutions. In the Indonesian context, the enabling environment constitutes a major determinant of the priority accorded to teaching, research and service by academics and the nature of research undertaken in universities.

Although decision-makers in leading institutions recognise the importance of improving Indonesia's international competitiveness in the sector, without drastic and significant changes in the enabling environment, academic research is likely to remain a low priority across the system as a whole. In the absence of such change, with appropriate institutional buy-in and support, pockets of research excellence may still be able to emerge. However, elsewhere academics' efforts are likely to continue to be concentrated in teaching and contract research.

4.1 Indonesian Perspectives on Research Capacity

According to Indonesian informants, Indonesian universities do not function effectively as research institutions, leading to a situation where their academic research is undervalued and their contract research effectively privatised.[11] In other words, individuals and teams supplement their incomes by undertaking contract research for government departments, international organisations and private companies but, in most cases, their academic unit receives little or no benefit from such activity in terms of scholarly outputs or even contribution to research culture. In such a context, it is not surprising that many talented and enthusiastic higher research degree graduates fail to publish in international academic venues upon their return to Indonesia. Pressure to publish internationally has dramatically increased in recent years in Indonesia; however, for many, while it is a priority to obtain an overseas PhD, it is not yet a high priority to have work published abroad.

[11] For a comprehensive overview of the Indonesian university sector, see Hill and Thee (forthcoming). For a more systematic discussion of the Indonesian academic experience, see Suryadarma et al. (2011). For an analysis of the impact of the procurement system on university providers of contract research, see Sherlock (2010).

Alongside a range of other structural barriers, the low value attributed to the development of an international track record was cited by informants from some of Indonesia's top social science universities as evidence of the fact that Indonesian universities have virtually no culture of doing 'serious' (academic) research. Indeed, as one young academic noted, many overseas graduates return to Indonesia with high hopes, only to find that they have few resources and little power, and therefore limited opportunity to pursue their research interests. By the time they gain sufficient power to become decision-makers, he went on to say, many of them have fallen out of the habit of sustained academic enquiry.

Some junior academics interviewed felt that this divergence reflected the fact that research priorities were necessarily different in Indonesia and Australia, as a consequence of the role Indonesian campuses have played in supporting national development, and that this was not necessarily problematic. This was so, they argued, because applied research better addresses Indonesia's policy agenda and therefore made a more concrete contribution to social change. Others rejected this hypothesis, arguing that there was little to guarantee the quality of contract research in the absence of a strong academic research culture. Informants in this second camp were despairing of their ability to maintain their commitment to academic research while working in an Indonesian university. In addition, because of the unattractiveness of academic positions, many very talented students with an interest in research do not seek out an academic career, choosing to work instead for international organisations (or foreign aid agencies).[12]

Many of the barriers identified by these informants pertained to institutional structures and imperatives. In the words of one junior lecturer, the institution positions teaching as academics' main task, closely followed by service, with research coming in a poor third. Some of the problems faced by junior lecturers are the result of the hierarchical structures within departments, in which junior staff are expected to drop their own work to ensure that departmental commitments are met. A number of junior academics commented on this, with one saying that she 'felt like an event organiser', who was always on call and had

[12] Another option is, of course, to seek an academic position abroad. One Indonesian academic employed in Australia went as far to say that if his only choice was to work at an Indonesian university then he would have to find himself a different kind of job.

little room to decide on her own priorities.[13] To make matters worse, she was expected also to prioritise contract research projects undertaken by senior staff members over her own research work.

Another aspect of academic hierarchy that frustrates junior researchers is the lack of interest on the part of many senior academics in the more intellectual aspects of the research endeavour. According to one junior academic, his superiors were 'like frogs under a coconut shell', an Indonesian expression that refers to inward-looking tendencies and lack of awareness of one's surroundings. There was no point, he went on to say, in working with 'old people', who he felt had little to offer in terms of mentoring or inspiration. According to another, the academic culture of his institution is an intellectual wasteland, where he has no one to talk to. Discussions within his department, he claims, revolve around personal matters, and 'no one wants to talk about academic stuff'.

It is important to note that this is not always the case, with some respondents commenting on the strong engagement of senior academics in their departments in intellectual debates and academic research. However, even then, junior researchers did not always feel that they had access to mentoring or that the research culture was sufficiently strong to really push them to engage in sustained academic enquiry.[14] Conversely, some very committed senior researchers interviewed were despairing of the ease with which their junior colleagues had adapted to the prevailing weak research culture, and expressed deep concerns about level of structural change required to reverse this.

These observations point to a second and related reason for Indonesia's poor performance on international academic league tables. That is, that the incentive structures – both financial and non-financial – of the Indonesian university system do not encourage academics to focus on internationally-recognised research. Financial incentive structures vary from campus to campus, but in general Indonesian academics receive a low base salary, which is topped up with significant allowances tied to hours in the classroom and other duties. As a result, many academics choose to take on far more face-to-face hours than required as part of their 'basic' teaching load. For example, in a social science

[13] Young female academics at other universities made similar comments.

[14] A related issue is the lack of mobility between institutions. It is common practice in Indonesia to hire graduates from one's own institution then provide opportunities for them to gain higher qualifications.

department at a leading private university, academics with a number of years teaching experience after completing a coursework Masters degree received a base salary of Rp. 6.5 million per month. Teaching expectations associated with this salary sat at around 10-12 face to face hours per week during semester. Extra classes were paid at a flat rate of Rp. 55,000 per contact hour. Informants in this department had chosen to take on varying amounts of extra teaching, with some choosing to take on none while others taking on as many as six extra hours per week, leading to a monthly increase of income of close to Rp. 1.5 million per month during semester. A similar financial incentive structure applied in the departments of interviewees from a major state university. In a bold challenge to the status quo, one of the interviewees chose to teach only two courses a semester (a total of six hours per week), having made a strategic decision to focus on obtaining a large DIKTI grant, the value of which significantly outstripped the money potentially generated through extra teaching. A second, equally able, researcher chose to teach 2.5 times this load in order to guarantee himself a steady income.

Where they have sufficient profile, academics seek to supplement their income with contract research, which can offer remuneration equivalent to several months' academic salary in a much shorter time. In designated research centres, this situation is exacerbated by an even heavier reliance on external funding for research.[15] Reliance on soft money in both instances leads to a never-ending cycle in which new opportunities must be pursued, applications written, and research conducted by researchers under pressure to complete multiple projects, but also to source the next project and to write the next application. Not only does this lead to double and triple dipping, but also to a situation where research outputs are confined to consulting reports, and where academics do not have the time, inclination or skills to publish in the academic literature.

Importantly, the decision to focus on contract research has few consequences in terms of academic progression. Like financial rewards, non-financial rewards (credibility, respect and promotion) within the academic system rely only peripherally an academic's capacity to contribute to international academic debates. Some evidence of publication in international journals is now required to be eligible for promotion to full professor. In theory, in order to maintain their professorial salary loading (equivalent to an extra 2 times the basic wage),

[15] For a discussion of problems faced by university-based research centres in Indonesia, see McCarthy and Ibrahim (2010).

professors are required to do one of three things every year: publish a book, present a refereed paper at an international conference or publish an article in an international journal (a category that includes Indonesian journals considered to be of international standing). There are two problems with this system. First, the lack of peer review and other forms of quality control in local publishing means that the simplest way to meet this criterion is to publish the results of a contract research project as a book. Second, although output is assessed every three years, even DIKTI officials admit that in practice sanctions for not performing once an academic is awarded his/her professorship are non-existent in practice.

At lower levels, the benefits of a strong international publication record are even more minimal. In terms of promotion criteria set by DIKTI, international publications 'count' for more than local publications, but not sufficiently to compensate for the extra effort required to reach the research standard required to publish internationally. Under the promotion criteria used in one university, an international academic publication was worth 40 points, a local academic publication worth 10 points, and an opinion piece in an Indonesian newspaper worth 1 point. Given the ease of publication in Indonesia – where university presses are essentially vanity presses and most academic journals are designed specifically for publication of faculty members' work – it is far easier to publish four items locally than even one relatively low-ranking international journal article. It is also feasible to publish a large number of opinion pieces which, at around Rp. 1 million per article, have the additional benefit of generating a significant amount of additional income. Importantly, opinion pieces are also not only financially rewarding, but have a far higher impact in terms of visibility in the public arena and in academic circles than either international or local journal articles. As one junior academic noted, they have done far more for his reputation than some journal article that almost no-one in Indonesia can access and, even if they can, generally will not read in any case.

The absence of a culture of reading and contributing to international journals has serious implications for the nature of Indonesian academic research. Indonesians' failure to engage with the international literature when they do publish is often attributed to language barriers or to lack of access to journal databases. Both factors undoubtedly have some impact. However, according to Indonesian respondents, a broader problem exists in the academic culture. As an Australian-based Indonesian academic observed, even where excellent research is being done and serious research communities exist, they are generally disengaged from the international research community. According to an Australian academic who had worked for 18 months in an Indonesian university

that had been given full access to an international journal database, not one of her colleagues accessed that resource in the time she was there.[16]

As part of their attempt to reorient academic culture, some universities – along with DIKTI – have also begun to provide funding for research grant schemes and other forms of research support. According to informants, however, many of these schemes are poorly aligned with the demands of quality research. In one example, grants to the value of Rp.10 million were offered at the faculty level to encourage basic research. According to informants, not only did the small amount on offer made the scheme unattractive, but the three-month time limit allowed to complete the funded project made it simply unworkable. At another university, where internal research grants were available for periods of up to six months, the problem lay with the scheme's unrealistic expectations in terms of numbers of outputs, leading to situations where multiple poor quality papers are written in such a way as to meet administrative requirements instead of working toward a single high quality publication. As a result, even the most junior of academics had little motivation to apply for such schemes because of the red tape involved to access small amounts of money and the limited time made available for completing the proposed research.

DIKTI research grant schemes were also criticised for their short timelines, but more so for the opacity of the application process and the inflexibility of funding formulae. One informant, who had been part of a team on a large DIKTI grant, was critical also of the lack of incentive for follow-up, noting that when the research on the grant was complete, the only requirement was to present findings to a panel of three experts in the field in what was essentially a 15-minute presentation. Other DIKTI initiatives, including mobility grants for international conference attendance and its sabbatical scheme for senior researchers were viewed more favourably, although it was generally recognised that in these cases selection criteria and/or the structure of the scheme did not guarantee optimal outcomes. In the case of the sabbatical scheme, which is only available to senior researchers, it was suggested that a period of three months

[16] There are, of course, exceptions to this generalisation. One Australian academic recalled the case of a very motivated former student who had been given continuing access to the Australian university's our journal database on a user-pays basis once she returned. One respondent mentioned the case of a German university that provided ongoing access to databases to its alumni. A number of committed Indonesian researchers also had strategies for maintaining access, including asking former classmates from overseas universities to send them journal articles.

was insufficient, especially in cases where awardees had had a period of research inactivity. Its utility also varied depending on the fit between awardee and host institution, and the level of support available in-country to awardees. Informants from Islamic and private universities also noted disparities in access to DIKTI schemes.

In some cases, deans and university rectors concerned with their institution's profile have also greatly increased financial incentives for academic publication, in some cases offering up to Rp.25 million cash in hand for a single article published in an international journal. DIKTI offers a further Rp.30 million for international publications. Nevertheless, contract research remains far more financially rewarding. According to one young researcher, an academic publication takes months, even years, of research and writing, whereas Rp.25 million can be earned in just a few days of high-end consultancy work.[17]

The combination of an intensive focus on contract research and a lack of engagement with international research has implications not only for universities' international standing but for the teaching-research nexus and, ultimately, the quality of contract research. A number of Indonesian respondents observed that, as a result of the contract-research driven academic culture, Indonesian academics' knowledge is broad but very general, and few have the opportunity to develop an area of specialisation. It follows then, that they are only ever in a position to give general policy advice and have few resources to draw on when seeking to challenge the received wisdom of policy makers.

4.2 Australian Perspectives on Indonesian Capacity

Indonesia is not considered a high-status destination for international, or even regional, research collaborations because of a widely held perception that it has yet to develop an internationally competitive record of academic research. With the exception of Singapore, no Southeast Asian country has had a university appear in the top 500 of the Shanghai Jiao Tong University Academic Ranking of World Universities (Welch 2012).[18] Yet interviews with Australian academics engaged in research or capacity building relationships elsewhere in Southeast Asia and with scholars from the region suggest that Indonesia's higher education

[17] For a discussion of the diversionary impact of donor organisations on Indonesia's research structures, see Sherlock (2010).

[18] For a discussion of five Southeast Asian higher education systems, see Welch (2011).

sector is lagging behind several of its neighbours both in terms of the sector's international competitiveness and of government investment in university research (Nielsen 2010; Suryadama et al. 2011).

When reflecting on Indonesian research capacity, Australian researchers who are familiar with the Indonesian context echo many of the points made by Indonesian informants. Many of the Australian scholars interviewed emphasised that Indonesia was home to several world-class researchers, but also pointed to the high degree of variation of research capacity across the Indonesian higher education system and the absence of a critical mass of research capacity.

Australian scholars also noted a number of key differences between international academic culture and academic culture in Indonesia. First and foremost, they observed that much of the social science research undertaken in Indonesia emphasises documentation and practical solutions to social, economic or environmental problems. By contrast, international academic culture values engagement in disciplinary debates and the interrogation of empirical data. According to informants, this difference in focus is more pronounced in some disciplines than in others. It is least obvious in the applied disciplines like public health and environmental management, where there is also a strong focus on real-life problem solving internationally. The difference is most pronounced in disciplines like politics and sociology, where international academic culture is oriented more to abstraction and critical analysis.

Australian interviewees also recognised that incentive structures within Indonesian higher education make it difficult financially for academics to make the decision to concentrate on a coherent research agenda. Again, they compared this with the situation in Australia, where academics are encouraged to develop an area of specialisation and, increasingly, to publish only in high-ranking journals. As a consequence of this agenda, but also the fact that they earn a comfortable living, Australian academics are much less driven by financial considerations than by a desire to be recognised for the quality of their academic research.

5. Research Capacity Building

The Indonesian government and its international partners, including Australia, have long engaged in initiatives designed to enhance Indonesia's research capacity. This section provides a brief discussion of different kinds of models of research capacity building that have been employed internationally, It then moves on to describe the most significant mechanisms of research capacity building which have involved Australian and Indonesian researchers.

5.1 International Strategies for Research Capacity Building

There are several types of programs undertaken to boost the knowledge sector in developing countries. However, the mechanisms used by such programs are generally quite similar. Many programs include a scholarship or subsidised study component to allow students from developing countries to attain qualifications in developed countries. Another common component of programs consists of research grants that involve collaboration between two institutions, one in a developing country and one in a developed country. Conferences, training and other face-to-face forums are also funded and organised with the aim of generating knowledge transfer and building ties between researchers in similar fields in different countries.

Programs to strengthen the higher education sector driven and funded by external donors tend to fall into four main categories:

- Programs where one or more organisations fund a specific project in one particular country. Examples of such projects include the British Council's 'Internationalising Higher Education' project being undertaken in China.
- Regional programs, usually funded by a conglomeration of organisations, which aim to develop the overall knowledge sector in a range of states. There are several of these, but key examples include the TEMPUS project undertaken by the EU to build the higher education sector in Eastern Europe, Central Asia, the West Balkans and the Mediterranean, the START project which aims to build research capacity in Africa and the Asia-Pacific, the Pan-Asia Networking (PAN) project driven by the Canadian government to promote knowledge for development, and the Asia-Pacific Network for Global Change Research.
- Thematic programs that focus on building the higher education sector in a specific area such as health research or environmental issues. Examples of

this type of program include the Water Financing Partnership Facility between the Asian Development Bank (ADB) and the Lee Kuan Yew School of Public Policy in Singapore and the South East Asia Research Collaboration with Hawaii (SEARCH), a health sector project between the University of Hawaii, the Thai Red Cross Aids Center and US Armed Forces Research Institute of Medical Sciences, focusing on HIV/AIDS research in Thailand.

- Organisations with a global focus that work with the general aim of improving knowledge around the world. One key example of this model is the Global Knowledge Initiative, whose partners include 77 US universities and colleges, 107 foreign universities and colleges, and 43 private sector businesses, foundations and non-governmental organisations. The project is centred on partnerships between 'Need' and 'Have' partners. Its overall aim is to facilitate knowledge development for institutions in 'need' using the expertise of countries/institutions that 'have'.[19]

In addition, several governments in developing Asia are now investing heavily in university research. China has invested heavily in its top tier universities, leading to a dramatic increase in internationally recognised publications, particularly in the hard sciences. Similarly, Malaysia and Vietnam have chosen to invest in a small number of 'model universities', with the express aim of competing on the world stage in terms of research, in Vietnam's case drawing primarily on foreign funds and foreign expertise (Welch 2012). Another key driver of research output in Vietnam has been the shifting of research activity from research institutes to the universities. In the case of Thailand –which performs much higher on international research productivity indexes than other countries in developing Southeast Asia – improvements in rates of international publication are the result of both significant investment in research through the Thailand Research Fund and increasing emphasis on key performance indicators. Indonesia, by contrast, performs very badly, with only a tiny percentage of its research activity resulting in international publications.

[19] For more details of these and other selected knowledge sector partnerships, see Appendix C.

5.2 Research Capacity Building and Collaboration in Indonesia

Australia has a long-standing scholarship program. It has also provided some support for other forms of research capacity building and research collaboration, including two high-profile post-tsunami collaborative initiatives (AIGRP and ARTI) and a number of targeted grant schemes for applied research in areas directly related to AusAID's own programs. In addition, there have been many different kinds of collaborative initiatives involving academics from the two countries across the gamut of the social and natural sciences.

This section describes the AusAID scholarships program, in-country research training programs, postdoctoral opportunities to spend time at Australian institutions, joint grants, individual and institutional research collaborations and, finally, a number of models through which Australian academics have been embedded in Indonesian institutions. The lessons learned from these experiences provide the basis for a consideration of possible ways of enhancing Australia's research partnerships with Indonesia in the final section of this diagnostic.

5.2.1 Scholarships

Overseas study represents a significant challenge for all but the very brightest graduates of Indonesia's top universities, and remains a transformative experience for most Indonesian academics. According to one young academic at a highly-regarded private university, the experience of masters study overseas initially left her shocked and depressed as she struggled to make the transition from rote learning to critical argument and to accept that the very high marks she had received as an undergraduate did not necessarily reflect an ability to compete in a different academic context. As her time progressed, she came to appreciate not only the value of critical thinking and active enquiry, but also the work ethic and commitment to lifelong learning that she observed in the academics she worked with.

Similar comments were made by young academics currently undertaking doctoral study in Australia, who felt that they had a great deal of catching up to do, not only in terms of academic writing in English, but also in terms of their knowledge of the literature. As a result, they complained, they struggled to master bodies of theory and had to spend so much time reading that it took them much longer than local students to get to a stage where they could focus on their own research. Australian academics who have supervised Indonesian candidates

confirm that all but the very best struggle with the demands of the research higher degrees.

There are a number of identifiable flaws in the AusAID scholarship program. First, it is overwhelmingly oriented towards coursework Masters degrees, with as little as 15 per cent of places available to research-only students. Of that 15 per cent, a significant number of places are allocated to senior members of the bureaucracy. As a result, Australia under-performs in terms of contributing to the research readiness of Indonesia's university-based researchers.

Second, the system tends to over-estimate the research experience that Indonesian students bring to their candidacies. Candidates are personally interviewed, and now have to make a research presentation as part of that process; however, there remains a bias towards students with good English skills and inadequate means of testing their academic capacity. In addition, AusAID's emphasis on development related topics and affirmative action policy for under-represented regions can undermine the system's capacity to deliver on academic merit. This can result in candidates being rejected by academics who are best placed in terms of research focus to supervise their projects, leading ultimately to their being placed with supervisors whose primary purpose is to increase the number of their higher degree by research supervisions regardless of research fit.

Once a student is accepted, there is an opportunity for further pre-departure English language training but not for adequate remediation of research skills. Moreover, there is no further filtering process other than reaching the desired English language score. This puts both candidate and supervisor in a potentially difficult situation. In most Australian universities, there are few support mechanisms for supporting even Indonesian students at the higher end of the skills spectrum, since the system is predicated on the assumption that candidates come with strong academic skills. Interviews with focus groups of Indonesian students reveal that they greatly feel the additional pressure to 'get up to speed' over the course of their candidature.[20] Meanwhile, responsible supervisors feel an obligation to get their students to the stage of submission, no matter how unrealistic that proves to be. It also ultimately puts pressure on examiners, who are only too aware of the enormous effort required to reach submission, to apply

[20] The high rates of students forced to complete PhDs after returning to Indonesia confirm that this is not always possible.

lower standards when examining marginal theses produced by AusAID funded students.

This problem is growing in complexity with the rapid increase of scholarship opportunities available to academics through the DIKTI scheme, which incorporates even fewer measures to prepare students for overseas study than the foreign aid funded scholarship schemes. Experience at the Australian end suggests that there is little quality assurance in terms of candidate's capacity: many of the proposals received from DIKTI recipients are not only written in very poor English but demonstrate very little sense of what a research project entails. As a result, many candidates have difficulty identifying a supervisor who is both expert in their field and willing to take them on.

Interviews with academics and scholarship providers from other countries confirm that this problem is not confined to candidates accepted into Australian programs. It is least problematic in the US system, where a strong focus on coursework in the lead-up to the dissertation provides candidates with an opportunity to remediate and scholarships are designed to accommodate this process. However, it is strongly felt in all systems in which the PhD is effectively a stand-alone research project. The Dutch government has attempted to address this through a series of programs, including the Towards a New Age of Partnership (TANAP) Program, established in the year 2000, and its successors, Encountering a Common Past in Asia (Encompass) I and II. These programs, which have a specific focus on providing overseas students with skills necessary to do archival research in Dutch, provide students with a BA honours year before they entered a Masters degree. The best of these Masters students are then offered targeted PhD scholarships.

An important side-effect of the difficulties faced by students who do not have access to such a preparation program is the fact that – with the exception of disciplines like Public Health, where it is possible to gain a PhD by publication – Indonesian doctoral students seldom have an opportunity to prepare papers for submission to academic journals during the course of their candidacy. There is a significant difference in genre between a dissertation and an academic article, which young Australian academics have either had the opportunity to master during their candidacy, through a period of postdoctoral research in a supportive environment or through peer mentoring in the first year or two of an academic position. Indonesian academics do not have the same opportunities for informal postdoctoral training, and thus their lack of exposure to the publishing process during their candidacy represents a significant gap in the skill set they have at their disposal in Indonesia.

AusAID has responded to feedback from Indonesian graduates on this issue by providing short courses on an ad hoc basis for alumni in various parts of Indonesia. However, this represents a necessarily limited solution to what is a serious structural problem. A far-reaching overhaul of the scholarship program would thus be most timely as a means of better promoting research readiness in the knowledge sector.

5.2.2 In-country Research Training

Most in-country research training and support provided by Australian institutions takes the form of short courses, such as those run by AusAID for selected alumni, and one-off 'how to' seminars and/or master classes run by visiting academics. In more technical fields, organisations like the Crawford Fund, an NGO established by the Australian Academy of Technical Sciences and Engineering, makes significant funds available for research training in Indonesia and other developing countries in the field of agricultural research. However, there is no equivalent in the social sciences.

The exception to this generalisation has been the Aceh Research Training Institute (ARTI). ARTI was established in the wake of the Indian Ocean tsunami in an effort to reinvigorate the province's research culture, both in the academy and in civil society. Building on a field station model established for research training in the social sciences by the Ford Foundation in the 1970s, which ran at seven regional universities for four years, the ARTI initiative was coordinated by Professor Michael Leigh, from Melbourne University, who had spent time building research capacity in Aceh in the 1980s, and Professor Bahrein Sugihen at Syiah Kuala University in Banda Aceh. The coordinators were advised by representatives of a consortium of eight Australian Universities, all of whom had themselves conducted research in Indonesia. The initiative involved four Acehnese universities, which also held advisory status. ARTI drew on the expertise of a much larger pool of Australian and Indonesian academics to deliver programs in thematic areas ranging from gender studies, to religion, to environmental and peace and conflict studies.

The ARTI initiative involved the establishment of a training centre at Syiah Kuala University with an expatriate director (for much of the time, Professor Harold Crouch) and administrator (a very capable honours graduate brought in on an AVI position) working alongside Indonesian support staff and visiting researchers. The centre offered three levels of research training, the first of which focused on basic research methodology, the second on disciplinary

training in a thematic area, taught by disciplinary scholars with Indonesian expertise from Australia and elsewhere, and the third on an independent research project supervised by a team of local, national and international academics.

The ARTI experience revealed many of the deep problems in the Indonesian higher education system, and particularly of lower-ranked institutions. Most clearly, it exposed the challenge of making time for research, even in situations where the time of academics has been bought out, as was the case with ARTI. As courses were all taught in Indonesian, language skills were not a problem for course delivery, although the quality of Indonesian-language academic writing was generally poor. Course instructors also found it extremely difficult to source suitable readings in Indonesian – a problem that Indonesian informants from top universities like Gadjah Mada confirmed continues to plague undergraduate course convenors across the country.[21]

Nevertheless, the initiative achieved a great deal in terms of creating a research community where none had existed and exposing local scholars to international academic norms and equipping a number of them to undertake further study overseas and at top Indonesian universities. In addition to providing structured opportunities to learn from world-class academics from Indonesia and elsewhere, the centre made space for foreign postgraduate students, who used its facilities to work on their own research projects, providing peer-level role models for local students. Together with the hands-on approach of successive directors and the steady flow of research active academic visitors, this element of the program succeeded in engaging local researchers for a time in a highly productive, academic research culture.

In terms of shortcomings, the ARTI model was expensive and labour intensive, and relied to a very large extent on the good will of Australian academics. Moreover, not only was the three year aid cycle impractical in terms of achieving

[21] The quality of English has improved greatly over the last two decades in Indonesia. However, at the undergraduate level it is still rarely sufficient for high-powered academic work. Many lecturers claim that their students read English, but when pressed admit that the lack of quality Indonesian language resources is a serious problem. A quick survey of a small sample of Masters and PhD theses completed in Indonesia suggests that it also presents difficulties at the postgraduate level. An additional consideration is that, even where English skills do exist, the dearth of quality materials available in Indonesian has a serious impact on Indonesia's capacity to develop robust academic discourse in the country's own language.

long-term change, but although located at a university, ARTI operated separately from that university except insofar as university staff were among the student cohort. As a consequence, there was no substantive change to the academic culture to which university staff returned. Unless they managed to gain a scholarship elsewhere, academic graduates therefore had no access to further skills development, or to any support, financial or otherwise, for academic research.

5.2.3 Sabbaticals and Postdoctoral Fellowships

There are very few avenues for Indonesian academics to spend extended periods in Australian academic institutions once they have completed a PhD. Occasionally high-performing Indonesians who have established strong research links with their supervisors or other academics succeed in gaining what were formerly known as Australian Postdoctoral Fellowships (now Discovery Early Career Researcher Awards), which are offered competitively on an annual basis by the ARC. Others have been successful in obtaining Endeavour Awards. However, AusAID recipients' capacity to take advantage of these schemes is limited by the conditions of AusAID doctoral scholarships, which prevent them from returning to Australia for two years after the completion of their doctoral program. In addition, in the case of ARC awards, they face the stiff competition from Australian and other international students for the relatively small number of grants on offer. Unlike comparable countries, like the Netherlands, Australia has no targeted scheme for postdoctoral fellowships in Indonesia or other developing countries. Both Indonesian and Australian informants noted that this was a major barrier to furthering academic research collaborations.

With no equivalent structure in Indonesia, the dearth of postdoctoral opportunities means that many talented Indonesian academics who have undertaken their PhDs in Australia do not have an opportunity to convert their dissertations into international-standard publications. Most commonly, they publish in Indonesia (in English or Indonesian) with few revisions to the content and without the benefit of the rigorous peer input generally provided to scholars publishing their first book. This represents a great loss in terms of further research training and mentoring, which, as noted in the discussion of scholarship schemes, is necessary in order to equip graduates with the confidence and understanding of genre required for academic publishing of an international standard.

Similarly, Australia does not have a nationwide scheme to support visiting academics wishing to undertake a sabbatical in Australia. Individual

departments or faculties, and sometimes universities, may offer some support for visiting academics, but this capacity is limited by access to discretionary resources. A significant number of senior Indonesian academics have used the DIKTI refreshing program to spend time in Australia. As noted, however, this scheme allows for a maximum time of three months. In addition, the scheme's tight timelines make it difficult to adequately plan for a sabbatical visit, especially in terms of leveraging such a visit for collaborative research.

5.2.4 Funding for Conferences and Publication Projects

The major form of Australian funding available for Indonesian scholars to participate in conferences and publication projects has been provided by AusAID to the Indonesia Project for its annual Indonesia Update and Update volume. For many years, it had a reputation for being something of a closed shop, involving a small, inner circle from the ANU and their NGO, government and academic collaborators in Indonesia. In the last decade or so, it has opened up significantly both in the terms of its focus and in the range of speakers invited to take the stage. Although the primary purpose of the Update is to provide summaries and analyses of events in Indonesia to the Australian bureaucracy, it has not only become something of an institution among Indonesianists in Australia, but also provided an avenue for a small number of Indonesians to present at a high level and receive the focused mentoring required to transform a spoken paper into an academic chapter.

The Indonesia Project has also been the vehicle of a second major publishing outreach initiative in the form of the *Bulletin of Indonesian Economic Studies* (BIES). For many years, the BIES has provided support to Indonesian authors in economics and related fields at a level that far outstrips that generally available to authors seeking to publish in an international journal. This initiative has been very labour-intensive, and heavily dependent on the personal commitment of the staff involved, but it has paid significant dividends in terms of creating a high-quality publishing niche for Indonesian economists, as well as a useful source of credible articles for academics and policy makers in Australia and elsewhere.

Another model that has been trialled is that of providing matching funds for workshops leading to the publication of an edited volume. There has been no initiative of this nature aimed specifically at Indonesia. However, the Australia Netherlands Research Collaboration (ANRC), an initiative funded in Australia by the then Department Education, Employment and Workplace Relations and Dutch Ministry of Education, Culture and Science, along with the Australian National University and Leiden University, which was designed to bring together

scholars from Australia, the Netherlands and Southeast Asia, involved significant numbers of Indonesian researchers.[22]

This program, which was the first large-scale targeted mobility program of this kind, had a rapid pay-off in terms of international engagement for participants from the Netherlands and Australia, and for some Southeast Asians. Almost all the workshops led to the production of an edited volume in a relatively short time, and the opportunity to come together with groups of scholars working on similar themes was highly valued by participants. The scheme's requirement for each workshop to come up with a statement on policy implications was less widely welcomed, as only some of the workshops dealt with issues of direct policy relevance. Another problem was that of finding a sufficient number of Dutch scholars to participate in all the workshops.

In terms of lessons learned, the program also offered some important insights into the limits of this kind of initiative when it comes to building research capacity in situations where a significant skills deficit exists. The most important of these was the difficulty volume editors (almost invariably from Australia or the Netherlands) had in (a) eliciting a written paper from Indonesian participants; and (b) working with Indonesians authors who did submit to get those papers to a stage where they were publishable. This experience stands as a stark reminder that mobility schemes alone are not sufficient to engender research excellence.

5.2.5 Joint Grants

The primary general mechanism for encouraging international research collaborations in the social sciences in Australia is the provision for overseas partners on an ARC application. However, not only are ARC grant schemes extremely competitive, but partner investigators are required to contribute the equivalent of a significant percentage of the value of the grant in cash or in kind. This requirement, along with the fact that Indonesian researchers often do not possess the kind of research publication track record considered to be competitive by the ARC, means that this mechanism does not encourage Australian academics to involve an Indonesian partner investigator. Academics who specialise in development studies or agriculture have had access to schemes like ADRA and ACIAR, which target applied researchers and are relatively open

[22] The scheme also provided mobility scholarships to Dutch and Australian PhD students and supported a heavily-subsidised course in Dutch for Archival Purposes in Australia.

to collaborations with developing country partners. However, the only major country-specific initiative in recent years that has specifically encouraged research collaboration was the Australia Indonesia Governance Research Partnership (AIGRP), which, like ARTI, was funded with post-tsunami aid money.

The primary focus of the AIGRP was to encourage Indonesian and Australian academics to work together as peers on a research problem of direct relevance to Indonesian policy makers. The scheme provided funding for a buyout of time on each side and for fieldwork in Indonesia, with projects to be completed within a twelve-month timeframe. Participants were encouraged to include scholars from regional Indonesian universities in their research teams. The results of these research projects were presented in short presentations at an annual forum in Jakarta attended by Indonesian policy-makers. The formal focus on engagement with policy-makers rather than on academic outputs was based on the premise that it would force academics to translate their research into policy terms. It was assumed that participants would go on to produce academic outputs from the research conducted because it was in their professional interest to do so.

This main scheme was supplemented by two much smaller initiatives, both of which focused on junior researchers. The first, the junior scholars program, offered Indonesians with Masters degrees and occasionally new PhDs to conduct a small research project which they reported on at a separate session at the program's annual forum. They were joined in this event by Honours graduates and PhD students from Australia, who reported on the research they had conducted as part of their degrees. As the AIGRP progressed, the preparations leading up to this final event became more elaborate, expanding from assistance with refining and presenting papers to field visits and discussion of further research.

In recognition of the difficulties of engaging regional researchers in the main grant scheme, a second supplementary program was introduced in the later stages of AIGRP, which teamed early career researchers from Australia with junior academics from Eastern Indonesia.[23] This element of the project involved

[23] According to one Indonesian informant, he and his Australian partner had worked very hard to involve regional scholars in a project designed for the main scheme but ultimately failed to do so except in the capacity of a research assistant. An Australian, who agreed to put in a proposal when a regional scholar approached him with a topic, was seriously disillusioned by the experience when his research partner ultimately failed to contribute to the research. Although

the identification of possible teams, who then attended an intensive workshop in Makassar that exposed them to collaborative research design and proposal writing, as well as giving them an opportunity to speak to policy makers from Indonesia's Eastern provinces. After the workshop, teams were given an opportunity to work up their proposals, the best of which were funded. The participants came together once more for a workshop in Bali at the end of their research.

Australian academics who took part in the AIGRP's scheme for established researchers are divided in their opinions on the model.[24] Proponents pointed to the scheme's success in bringing together disciplinary experts with a strong record in policy-related research but little or no experience of research in Indonesia with Indonesian researchers to work on issues of interest to Indonesian policy-makers, but also in pushing Indonesia specialists to push the boundaries of their research interests and explore and communicate the policy relevance of their work. Critics acknowledged that aspects of the program were successful, but felt that the timeframe of the collaborations was too short, that the annual forums were too resource-hungry, and that the collaborations were not sustainable. A major reason for this was that Indonesian partners had difficulty meeting their commitments under the program because of their other priorities. As a result, many Australian scholars felt that they bore an unfairly large part of the research burden. They also pointed to the narrow impact of the scheme, both because of the relatively small number of projects funded but also the focus on individual researchers, which some saw as a squandered opportunity for institutionally-based capacity building.

In terms of research capacity building, any evaluation of AIGRP must begin from the realisation that, while it included research capacity building elements, the

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these kinds of experiences were not necessarily confined to interactions with regional scholars, they do point to capacity issues at regional universities.

[24] AusAID-commissioned evalations of the program were very critical of both the AIGRP team and of AusAID, primarily on the grounds that the program's narrow focus and its program design, which had few measurables and relied too heavily on 'learning by doing'. According to the program director, Professor Andrew MacIntyre, one of the biggest challenges he and his team faced was to design and manage the program in such a way that satisfied all stakeholders, which included the governments of Indonesia and Australia and universities and research institutes as well as individual researchers, even though the latter were the chief focus of the program. Having invested a great deal of energy in accommodating stakeholder interests, one of his principal regrets was that the enormous investment of time, energy and good will by so many senior people in the program was squandered when the decision was made to discontinue it after one project cycle.

part of the program that focused on principal researchers was predicated on the assumption of that collaborations would take the form of an equal partnership. As such, although the scheme's requirements did encourage research capacity building through the inclusion of 'regional' researchers, it was designed primarily to generate and facilitate policy-related collaborative research (and through it research excellence) than to build research capacity. As with ARTI, AIGRP nevertheless suffered from a problem of sustainability, not only as a result of its dependence on the aid cycle but also because of its disarticulation from a broader attempt to promote systemic change.

The short-term, project cycle driven approach adopted by AusAID in both this case and in the case of the ARTI initiative sits in stark contrast to the much longer term, iterative approach, adopted by best-practice donors. In the area of joint grant structures, the Netherlands stands out a stark counter-example to AusAID practice. Since 2002, the Dutch government has funded a large-scale scheme to promote collaborative long-term collaboration between researchers and research consortiums in Indonesia and the Netherlands, known as the Scientific Programme Indonesia-Netherlands (SPIN). SPIN, which is administered by the Royal Netherlands Academy of Arts and Sciences, made a total of Euro 8.235 million available for projects in three priority areas, namely Green Commodities, Sustainable Energy and Water Research; Infectious Diseases and Health; and Socioeconomic Development in the period 2007-2011 alone. SPIN grants provide a mechanism for assembling multi-institutional teams of established researchers who work with a postdoctoral scholar and a number of doctoral students on a topic related to one of these themes over a period of four to five years. As well as salaries and scholarships, the grants provide funds for fieldwork and for research team meetings. This design not only provides an integrated approach to collaborative research and research training, but allows long-term collaborative research relationships to develop and flourish.

Finally, the AIGRP experience also reinforces the lessons learned in other programs about the nature of research collaboration itself. As noted earlier, it was assumed in the project design that academic self-interest would ensure that participants would go on to publish academic articles out of their joint research. In some cases this was, indeed, the case. In many others, however the lack of incentives on the Indonesian side – coupled in this case with the fact that emphasis on direct policy focus pushed many of the Australian partners outside their comfort zone – meant that no academic publications ensued.

In hindsight, in terms of the latter, it is now clear that an important weakness in the AIGRP design was its emphasis on direct policy relevance. [25] On the one hand, the scheme encouraged academics to engage with areas of immediate policy interest and forced them to present their findings in formats designed to overcome some of the recognised problems associated with intermediation between academics and bureaucrats. On the other hand, however, in many cases the focus on direct policy relevance was artificial, and ultimately jeopardised the quality of research design and the academic utility of the research findings but also their fitness for purpose in policy terms. An important lesson from this experience, then, is that in the context of academic contributions to the knowledge sector, it is vital that academic research drives policy and not the other way around.

5.2.6 Institutional Research Partnerships

A small number of universities in Australia have structured institutional relationships with one or more Indonesian universities, many of which centre on applied research programs. One example of this is Charles Darwin University (CDU), which worked with a number of universities in Eastern Indonesia to build collaborative research relationships.

In the area of marine environmental management, CDU staff are working closely with Hasanuddin University to develop a proposal for submission to the UN Global Environmental Facility and the World Bank, which would involve several lower-ranking universities in Eastern Indonesia. In doing so, it plans to build on Hasanuddin's established role in research capacity building in Eastern Indonesia.[26] If successful, the proposal will lead to a program of postdoctoral and higher degree research collaboration between six Australian and six Indonesian universities. This would mark an important shift in Indonesia's pattern of international collaboration in marine science. To date its only bilateral relationship in the field is with Germany, which involves a twinning arrangement through the SPICE program.

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[25] For further discussion of the link between academic and policy-oriented research, see McCarthy and Ibrahim (2010).

[26] In bringing the proposal together, CDU has relied on colleagues at Hasanuddin to identify suitable partners in smaller universities, in part through Hasanuddin's DIKTI-funded English language training program for academics from Eastern Indonesian universities.

5.2.7 Embedded Researchers

In some cases, institutional collaborations can involve the embedding of an Australian researcher in Indonesia. One example of this emerged as part of a twinning arrangement in psychology between the University of Queensland (UQ) and the University of Indonesia (UI). Before 2011, the twinning relationship had only been used for student exchanges, short-term staff visits and ceremonial events. In that year, a three-year contract position was established, which requires the incumbent to spend six months of each year teaching and researching in Brisbane and the other six months researching and engaging in research capacity building in Jakarta. The incentive for the incumbent was that she could further her research interests in evolutionary psychology through access to Indonesian orang-utans. For UI, the arrangement was attractive because the presence of a foreign researcher could serve as a catalyst to increase research capacity.

In another example of embeddedness, a Sydney University researcher with an interest in animal disease monitoring and the impact of disease on livelihoods and biosecurity works out of Makassar in collaborations with universities, NGOs and a number of government agencies. In the course this work he is involved research capacity building in quantitative and qualitative methods, as well as in joint academic publications. His permanent location in Indonesia underpins his ability to successfully embed these research capacity building activities in his academic research projects, to the benefit of both the projects and of his Indonesian collaborators.

A similar role is played in a different capacity by a senior Australian academic who in his retirement has taken a teaching and research position on local wages for a semester a year at Parahyangan Catholic University in Bandung. According to junior staff in his department, this academic has played a vital mentoring role, giving them feedback on their academic research and writing. Of course, without the provision of Australian salaries, this final iteration of the embedded academic model is only sustainable in very particular circumstances, as most Australian academics could not afford, or would not be willing, to work on local wages.

5.2.8 Incidental Research Collaborations

Incidental research collaborations (which can be short or long term) are facilitated through a range of different mechanisms. A particularly significant type of collaboration emerges from a supervisory relationship within the context of a Masters or, more commonly, a PhD. The extent to which these relationships

translate into research collaborations is determined by a wide range of factors, including the quality of the candidate and synergies between the candidate's and supervisor's research interests, but also the extent to which co-publication is an accepted practice in a particular discipline. In those disciplines like business, economics and public health, where co-publication based on students' thesis work is considerable acceptable or even desirable, the initial incentives for developing an on-going collaborative relationship are far higher than in disciplines where co-publication is discouraged. In the latter, supervisors' willingness to mentor a former research student through the publication process is much more dependent on their other commitments and the extent of assistance necessary, as there is no direct incentive to do so.

This is just one of a number of patterns that are discernible in collaborations between Australian and Indonesian scholars. Interview data suggests that Indonesianists working at the qualitative end of the social sciences are least likely to seek out Indonesian collaborators, partly because their disciplines tend to favour sole authorship, but also because the qualitative social sciences emphasise writing quality and argument over large-scale data collection, the former being less developed in Indonesian research culture than the latter. In addition, as this cohort speak Indonesian and have deep country knowledge, they are not reliant on a local partner to provide access and local expertise.

At the other end of the spectrum, researchers in public health and environmental management do not only rely on local partners in the collection of data and the management of local relations, but work closely with decision makers to ensure that research results have the best chance of being translated into policy. Some researchers active in this area are Indonesia specialists; however, many others are disciplinary experts dealing with research questions such as tropical marine environmental management. The latter rely particularly heavily on local partners. Those interviewed agreed that Indonesians have a relatively good grasp of quantitative methodology (or could readily acquire one), and that while expectations about the nature and timeliness of contributions must be negotiated, collaborations were both necessary and desirable in these fields.

Collaborations in disciplines that rely primarily on quantitative methodologies also have a relatively high rate of success. At the other end of the spectrum, collaborations in the critical social sciences are much more likely to fail without extensive and carefully targeted support. In the qualitative social sciences, major barriers to more extensive collaboration identified by Australian researchers coalesce around two major points. The first, which is not specific to these disciplines, is the impact that Indonesian academics' competing agendas have on

their capacity to deliver a good product in a timely fashion. Indonesian researchers generally do not devote what Australian partners would consider sufficient time or focus to collaborative projects. Interviews also revealed cases in which Australian researchers became aware that their Indonesian partner was double or triple dipping on a single piece of research, either with the result that findings were not publishable because of questions around ownership of data or that the contribution made by the Indonesian partner had clearly been written for another purpose.

The second, and perhaps more discipline-specific concern, pertains to the difficulties many Indonesian researchers experience in the writing-up phase, both in terms of deep engagement with the literature and in the technical aspects of academic writing. As noted by one Australian early career researcher with a high level of personal commitment with collaboration with Indonesians, even in the best of circumstances the level of effort required to edit and incorporate the contributions of her long-term Indonesian collaborator means that co-authored pieces are often put to one side. More broadly, Australian researchers in the critical social sciences perceive that Indonesian researchers are, in general, focused on getting the research done and moving on to the next project, and not on writing up in a way that engages with international academic debates. This difference in focus can be frustrating for Australian academics, especially in cases where an Indonesian research partner commits to contributing to the writing up phase but does not deliver.[27]

A final – but very important – issue is that of the sustainability of these kinds of collaboration in the absence of targeted funding schemes as the research quality agenda in Australia reduces academic space for outreach activities. As noted earlier, the research quality agenda emphasises high-quality academic publications in high-status international journals and collaborations with partners who have strong academic track records in those journals. Without clear incentives, collaborative relationships with researchers who are not perceived to fulfil these criteria will become increasingly difficult to maintain.

[27] Importantly, interview data revealed that Indonesian researchers are very cautious about collaborating with other Indonesians for many of the same reasons. As one active junior Indonesia-based researcher noted, in collaborative projects involving several Indonesian universities it is not uncommon that only one or two people are 'serious about their research'.

5.2.9 Academic Collaborations with Professionals

There are many examples where an Australian academic establishes a research collaboration directly with professionals, particularly those in the public sector, either as peers in a research project or in a research capacity building relationship. One example raised in interviews was a collaboration that involved an Australian researcher and three health professionals at a public hospital, who were recruited by the hospital research director to participate in a project on communication on hospital wards. According to the Australian researcher, who designed and managed the project, the data collection phase went reasonably well and hospital management was very open to responding to its findings. Predictably perhaps, difficulties emerged once the time came to write up academic papers from the research. Of the three research partners, only one has shown interest in taking that next step. The Australian researcher is still hopeful that an academic paper will be produced from the project.

An example of research training can be found in the work of Flinders University, which used a Public Sector Linkage Project (PSLP) grant, with supplemental funds from DIKTI, to work with the Ministry for Women's Empowerment to build research capacity in women's studies centres across Indonesia. One of the key features of this arrangement was the high level of ownership of the project by the Ministry, stemming from a long-standing relationship with senior researchers from Flinders and the fact that the concept for the PSLP was formulated by the Ministry rather than from its Australian partners. The PSLP was used to fund a short course in Australia during which participants, which the Ministry had identified in selected women's studies centres, developed a research project. The Ministry then contracted Flinders academics to mentor participants during the period in which they conducted the research. As part of the project, the academics also worked with Ministry staff to develop research management structure. This research management framework has since been adopted by a number of other ministries.

There is a qualitative difference between these two examples. The first, while not involving academic partners, had an academic publishing objective. The second was academic in the sense that the target was women's studies centres, but was undertaken primarily as an outreach activity by the Australian participants. While the latter model can generate income or positions in the Australian university, it is generally adopted by academics with a high level of personal commitment to outreach work. It is very difficult for more junior staff to make this level of commitment to outreach under Australia's quality agenda, with its focus on publishing in high-quality outlets as the main form of output.

6. Building Research Capacity through Collaboration

A strategy that seeks to build research capacity through collaboration offers multiple benefits for Indonesia not only in terms of providing a significant boost in the internationalisation of its higher education sector but in terms of encouraging research-led teaching and providing a stronger academic base for the contract research that feeds into policy making processes.

As research is very much a process of learning by doing, long-term international collaborations that involve deep engagement at all stages of the research process, from research design to publication, offer a very practical way to foster research excellence. At the same time, if collaborations are to be based in partnership and produce high-quality results, they need to involve Indonesia's best academic researchers, many of whom are located in a small number of elite universities. These same universities are among the best resourced in Indonesia, which begs the question why they should be supported through an aid program.

The answer lies in the realisation that long horizons and a staged approach are required to promote systemic impact: if the aim is to develop academic research culture, then it is best done in the first instance where it is most likely to succeed. Senior researchers in Indonesia's top universities speak openly about the challenges their institutions faced in realising their international ambitions in terms of research quality and quantity. Even middle-ranked universities have far fewer resources to call upon. In strategic terms, given of the size and complexity of the Indonesian higher education sector, there is little choice but to work with nascent centres of excellence, which have the potential not only to supply policy-based knowledge, but, in time, to reach out to other universities. It is only under such conditions that externally-funded programs involving foreign researchers can avoid becoming a smokescreen for research capacity substitution and, instead, truly support the development of Indonesia's own research capacity.

At the same time, it is not enough just to simply identify 'research intensive universities' and pour available funds into those institutions. Close observation of Indonesian universities reveals that (like their Australian counterparts) no institution, or even faculty, is uniformly excellent. Potential centres of excellence are therefore best identified at the departmental level through an open competitive process and fostered at that level through long-term, disciplinary specific interventions. Such a process will increase institutional buy-in, as will a staged application process that requires the Indonesian host university to identify suitable international partners.

Ideally, such a process would be accompanied by significant shifts in the enabling environment. It should also be complemented by a strategy to improve research readiness and graduate capacity to engage in the policy sphere. These measures would have an impact both in the centres of excellence and in other parts of the university system.

6.1 Remediating the Enabling Environment

The most intractable barrier to research excellence in Indonesia is the incentive structure within higher education. Although decision-makers in DIKTI and in elite universities have attempted to improve the incentives for academic research, the problems outlined in Section 4.1 are such that even significant changes actually only constitutes tinkering at the edges of the problem. Real change would require a total restructuring of academic salaries and non-monetary incentives, including promotion criteria.

In the absence of a total restructure, a number of measures related directly to the promotion of academic research would help to least partially remediate the enabling environment. The first group of these would help **promote a culture of peer review**. There is considerable room for improvement in the structures and administration of DIKTI-administered grant schemes, particularly with regard to the extent to which they incorporate peer review mechanisms. Here, the criteria used by bodies such as the Australian Research Council (ARC) may provide a helpful model. In the Indonesian case, however, grants would need to include a significant salary component and strict guidelines on acceptable research output in order to ensure that recipients prioritised funded projects over contract research.

It would also be useful to establish a stronger system for accreditation of national journals requiring the demonstration of rigorous peer review would provide stepping-stones for Indonesian academics seeking to publish in international journals. An elite national journal in each discipline that is not tied to a single university or Faculty would go a long way to achieving this. It would have the added benefit of providing quality resources in Indonesian for use in undergraduate teaching, thus helping to provide models for good academic writing. These resources could be made freely available through a functioning, searchable database be established, in which all nationally accredited journals be

required to deposit their contents as a condition of maintaining accreditation, and access to the contents of which are freely available online.[28]

In terms of **research internationalisation**, a simple first step would be to establish a searchable register of research strengths both of departments but also of individual researchers that is based on verifiable performance indicators. If made freely available, such a register would make it possible for foreign researchers to identify potential research partners, but also workshop participants and keynote speakers. A useful side effect would also be to encourage transparent competition between departments in particular disciplines, and to raise awareness *within Indonesia* of Indonesian academics who are competitive at the international level.

Research excellence through internationalisation could also be supported centrally by the provision of small grants for scholars from other countries, including those in Southeast Asia, to spend a sabbatical based at an Indonesian university, to be spent in research or research writing. This would encourage greater and closer engagement with the international academic community and contribute to the development of a research culture. The success of such a scheme would necessitate an overhaul of current processes for the award of research visas, which constitute a significant disincentive for researchers looking to spend time in Indonesia.

These measures fall squarely in the domain of the Indonesian government. However, technical support could be provided in the form of expert advice from bodies like the ARC.

6.2 Building Research Readiness

The second step in promoting research excellence is to ensure research readiness. Many of the young Indonesian scholars interviewed in the course of this diagnostic felt that, although they learned a great deal in the course of an overseas Masters or PhD, they struggled to meet their supervisors' expectations,

[28] LIPI has established at least two national databases, one called Garuda and another called the Indonesian Scientific Journal Database. Although the latter is obviously much newer, and has a much more user-friendly interface, test searches suggest that it does not sufficient power or index a sufficient number of journals to be particularly helpful. Moreover, the contents of the journals identified in the test searches were not available electronically which, given the uneven distribution of journals, effectively means that they are unattainable.

particularly in the early stages of their candidacies. As noted in the discussion of scholarships in Section 5.2.1, part of the problem lies in a serious mismatch between candidates' preparedness for a research higher degree program and the conditions imposed by scholarship schemes.

The Encompass program, where students working with archival resources in the Netherlands offers a possible model for better preparedness for further study, providing not only language training but also the opportunity to undertake a small research project before being accepted into a research Masters, and then provided with pathways to a PhD. This system allows for iterative research training within a coherent system, which minimises the chance that a candidate can progress through a Masters without gaining the necessary skills to undertake a PhD. A similar principle underpins the Ford Foundation's International Fellowships Program's scholarships to encourage participation of students from disadvantaged groups. Some of the main barriers to participation lay in students' English language capacity, but also in their ability to conceptualise a research project. In order to minimise the impact of these barriers, Ford established a multi-layered application process, in which applicants were initially screened on the basis of a 1-2 page pre-application, which could be written in English or in Indonesian. Those selected could then access assistance to fill out a full application. If successful, 'fellows elect' were then admitted to a one year program during which they participated in a skills assessment to identify gaps in their skills base and engaged in remedial training which included, but was not limited to language training. During that time, fellows elect were also helped to identify a suitable host institution, and to put together a quality research proposal.

In the Australian context, **a five to six month pre-research degree program** could be offered after the current period of language training but before beginning a research candidacy. Such a program could be used to ensure an equivalent level of research skills to an Australian candidate exiting Honours. It would also provide an acceptable exit point for candidates who prove to be unsuitable for a research higher degree. The scholarship period would, have course, have to be extended to accommodate this measure.

Similarly, in social science disciplines that do not offer research higher degrees by publication, Masters and PhD graduates' capacity to produce quality journal articles and to write policy briefs could be enhanced by a **concentrated period of supported research writing**, in which students also had an opportunity to practise and extend their skills of critical review. The best way to accommodate this would not be to extend the candidacy, but to add a discrete component to be

completed on submission of a candidate's thesis. The benefits of these post-thesis components would be immediate, as candidates would return to Indonesia not only with publications in the pipeline, but with a better understanding of the international process of research writing and review. Such a course could run for a period of, say, three to four months on a biannual basis, beginning shortly after the standing deadlines for submission. This post-submission program could also incorporate, where relevant, a period of internship in a government department or international agency to help them better understand the research-policy nexus and an element of intensive instruction on how to translate academic research writing into policy briefs. If sufficient numbers of candidates were involved, programs could be targeted to particular disciplines.

Ideally, both the preparation and post-submission programs would be offered in a small number of locations around Australia rather than at the candidate's host university. This would have the benefit of generating the critical mass of students required to run carefully tailored programs and lessen the risk of them degenerating into an *ad hoc* addition to the candidature proper. These measures could be implemented entirely within AusAID's scholarship program, initially as a pilot program. This extra training could be funded by realigning the distribution of a proportion of funds provided for scholarships for coursework masters to scholarships for research higher degrees. Although this would increase the investment in individual candidates, such a structure could be tied to eligible candidates' involvement in research training of other academics in their home institutions, and thus achieve a greater distributional effect overall.

6.3 Facilitating Long-Term Collaborations

The final element in this suite of measures is the development of a purpose-specific competitive grant scheme designed to facilitate long-term collaborations. These grants, which could be administered through the ARC, could be targeted to encourage a small number of large-scale research projects involving a number of activities over several years in disciplines of broad policy relevance (politics, economics, education, public health, demography, anthropology, development studies, environmental management, etc.) but not tied to particular policy initiatives.

Selection criteria should be based disciplinary excellence rather than on an institution's overall reputation, thus increasing the likelihood that at least some lead institutions could be identified outside the top tier without compromising on quality. As noted above, institutional buy-in could be maximised by a two-step application process in which departments could put forward an initial

expression of interest, including a preliminary proposal, which could be assessed on collective track record and academic merit. Those that passed successfully through this filter could then be invited to assemble a team of Australian researchers and submit a full application.

The grants would necessarily be both substantial and long-term, with provisions for academic mobility and workshops as well as a number of research projects. The scheme would also need to include measures to ensure real engagement, for example by providing targeted fellowships for Australian researchers to be embedded for a period of one year in the relevant department or research institute. In order to encourage genuine collaboration, the scheme would need to include funding to at least partially free a team of researchers at the host university from teaching and the demands of contract research. Collaboration between Indonesian universities could be encouraged through the scheme through provisions for 1-2 excellent researchers from other universities to spend a sabbatical at the host institution during which they could participate in the research program.

In addition to exposing Indonesian researchers directly to an international grant process, the administering of the program through the ARC would ensure that the project was classified as research rather than outreach by Australian institutions, thus providing incentives for quality Australian researchers to participate, and (where deemed necessary for ensuring accountability) allowing for disbursement of some or all funds through an Australian institution, or institutions.[29] ARC reporting requirements would also provide an extra incentive to ensure that specified targets were met.

6.4 Generating Demand for Quality Research

Finally, it should be recognised that strong demand for policy-relevant research does not emerge spontaneously. It has been suggested here that, in the Indonesian context, it may be necessary to generate supply in order to stimulate demand and thus overcome the current tendency for research to be commissioned in order to 'tick a box' rather than to inform policy.

[29] Provisions could be made for intensive language acquisition to accommodate disciplinary experts who are newcomers to Indonesia.

If the premise is accepted that the best applied research builds on quality basic research, then there is a role to be played by Indonesia-based foreign consumers of policy-related research in generating that supply by including academic research excellence, as evidenced by an international track record, in their criteria for recruiting academic contractors. Such a measure would help establish a culture in which Indonesian academics saw research consultancies as something to be done alongside academic research rather than as something that replaces it.

7. Recommendations

What has been recommended here is a suite of measures that, if combined, could promote pockets of research excellence in strategic areas which could serve as stimulants for long-term, systemic change in the supply of, and demand for, quality policy-relevant research. In summary, these are as follows:

7.1 Recommendations on the Demand Side

1. That demand for quality policy-relevant research among Indonesian institutions be stimulated by the generation of its supply through the development of centres of pockets of research excellence in Indonesian universities.
2. That Indonesia-based foreign consumers of policy-related research include academic research excellence, as evidenced by an international track record, in their criteria for recruiting academic contractors.

7.2 Recommendations regarding the Enabling Environment

3. That AusAID offer technical assistance to the Indonesian government to revise university incentive structures, including promotion criteria, with a view to recalibrating the balance between research and teaching and decreasing academics' reliance on contract research.
4. That AusAID offer technical assistance to DIKTI, to be delivered by the ARC, with a view to improving selection criteria and selection processes for DIKTI-funded grants.
5. That AusAID offer support and technical assistance for the establishment of an elite, internationally peer-reviewed national journal in each discipline to function as a stepping stone to publication in international journals. These journals should be published in Indonesian, be run independently of any particular campus and be freely available online.

6. That AusAID offer support and technical assistance for the establishment of a functioning, searchable database, in which all nationally accredited journals be required to deposit their contents as a condition of maintaining accreditation, and access to the contents of which are freely available online.
7. That AusAID provide technical assistance for the establishment of a searchable register of research strengths both of departments but also of individual researchers using verifiable performance indicators.

7.3 Recommendation regarding Universities' Intermediary Functions

8. That selected recipients of AusAID scholarships be provided with internship opportunities with Australian government departments and international organisations, complemented by formal instruction on how to transform academic research into policy briefs, as part of a post-submission program to be offered in one of a small number of locations in Australia for students who submit within four years of commencing their candidacy.

7.4 Recommendations on the Supply Side (Research Readiness)

9. That academic applicants for Australian scholarships be given priority over bureaucrats at the Research (Masters) and PhD levels.
10. That AusAID leverage its scholarship program to build research readiness through a five to six month purpose-specific, fully-funded, intensive research training program (effectively the equivalent of an Honours degree, but with additional focus on research methods and critical academic reading and writing) to be offered in a small number of locations in Australia after language training but before a student's candidature for all students enrolled in a higher research degree. The completion of this program would serve as an exit point for students who do not show sufficient research promise to go on to a higher research degree.
11. That AusAID include within its scholarships for research higher degrees a three to four month post-submission program focused on extracting academic publications from their theses, along with the policy engagement described above, to be offered in a small number of locations in Australia for students who submit within four years of commencing their candidacy.

12. That scholarships be extended and flexibility be introduced within the student visa system to allow submitting candidates to remain in Australia for this purpose and subsequently, if the opportunity arises, for postdoctoral work.

7.5 Recommendations on the Supply Side (Research Excellence)

13. That AusAID fund a scheme promoting a small number (5-10) of substantial long-term, collaborative research projects in areas of broad policy relevance but not tied to particular policy initiatives, to be administered by the ARC.
14. That applications to this scheme be initiated by a host department or research institute within an Indonesian university (public or private) involved in social science research and be developed in conjunction with a cross-institutional team of Australian researchers selected by that university on the basis of research fit.
15. That the scheme include provisions for the following:
    a. Funds for a series of joint research projects.
    b. Fellowships to enable a number of members of the Australian component of the team to be embedded for a period of one year each for successive years in the host department/research institute.
    c. Funds to buy out a team of researchers in the host department/research institute from their teaching responsibilities.
    d. Funds to provide opportunities for up to two promising early career researchers from a targeted pool of regional universities in Indonesia to undertake an extended sabbatical at the host university and to participate in the research team.

       Funds to support international participation (not limited to Australian partners) in a series of academic workshops run by the host department/research institute, on the condition that they result in an English-language, edited volume published by a reputable publisher outside Indonesia.

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Appendix A: Selected Australian Think Tanks

Think Tank	Funding Source	Description
Asia Education Foundation http://www.asiaeducation.edu.au	Federal Government, State Governments, Principals Australia, Myer Foundation, Association of Independent Schools; Australian Parents Council.	A joint activity of Asialink (University of Melbourne) and Education Services Australia, aiming to promote Asian literacy in Australian Schools.
Asia Society (AustralAsia) http://asiasociety.org/	Privately funded by 'foundations, corporations and individuals who believe in the mandate of the society'.	Part of global non-profit organisation Asia Society, based in New York. They have an established 'advisory council' representing business, foreign policy, the arts and academia providing expertise and advice on how to promote the organisation's interests. Many of its publications are geared toward US foreign policy.
Asialink http://www.asialink.unimelb.edu.au/	Originally a collaboration between Government and the Myer Foundation but is now run through the University of Melbourne. Asialink continues to receive funding from the Myer Foundation.	Claims to be: 'Australia's leading centre for the promotion of public understanding of the countries of Asia and of Australia's role in the region. Asialink is a key provider of information, training and professional networks.' It prides itself as excelling in 'soft diplomacy' delivering high level forums, international collaborations and briefings. It also created the PriceWaterhouse Coopers (PWC) Melbourne Institute Asialink Index, described as 'The first multi-indicator measure of engagement between Australia and Asia.'
Australian Business Foundation http://abfoundation.com.au/	Unkown.	Offers research fellowships on topics that affect Australia's business capabilities, competitiveness and sustainability.
The Australia Institute https://www.tai.org.au/	Funded by grant, philanthropic trusts, membership and commissioned work.	Claims to be the 'most influential progressive' think tank in Australia, focusing on economic, environmental and social issues 'to inform public debate and bring greater accountability to the democratic process.' Many of the recent research publications are directly relevant to contemporary policy debates (eg coal seam gas project, poker machine reform, pollution concessions/taxes etc).

Think Tank	Funding Source	Description
Australian Fabian Society http://www.fabian.org.au	Unknown.	Australia's 'oldest think tank'. Dedicated to the advancement of socialist thought in public policy decision-making. The website states that they are committed to influencing the ideas of political parties, especially the Labor Party. The current patron is Gough Whitlam.
Australian Institute of International Affairs http://www.aiia.asn.au/	Financed by members, tax-deductable donations and 'small government subvention'.	AIIA 'provides a forum for discussion and debate, but does not seek to formulate its own institutional views'. It produces three journals as well as occasional papers. To further promote its work the AIIA also holds lectures and seminars, and has an internship program.
Australian Institute of Policy and Science http://www.aips.net.Au	Receives funding from the Australian federal and state governments, universities and the corporate sector.	Aims to promote public engagement in science and 'ensure people have a voice in the decisions that affect them'. Responsible for the *Australian Quarterly*, Australia's oldest continuous print current affairs journal. Also runs the *Tall Poppy Awards*, designed to recognise Australia's intellectual achievers.
Australian Strategic Policy Institute http://www.aspi.org.au	Government funded.	An independent, non-partisan body with purpose of providing advice to government on Australia's strategic and defence policy. Has produced a range of publications, which are publically available.
Catalyst Australia http://www.catalyst.org.au/	Member based, strong trade union links.	Claims to 'work closely with trade unions, non-government organisations, academics and practitioners to promote progressive policy solutions to some of today's most pressing social and economic issues'. Overarching themes are good lives, good work, good communities.
Centre for Independent Studies http://www.cis.org.au	Private sector, donations. Does not accept government funding on principle.	Supports free market economy and libertarianism 'through positive recommendations on public policy and by encouraging debate amongst leading academics, politicians, journalists and the general public'.
Centre for Policy Development http://cpd.org.au	Mix of funding from government, universities, union and private companies.	Centre/Left think tank aiming to direct policy change through research. Originally linked to the *New Matilda* magazine/website. Claims to look beyond the 'media spin' on issues. Publishes reports regularly. Published a book with policy recommendations for a 'better Australia', distributed directly to MPs and decision-makers.

Think Tank	Funding Source	Description
Chifley Research Centre http://www.chifley.org.au/	ALP	Australian Labor Party's official policy development research institute.
Committee for Economic Development of Australia http://ceda.com.au/	Member-based.	Focus on the business and economic policy advice. Has a research and policy program that focuses on Australia's long term development. Claims that: 'Our independence also provides the capacity to speak directly to government at a federal and state level, unhindered by vested interests.'
Education Services Australia http://www.esa.edu.au	Funded by education departments across all states.	Aims to support the delivery of national education priorities through research and facilitating the pooling and distribution of knowledge amongst states.
Evatt Foundation http://evatt.org.au	Originally given public and union funding, now predominantly member-based.	Progressive think tank which aims to advance the ideals of the labour movement. It produces the *Evatt* journal, as well as periodic policy papers.
Grattan Institute http://www.grattan.edu.au/	Australian Federal Government, the State Government of Victoria, the University of Melbourne and BHP Billiton.	Has four key research areas: Cities, Schools Education, Higher Education, Energy and Productivity. Believes that evidence-based research is key to developing sound policy in these areas. Bipartisan organisation, with initial support from Steve Bracks (former Labor Premier of Vic) and Peter Costello (Liberal Federal MP).
Institute of Public Affairs http://www.ipa.org.au/	Private Business including ExxonMobil, Telstra, WMC Resources, BHP Billiton, Phillip Morris, Murray Irrigation Limited and Visy Industries.	Advocates free market economic policies such as privatisation and deregulation of state-owned enterprises, trade liberalisation and deregulated workplaces, climate change scepticism (through its environmental subsidiary the Australian Environment Foundation), and the accountability of non-government organisations.
Lowy Institute for International Policy http://www.lowyinstitute.org/	Initially funded by entrepreneur Frank Lowy but now funded by a range of government departments, including AusAID and ASIO, and by private business.	Produces publications on international relations, partners with government departments on projects. Also organise seminars, debates discussions etc. Also has a popular blog that publishes contributions from staff, researchers, interns and the general public.
The Melbourne Institute http://www.melbourneinstitute.com/	Based in the Faculty of Business and Economics at the University of Melbourne.	Seeks to produce 'cutting-edge research into key issues relevant to contemporary economic and social policy.' Produces the *Australian Economic Review* as well as other

Think Tank	Funding Source	Description
		periodical references.
Menzies Research Centre http://www.mrcltd.org.au/	Liberal Party.	Official think tank of the Australian Liberal Party. Holds conservative/neo-liberal values.
Network Insight Institute http://www.networkinsight.org/	Sponsored by Allen Arthur Robinson, Telstra, Foxtel, Google, Austar, Macquarie Bank, Seven Network.	Claims to provide independent information, ideas, seminars and publications for the community and industry about the future of media, telecommunications and e-commerce.
Page Research Centre http://www.page.org.au/	National Party.	Official think tank of the National Party. Focuses on rural issues, environment, sustainability etc.
Per Capita http://www.percapita.org.au	Unknown.	Independent, progressive, centre-left think tank. Views the role of government as a market designer: setting parameters for a liberal economy to produce better social outcomes. Its three main projects for 2012 were 'The philosophy of tax', 'Politics and the Brain' and 'Better by Design: Market Design as Policy Tool'.
Strategic and Defence Studies Centre http://ips.cap.anu.edu.au	Based in the School of International, Political and Strategic Studies at ANU.	Members provide direct training to employees of Department of Defence and DFAT. Publishes the Canberra Papers on Strategy and Defence and the SDSC Working Papers, which are highly respected publications by government.
Sydney Institute http://www.thesydneyinstitute.com.au	Privately funded.	Known for organising forums for speakers from a wide range of backgrounds. Also publishes *The Sydney Institute Quarterly* and *The Sydney Papers*. Currently chaired by Gerard Henderson.

Appendix B: Selected Consultancy Firms

Company	Description
Access Economics https://www.deloitte.com	Self-described as 'Australia's leading economic consultancy', now an arm of Deloitte Consulting.
Coffeys* http://www.coffey.com.au	Initially an engineering consulting firm, Coffey's International Development specialises in human development, governance and public sector reform, security and justice, economic growth, environment and natural resource management.
Cardno-Acil* http://www.cardnoacil.com.au	Has consulting expertise in Community Development, Education, Environment and Natural Resource Management, Governance, Health, Law and Justice, Post Conflict Management, Private Sector and Enterprise Development, Public Sector Reform, Reconstruction and Rehabilitation, Rural Development.
Deloitte https://www.deloitte.com	Know best as a business and finance consultancy firm but offers much broader services through a range of subsidiaries. Deloitte Australia provides a broad range of audit, tax, consulting, and financial advisory services to public and private clients. It has expertise that spans industry sectors including automotive; consumer business; energy & resources; financial services; government services; life sciences & health care; manufacturing; real estate; and technology, media & telecommunications.
GRM* http://www.grmintern ational.com	Consulting expertise in Economic Growth and Trade, Democracy and Governance, Education, Environment and Climate Change, Health and HIV/AIDS and Rural Development. Also includes MDI International.
KPMG www.kpmg.com	Like Deloitte, KPMG is mostly known for financial and auditing services but also consults on governance, risk management and performance growth.
Mott Macdonald Australia http://www.mottmac.com	Involved in a very broad range of consultancies.
Pricewaterhouse Coopers (PWC) http://www.pwc.com/	Auditing and financial consultancy. Has a link on their website entitled 'Our contribution to the debate', which links to their research findings and opinion pieces from experts they employ. They also list their publications on their website.
Sinclair Knight Merz http://www.skmconsulting.com/	An Engineering firm that specialises in: Project Management, Project Delivery, Strategic Consulting, Spatial, Asset Management, Stakeholder and Community Consultation, Sustainability, Security, Programme Management, IT and Communications
SMEC International* http://www.smec.com	Professional engineering and development consultants. Identified areas: water, transport, social development, energy and renewables, urban development, geotechnical mining and tunneling services, natural resource management and environment, governance and advisory services.

* Currently have projects in Indonesia.

Appendix C: Selected Knowledge Sector Collaborations

Below are details of selected knowledge sector collaborations with a developing country focus.

Asia-Pacific Network for Global Change Research (http://www.apn-gcr.org/)

- Ongoing project that commenced in 2003, has 22 member countries.
- Funded by National Science Foundation (USA), Hyogo Prefectural Government (Japan), Ministry of Environment (Japan), Ministry for the Environment (New Zealand), Ministry for the Environment (South Korea), US Global Change Research Program (USA).
- Aim is 'to enable developing countries in the Asia-Pacific region to participate increasingly in regional cooperative research, and to benefit fully from such research'.
- Structure is built around a joint annual meeting of policy-makers (IGM) and scientists (SPG), which approves the APN's programs of work and budget for the next year, including the research programs and related activities to be funded, based largely on recommendations from the SPG.
- Funds research programs in the earth sciences (including climate change and environmental management) through two schemes: Annual Regional Call for Proposals (ARCP) and Scientific Capacity Building/Enhancement for Sustainable Development (CAPaBLE). Selected applicants attend proposal development training workshops.
- Also holds 'synthesis meetings' around key agenda issues. The aim is the development of policy options for appropriate responses to global change that will also contribute to sustainable development. The synthesis reviews all APN projects and other related activities on issues such as climate change with the aim of identifyingg knowledge gaps and helping to prioritise research goals and programs relating to climate change in the Asia-Pacific region as well as provide knowledge on climate change issues for policy- and decision-making.

Global Knowledge Initiative (http://globalknowledgeinitiative.org/index.html)

- The funding structure is not unclear from the website, It appears that the GKI sources funding for itself to cover its costs while some individual projects are funded by specific development agencies, NGOs or the private sector.
- Partners include 77 US universities and colleges, 107 foreign universities and colleges, and 43 private sector businesses, foundations and non-governmental organisations.
- Aim is to facilitate knowledge development for institutions in 'need' using the expertise of countries/institutions that 'have'. The entire project is centred around partnerships between 'Need' and 'Have' partners.
- The ANU is the only Australian institution involved. On the Indonesian side, UI, UGM and ITB are partners.

Internationalising Higher Education (http://www.britishcouncil.org/china-education-higher.htm)

- A UK-Sino Collaboration run by the British Council assisting the Ministry for Education in China.
- The aim of the program in not to expressly improve the knowledge sector in either China or the UK, but is about using the partnership to facilitate knowledge building and understanding of developments and tracking issues in China.
- The project has four major components:
    - 'Global policy dialogues' bring together policy makers, leaders and practitioners from higher education institutions in China and the UK annually. These are mostly a communication dialogue for the exchange of ideas. There is also a Sino-UK Education Summit which has led to an MoU between the two countries which pledges cooperation to build quality assurance into the Chinese higher education system, a university leadership development program, a scholarship program co-sponsored by both countries for Chinese students to study in the UK, and an agreement to collaborate on improving the National Higher Education Policy in China.
    - 'Knowledge Economy Partnership' is a platform designed to create partnerships that link higher education institutions with government and the business community to improve the knowledge economy. Through this aspect of the project, the British Council nominates

programs or sectors for collaboration, and UK organisations submit proposals to undertake the project. The Chinese institution pays for their input and the British Council covers the input of the UK institution. This program also includes a Partner Connect Placement Scheme which facilitates the placement of researchers in a partner organisation to facilitate knowledge sharing and skills transfer, an English Language component that provides language training to Chinese researchers.

- Education Market Intelligence undertakes research specifically on the higher education sector to analyse trends and developments, focusing on the impact of internationalisation and globalisation. The collaboration has produced a number of reports comparing issues such as student mobility, academic collaboration, and national education policies, available at: http://ihe.britishcouncil.org/educationintelligence.
- Students and Alumni programs aim to 'internationalise' education through increasing the mobility of students in and out of China. It has specific programs to promote/fund students from both countries to study in the other. It also builds an alumni network to continue the exchange of ideas and provide information of employment opportunities to for participants.

Pan Asia Networking (PAN) project (http://web.idrc.ca/en/ev-4509-201-1-DO_TOPIC.html)

- Run since 2003.
- Funded by the International Development Research Centre (IDRC), a Canadian organisation that reports to the Minister of Foreign Affairs. The IDRC aims to support research in developing countries to promote growth and development.
- Supports research into innovative ways of adopting ICT in order to address development challenges in the key areas of health, education, livelihood and governance.
- The project currently runs 4 major programs:
  - **PAN Localization**: Supports research to generate local language internet and computer-based tools to alleviate language barriers in using technology.
  - **PAN-DORA:** A regional project linking distance-education practitioners from a number of Asian countries and supporting tertiary institutions

that use distance-learning technologies to deliver affordable education 'to the masses'.

- **PAN ICT4D R&D Grants:** Aims to build institutional research capacity and encourage innovative solutions to development problems. PAN provides small grant funding to institutions with successful proposals and promotes exchange of knowledge amongst recipients of the grants. Grant holders are supported by a number of partners including UNDP, Microsoft, and Asia Pacific Development Information Program (APDIP).
- **ENRAP II**: Researches strategies to support rural communication and knowledge networking project.

- The 2010 prospectus notes that the project has had 'limited success' in creating a set of methodologies and tools to improve how research is conducted. It also notes some key elements that facilitated success of the research grant programs. These are: ongoing mentorship for researchers, opportunities to present at conferences, and training and tutorials on research methodologies, communicating for influence, using focused evaluation techniques and resource mobilisation.
- The prospectus document also highlights the importance of long term projects and programming.

South East Asia Research Collaboration with Hawaii (SEARCH)
(http://www.searchthailand.org/)

- A health-sector project focusing on HIV/AIDS in Thailand. Currently there is a 3-way collaboration between the University of Hawaii, Manoa, Thai Red Cross Aids Center and U.S. Armed Forces Research Institute of Medical Sciences.
- The project aims to undertake HIV/AIDS research across the two countries, coordinating research about HIV/AIDS and related infectious diseases and serves as a training base for the care of HIV/AIDS suffers (both adult and paediatric).

START (http://start.org)

- Founded in 1992.
- The primary funders of the project are the United States Climate Change Science Program Agencies, German Ministry for Education and Research, National Science Council of Taiwan. Individual START programs are funded by various donors and foundations.

- Promotes research-driven capacity building 'to advance knowledge on global environmental change in Africa and the Asia-Pacific'. Aims to build relevant capacities of both individuals and institutions for advancing education and research.
- Provides research grants and fellowships and curriculum development, also funds advanced training institutes, multi-stakeholder dialogues, knowledge assessment and synthesis and 'place-based strategic planning'.
- START currently runs a 1-year funding grant project for research in Africa that 'support science-based research to build the capacity of individual scientists and their affiliated institutions in Africa.' The projects are based on collaborations between institutions of higher learning or NGOs. A fellowship program offers research in climate change to undertake further training at a host institution.
- Overall, while the organisation funds research in Asia and Africa funding is aimed at individuals/collaborations between individuals who apply, not at building an overall knowledge sector.
- Does not appear to facilitate links between policy makers and researchers.

TEMPUS (http://eacea.ec.europa.eu/tempus/index_en.php)

- Commenced in 2000 and runs in 7 year cycles.
- An EU project to support the modernisation of higher education in the Partner Countries of Eastern Europe, Central Asia, the Western Balkans and the Mediterranean region, mainly through university cooperation projects.
- The project is funded by the EU, the European Neighbourhood and Partnership Instrument (Eastern and Southern Europe) and the Development Cooperation Instrument (Central Asia).
- Tempus' main themes are:
    - Curricular Reform: Modernisation of curricula in academic disciplines identified as priorities by the Partner Countries.
    - Governance Reform : University management and services for students, introduction of quality assurance, institutional and financial autonomy and accountability, equal and transparent access to higher education, development of international relations.
    - Higher Education and Society: Training of non-university teachers, development of partnerships with enterprises, knowledge triangle education-research-innovation, training courses for public services

(ministries, regional/local authorities), development of lifelong learning in society at large, and qualifications frameworks.

- Tempus has a number of programs to support collaboration:
    - 'Joint Projects' program, funds multilateral partnerships between institutions in the EU and in partner countries. The partnerships that are funded are chosen on the basis on a proposal.
    - 'Structural measures' program, which targets reforms to improve the education sector in one or across several partner countries.
    - 'Lifelong Learning' program, which facilitates exchanges, study visits and networking activities. Projects are intended not only for individual students and learners, but also for teachers, trainers and all others involved in education and training.

Water Financing Partnership Facility Knowledge Hubs (http://www.apwf-knowledgehubs.net)

- Commenced in 2008.
- A collaboration between the Asian Development Bank and the Lee Kuan Yew School of Public Policy (LKYSPP) in Singapore.
- The overall aim of the project is to improve rural and urban water services and integrated water management in the Asia-Pacific. The ADB selected LKYSPP as 'the knowledge hub for its centre of excellence'.
- Each knowledge hub is supposed to respond to research needs to allow for effective policy making i.e. the research should be a response to government/policy needs.
- This project does not explicitly set out to build the knowledge sector, but the exchange of ideas and funding to the set-up of 'knowledge hubs' aims to build the capacity of certain institutions to become centres of excellence in a specific field.