



UNIVERSITIES
AUSTRALIA

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Universities Australia Submission to the
Review of Australian Higher Education

July 2008

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Executive Summary

Australia's universities contribute substantially to Australia's national goals. They are central to each of economic progress, social development and ecological sustainability: the nation's triple bottom line. The sector has proven to be strong and vibrant, but its resilience has been tested by over a decade of neglect.

On the one hand domestic and international student numbers at both undergraduate and postgraduate level have grown strongly over the last decade. Research activity continues to perform above expectations internationally, and has benefited from an increase in competitive grant funding and the effective pursuit of a variety of collaborative activities and innovative funding sources. In terms of governance and administration, the last decade has seen university management systems become much more closely aligned with, and in key areas exceed, best practice for large organisations in other fields.

At the same time, there are significant uncertainties in the sector's future. Universities in Australia have reached a 'tipping point'. An anticipated sharp drop in the school leaving population over the next decade will impact on domestic enrolments. Global competitive pressures and a high exchange rate driven by minerals will make continued growth in international student numbers more difficult. A rapidly aging academic workforce will prove hard to replace given the relatively low numbers of entry level positions and research degree completions. Financial market conditions may impact upon university investment returns, philanthropy and the ability of universities to pursue innovative financing arrangements to support their growth.

Underlying all these challenges is a fall in government funding in real terms of 40 per cent per student over the last decade, which has contributed to a dramatic increase in the student to staff ratio and the progressive running down of university infrastructure. The under-funding of universities has been paralleled by reduced access for students to support payments such as Youth Allowance. These challenges have resulted in a reduced capacity for universities to even better address major social policy issues such as increasing the participation rate of disadvantaged groups in universities, though absolute numbers have risen well.

Universities Australia makes the following recommendations to Government in relation to ensuring that Australia's higher education system can sustain and enhance the knowledge foundation for the country:

- Establish a vision for the higher education sector based on excellence, diversity, inclusion and international engagement, and acknowledging the particular role that universities play in pursuing broadly based teaching and research in the public interest.
- Set a national target of 2 per cent of GDP for the higher education sector by 2015, with a pattern of increased public funding of universities consistent with this goal so as to at least reach 50 per cent of total university revenue.
- Provide transparent, predictable and sustainable funding for the full cost of teaching, research and external engagement programs, including through appropriate indexation of Commonwealth grants.
- Ensure adequate and consistent student service provision and student income support arrangements, including considering a reduction in the age of independence to 18, the removal of income assessment from all scholarships and an increase in the value of the Australian Postgraduate Award.

- Promote greater participation in higher education, especially for mature age groups, Indigenous Australians, and other less advantaged social groups, including via greater work-integrated learning opportunities and a more integrated education system.
- Ensure that regulation of higher education is fit-for-purpose and preserves the autonomous, self-accrediting nature of universities while enhancing partnerships and co-operation consistent with this process and while supporting universities to address key challenges such as the mass retirement of 'baby-boomer' academics.

I. Introduction

Universities in Australia are at a 'tipping-point'. The sector continues to have many strengths, including expanded enrolments, development of a major international education industry, excellent student evaluations and research performance well ahead of our size. Nevertheless a dozen plus years of neglect have seen the student-staff ratios blow out, serious degradation of infrastructure and unsustainable stresses on staff. The academic workforce is ageing as academic life becomes less attractive to graduates. We are not educating all the highly skilled workers we need to be a competitive country in the knowledge economy of the 21st century. Our universities are dangerously dependent on the income from international students, a market which is fragile and unpredictable in the medium term.

Urgent remedial action is therefore required or we will fall far behind the countries in our region and beyond which have made the decision to invest seriously in education and research in their universities. Decisions taken today will determine the country we will become over the next twenty years. The basic alternatives are clear.

One choice is for the Government to continue on the course of the last dozen years or so and not to make the quantum leap that is required to support our universities to the extent necessary for them to compete with the world's best. It is likely that in twenty years time we will still be a relatively fortunate country. Resources, financial services and tourism may well continue to keep the economy ticking over. But our automotive industry will have moved offshore and our small and medium manufacturing enterprises will have disappeared. The population will be ageing as our brightest and most enterprising young people decide to leave for greener pastures with global companies, universities and innovation centres in other countries. Our agricultural industries will be in decline under the impact of climate change and water shortage. Our universities will be underfunded and understaffed, no longer able to attract international students or to attract or retain the best Australian or international staff. Australia will be a backwater with a declining economy overly dependent on the vagaries of the commodities markets and with no real prospects of a better future.

The other choice is for a major investment in our human capital and in research and development by investing in our universities. This will allow the temporary boost to our economy resulting from the resources boom to translate into a prolonged boost based on innovation and creativity and a highly trained and creative workforce. If this choice is taken Australia will be an exciting place, recognised as one of the leading countries for innovation in areas such as biotechnology, nanotechnology, information technology and alternative energy. Its universities will be attracting the best and brightest from all over the world ensuring that the boost to our innovation is sustained. Our automotive industry will be flourishing because of an export market developed around innovative products developed by partnership between the industry and universities. We will have global leadership in niche areas based on innovation and quality rather than on price. Australia will be attracting new industry because research has allowed us to use our abundant supplies of coal and gas with minimal environmental impact. There will be an energetic cultural life driven by a coterie of young talent nurtured by our universities and attracted by the exciting environment in Australia.

Universities Australia welcomes the opportunity to provide a submission to this Review of Australian Higher Education ('the Review'). The Review represents an opportunity to set a new direction in the relationship between Government and the university sector. The Review will properly consider a wide range of topics concerning access to and the quality of higher education. However, in the context of the long term erosion of government support for the university sector appropriate funding and regulatory arrangements for the university sector must be at the core of the Review's findings.

To ensure that these contributions are able to be maintained and enhanced, Universities Australia proposes in this submission a number of new policy settings from Government and also new activity by universities, including in partnership with other stakeholders. This submission provides a representative voice across Australia's university sector. Individual universities and specialised university groupings may also appropriately provide separate submissions emphasising matters of particular importance to them. But there is widespread agreement on the basic foundations required, as presented here.

2. What distinguishes universities?

In shaping the future for higher education in Australia, Universities Australia believes that the Review should be clear about the distinctive role of universities within the higher education system. Simply put, a university is characterised by the pursuit of broadly based higher learning and research for the public benefit. While a university may operate in a businesslike manner, it is however not a business; while it is usually a public institution, it is not a part of government; and while it is a part of the community, is not a non-government organisation (NGO) in the manner of a membership-based association. The defining characteristics of a university are that it is academically autonomous, and it:

- offers rigorous teaching and examination across a substantial range of disciplines and qualification levels (i.e. from diploma to doctorate);
- is committed to the systematic development of new knowledge through fundamental and applied research;
- undertakes research training at doctoral and postdoctoral levels in its areas of research strength;
- contributes to public debate and to the advancement of public understanding concerning matters of national and international importance;
- engages with its host community to share facilities of community benefit, foster its accessibility to community members and assist in addressing community issues and problems; and
- participates in national and international networks to advance knowledge and promote the value contribution of higher education.

The breadth and integration of a university's activities in teaching, research and external engagement separates a university from other higher education providers, which typically operate in a specialist field without necessarily pursuing a broader commitment to scholarship in the public interest.

Based on a count of the state-based Australian Qualifications Framework (AQF) registers, there are approximately 160 unique non-university higher education providers or approximately 200 if theology schools operating through 'umbrella' groupings such as the Melbourne College of Divinity are counted as individual institutions.

The main examples of higher education institutions outside the university sector are:

- colleges of theology primarily focussed on training clergy for the various Christian denominations.
- professional training bodies (e.g. the College of Law, the College of Nursing).
- privately owned business, IT and complementary medicine colleges.
- a number of technical and further education (TAFE) colleges and institutes.

With very few exceptions (e.g. a large religious institution such as Tabor College or certain TAFEs) there remains a clear distinction between university and non-university providers in terms of the definition of a university offered above. For example, almost no non-university providers offer higher degrees by research, pursue a substantive research program or offer a broad range of undergraduate qualifications. Those providers that wish to develop some or all of these characteristics are able to pursue university status if desired, and this would be welcomed by Universities Australia, but only if

the characteristics required are met. To dilute the use of the name would not assist students and other stakeholders in any way.

The apparent growth in enrolments in non-university providers, particularly following the extension of FEE-HELP to these bodies, reflects a potentially healthy diversification of the higher education market, but should not be interpreted as diminishing the importance or significance of the university system. It is a boom from a low base and universities remain overwhelmingly predominant within higher education in their size, reputation and breadth of course offerings, and have proved themselves to be highly responsive to valid demand, even in the face of very different regulatory restrictions and institutional pressures than those applying to private providers. That said, the growth in other areas of higher education is welcomed by the universities. Diversity in forms of provision that help best meet student choices and needs is to be supported and encouraged. And higher participation rates in higher education are beneficial for Australia.

There has been some suggestion that the outcome of previous higher education reforms has been a high degree of uniformity among Australia's universities, and that by extension significant changes to current policy settings should be made to encourage greater diversity. In reality, while universities share the core characteristics described above, they are already highly diverse institutions noteworthy by their distinctiveness. This diversity is reflected in their research intensiveness, disciplinary coverage, their educational methods, the character of campus life, and the degree of internationalisation. This diversity is also increasing as universities change and adapt autonomously.

In size, Australian universities' equivalent full-time student load varies from over 40,000 to under 5,000, with a proportion of international students between 60 per cent and 5 per cent.¹ Universities increasingly pursue differentiated models of undergraduate teaching, for example the liberal arts model of the University of Melbourne or the industry-linked model of Victoria University, the community development model of Macquarie University, and the distance learning capability developed by the University of New England. The research funding of Australia's universities varies from a few million dollars a year to over \$250 million, with a proportion of research students between 1 per cent and 15 per cent.² Many universities naturally link their research strengths to their geographic location, for example James Cook University and tropical research, or Charles Darwin University and indigenous health.

While there is scope for further increasing diversity within the university sector through the pursuit of distinctive university missions, this diversity should not be dictated by policies that undermine the broadly-based foundation of universities' role in the community.

A university need not be exhaustive in its coverage of all research and teaching undertakings, but it must combine undergraduate and postgraduate teaching and research across a range of disciplines. This principle in no way prevents a university from concentrating on particular areas of teaching and research strength, as many of Australia's universities already do. It does, however, differentiate a university from a more specialised body that should properly be called a college, school or institute. Breadth of coverage also underpins the validity of autonomy and self-accreditation, through the provision of internal checks and balances arising from peer review within a community of scholars, including across disciplines, schools and faculties.

3. A vision for the university sector

Universities Australia's vision is of a world-class university sector based upon four key characteristics for the system: *excellence, diversity, inclusion and international engagement*.

Our vision is one where excellence is rewarded wherever it occurs; where the diverse roles of universities in education, research and engagement are recognised; where equitable access and participation are fully supported; and where activities are globally integrated. Achieving such a vision requires long-term planning and a genuine partnership with the States and the Commonwealth. This partnership in turn needs to be built upon adequate funding of teaching and research, appropriate accountability, a performance orientation, and regulation that is fit-for-purpose.

3.1 Excellence

Universities Australia believes that excellence should be rewarded wherever it occurs in the university system. Particular disciplinary and institutional strengths occur across the sector and should not be undermined by a narrow funding approach based on 'picking winners'. Within the sector, measurement of quality is becoming increasingly robust. Universities undertake systematic evaluation of courses and academic teaching, using information provided by students as a foundation for continuous improvement. The universities' own work is backed-up by the quality assurance audits of the Australian Universities Quality Agency. In recent years the Australian Learning and Teaching Council (ALTC) has added a further element to quality teaching and learning outcomes, through an extensive range of study programs, commissioned research into best practice and through annual awards for excellence in teaching. In future, universities will make much more use of benchmarking between institutions and the use of staff from other universities for the purpose of peer review of courses and of teaching. Initial steps in this direction will be reflected in the results of the second round of AUQA audits, which began in 2008. In England, there are major developments in funding "engagement" functions of universities too based upon metrics of knowledge transfer.³

In the area of research quality, Universities Australia has welcomed the Government's Excellence in Research for Australia initiative, while noting that a great deal remains to be done to ensure the robustness and confidence of the sector in the metrics used, particularly in disciplines where the use of such metrics is not well-established. It is also important that the rewarding of excellence through funding formulas and/or competitive grants not discourage any collaborative activities across disciplines and institutions, as can at times occur. There can be an uneasy balance in the "co-opetition" system that has emerged in Australian universities more than in Europe, due to the lower share of government funding in Australia. Greater collaboration can also be encouraged through cross-institutional research networks which may allow for better use of the sector's research resources, and which may be facilitated where appropriate by the introduction of mission-based compacts.

Excellence in teaching and research is enhanced by efficient and effective university governance and management that reflects international best practice. Governance reform however should continue to occur in a measured way that preserves the academically autonomous, self-accrediting nature of universities. University tradition can sometimes frustrate those outside the higher education sector, particularly those who would like to see more rapid changes in governance and operating practice and "responsiveness" to immediate perceived needs. Overall, however, the gradualist approach to governance reform has served universities well. Of the 66 Western institutions still in existence since the time of the Reformation, 62 are universities.⁴ Australia's oldest universities (Sydney and Melbourne) date from the early days of Australian self-government in the mid-19th century and remain among our leading national institutions.

One paradox of the modern university is that, while it is the custodian of centuries' old traditions of scholarship and learning, it is also likely to be a highly globalised and technologically advanced enterprise. In the future, universities in many areas will continue to lead and embrace change. Relative to much of business and government practice, universities have been leaders in innovation for, and widespread adoption of advanced digitalisation across teaching and research. A clear example of where universities have led the nation is AARNet or the Australian Academic and Research Network, which introduced the internet to Australia under the auspices of Universities Australia's predecessor organisation the AVCC in 1989, leading to a rapid take up across the university sector and beyond (e.g. the original AARNET became Telstra Bigpond). AARNet now has the largest research network "footprint" in the world with nineteen national and nine international points-of-presence.

3.2 Diversity

Diversity among institutions is a key mechanism for achieving a high quality and sustainable university sector. Universities Australia believes that the nation requires a regulatory system that allows universities to embrace their differences, whether they are derived from location, disciplinary focus, external engagement or other elements of mission. We also need a system that promotes flexibility in the workplace and in organisational structures. We need a funding system that ensures different fields of endeavour are fully funded to enable universities to perform their diverse functions better.

While supporting greater diversity, Universities Australia believes that universities should continue to share the core elements of true universities as described in the previous section. In particular, a university should offer teaching and research across a range of disciplines and levels of advanced study. It is the interaction between levels of study and disciplines that differentiate a university most clearly from other higher education and vocational education and training (VET) providers and it is important to maintain this distinction for best benefit to the nation.

At the same time, Universities Australia supports universities becoming increasingly connected with the provision of VET, which can be achieved without diminishing the distinctive university mission in higher education. Some areas where connections will continue to grow are in the closer integration of activities within the five 'dual sector' universities, the greater facilitation of pathways to and from VET courses into higher education (e.g. through clarification of advanced standing requirements), increased sharing of campuses and campus facilities between universities and VET providers, and the inclusion of VET providers in applied research networks.

3.3 Inclusion

Inclusion is Universities Australia's third key system principle for the future of the university sector. We believe that universities must remain connected to the community and open to students from the widest range of backgrounds. In general, students from lower socioeconomic backgrounds perform as well as other students when they attend university, but are only half as likely to attend. Despite considerable effort, only marginal improvements have been made in this area in recent years in measured participation rates, though the absolute number of those of less advantaged backgrounds has still increased substantially. Particular problems remain in the enrolment and retention of students from rural Australia and Aboriginal and Torres Strait Islander students. These concerns, and possible measures to address them, are discussed in detail in the section 'Student Support, Equity and Participation' later in this submission. The key point to emphasise here is that constrained choices of higher education options for Australians is a matter both of equity and of economic advantage for the nation being compromised.

We believe it is fundamental to the sustainability of universities for them to be embedded in their communities through so called 'third stream' activities of government, community and business engagement. These extend the reach and impact of the teaching and learning activities. Almost all

universities now have a senior executive position with clear responsibility for external engagement. Many have advisory boards to assist in this area, and in addition to traditional activities such as public lectures and Town-Gown events, universities are increasingly pursuing innovative collaborations such as staff exchange with external organisations and ‘business park’ campus extensions.

In an environment of national skills shortages, building connections with the private sector will be of ongoing importance, involving elements such as internships, adjunct appointments, corporate philanthropy, joint research projects and commercialisation activities. Universities Australia believes an efficiently functioning university sector should act as a hub for the overall innovation system, fulfilling several functions including:

- production of graduates, well-trained and skilled, and exposed to a wide range of educational, research and international ideas; and
- knowledge creation – from highly targeted and applied to exploratory;
- knowledge transfer from the public domain – through collaborative research, commercialisation activities, and informal national and international networks; and
- provision of repositories of innovative capacity – human capital, facilities, knowledge creation and transfer through research and teaching activities.

Of course, too much “responsiveness” could undermine the more fundamental contributions that universities do make. Australia is actually beset by a serious problem of “short-termism” in many business and government spheres of decision-making, that universities help to countervail by a commitment to excellence that is underpinned by the systematic pursuit of logic and evidence. This is not to deny in any way that “engagement” is not an important part of the university mission. But it should build on university strength and distinctiveness in teaching and research. Indeed it is quite possible to discern a “quiet revolution” in Australian universities of precisely this kind: the pursuit of excellence through engagement.⁵

3.4 International Engagement

Internationalisation is another example where universities are ahead of much of the rest of the country: the undergraduate student population from overseas has increased several times over the last two decades, research is increasingly conducted through international networks and academic positions are often recruited on a global basis. Past internationalisation on campus has occurred in what can be seen as two waves. The first wave represents the period where universities took in international scholarships students, many as part of the Colombo Plan and began to establish links with similar institutions offshore. The second wave began around 25 years ago when universities were first able to enrol full-fee-paying students.

Universities are now on the crest of a possible third wave of, or new vision for, internationalisation. It involves a desire to move forward in five forms: through increased international integration and diversification of the teaching, research and campus culture; through greater enrolment of international students in higher research degree programs; through greater integration and outreach from overseas campuses; through greater international mobility of Australian students; and, finally, via overseas universities seeking a presence in Australia which, again, Australia’s existing universities welcome-subject only to the strictures enunciated earlier as to what is distinctive about universities being recognised.

This third wave of internationalisation will probably not come with the same economic benefits of the mass enrolment of undergraduate students by which the second wave is characterised.⁶ It will cost time and resources to better integrate internationalisation into teaching and student support systems and to position Australia with respect to the Bologna process on the compatibility of academic degree

standards. It will also require increasing upfront investment to participate in major global research projects. For example, European Framework research projects welcome Australian participation, but only on a full cost -sharing basis-unlike European Commission practice for inclusion of emerging economies.

Nor will a greater enrolment of international PhD students be directly revenue generating. Top PhD students are able to choose the country and university they study in and have their tuition costs covered. For Australian universities to increase the number of quality international PhD scholars enrolled, they will have to subsidise tuition costs at a minimum. Increased international mobility among Australian students will not be cheap either. An international education is an inherently valuable experience that most Australian students have been missing out on. Students who study overseas are ambassadors for their university and country and graduate with enhanced employment opportunities. From a broader perspective, student mobility facilitates increased understanding and cooperation among people from different countries, between university communities, and societies in general. It also generates economically valuable knowledge transfer.⁷ Barriers to Australian students studying offshore are primarily financial and can be overcome by universities and government allocating greater resources to facilitating and promoting the international mobility.

4. The Contribution of Universities to Australia

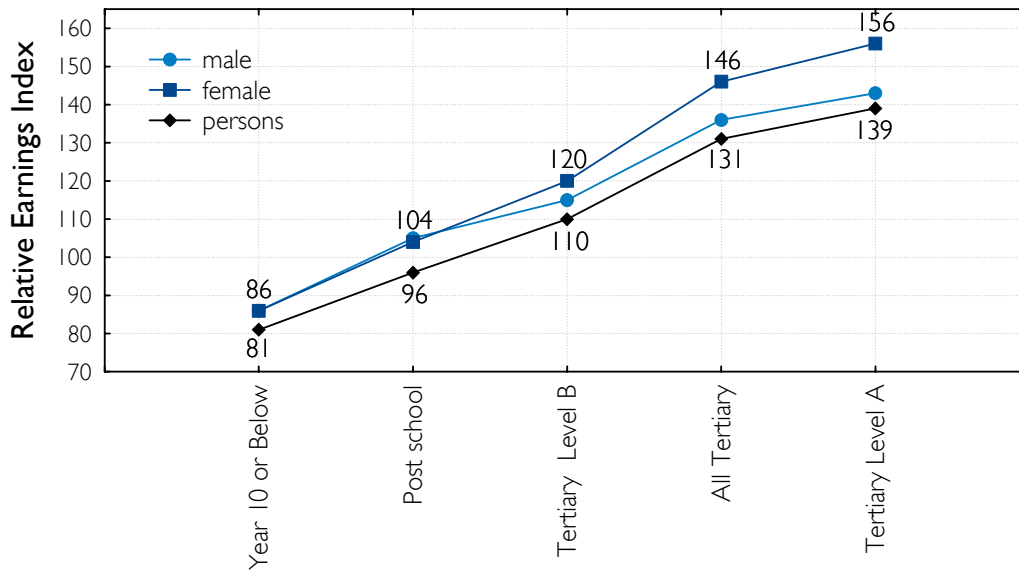
Universities Australia commends the Higher Education Review Panel on the Discussion Paper's attempt to capture the scope of the contribution of higher education to Australia, and in particular on the balance between meeting skills needs and producing commercialisable research on the one hand, and providing a liberal education, undertaking fundamental research and contributing to a civil and sustainable society on the other.

As the Discussion Paper notes, higher education in Australia is a major industry in its own right. Universities, by far the largest higher education providers, are a \$15 billion sector, with one million students and 100,000 employees. Australia's 39 universities constitute one of the country's most globalised and technologically sophisticated industries. They are the major contributor to the education services export sector, which has grown to be the third largest earner of export dollars for Australia (with only coal and iron ore earning more).⁸ In the international sphere, Australia's universities build links that encourage trade, cultural understanding and regional security.

The benefits of higher education can be seen at both the individual and societal level. Figure 1 shows individual earnings increasing dramatically with level of education, a phenomenon that is even more marked for women than for men. Another way of expressing the same point is to note that in a society where the annual minimum wage is \$26,617, the average starting salary alone for a bachelor graduate is \$42,000 and for a master coursework graduate that starting salary is \$65,000⁹.

According to the Australian Graduate Survey, more than 80 per cent of university graduates are in full-time work within four months of completing their degrees.¹⁰ The overall participation rate for Australians aged 25-34 with at least a bachelor degree is 55 per cent whereas for those with no post-school qualification the participation rate is only 28 per cent.¹¹ A number of national analyses across the OECD have also shown a positive causal relationship between higher educational attainment and better mental and physical health.¹² Even in narrow economic terms, this means that higher education participation support can potentially pay its way through reduced health care costs. Similar analysis is well established for the relationship of education achievement and employment participation, unemployment, criminal offences and welfare dependence rates, across and within countries.¹³ This phenomenon has been recognised as sufficiently strong that there is a new focus in human capital economics on explicating the mechanisms for this in household choice, as well as on quantifying the pay-offs to individuals, families and societies¹⁴.

Figure 1: Relative Earnings by Qualification, Australia Population aged 25-64, 2005 ¹⁵



At the aggregate level, there is a very strong correlation (approximately 70 per cent) between Gross Domestic Product and expenditure on higher education.¹⁶ This is particularly concerning given that our competitor nations have been rapidly increasing investment in higher education at a time when public investment in Australia has been falling. Research by the US National Bureau of Economic Research suggests that each additional year of education across the population increases annual productivity growth rates by between 0.3 per cent and 0.8 per cent.¹⁷

Universities Australia's own research finds specifically that a general taxpayer investment of \$420 more per tertiary student pays back \$595 in public revenue downstream and generates even larger private disposable income benefit of \$821 in annual gain. A payoff of \$1,416 for a \$420 taxpayer contribution, plus complementary private payment, is a much to be desired outcome – and it is a conservative estimation (Figure 2).

Figure 2: Public and Private Return on Investment (\$1,000: 42per cent Public v 58per cent Private share)



Critical environmental and social justice challenges of our time require improved understanding through university teaching and research. Australian researchers continue to make substantial contributions in these fields, whether as members of the Intergovernmental Panel on Climate Change; producing national reports on addressing global warming; or undertaking research into understanding social exclusion, race relations, housing affordability, and modern families and communities.

Universities are also key contributors to public debate on matters of national and international importance such as climate change, economic management and regional security. University faculty serve as advisors to government and business on these and many other issues, as well as participating in media analysis and at events such as the Prime Minister's 2020 summit. Debate on climate change, more than any other issue, has been led by university academics such as Tim Flannery and Ross Garnaut, with Australian academics also being well represented on the Intergovernmental Panel on Climate Change. Through initiatives such as *Australasian Campuses Towards Sustainability*, universities are also acting to provide corporate leadership in this area.

The Wentworth Group of Concerned Scientists (many of whom hold or have held leading university appointments) is a prominent example of what can be achieved when university expertise is linked to business and to research bodies. Funded largely through The Purves Environmental Fund, a private charitable organisation, the Wentworth Group has developed a respected profile for its environmental thinking and its blueprints for preserving Australia's environmental infrastructure, primarily water. Since its initial meeting at the Wentworth Hotel in 2002, the Group has developed into a policy force and has also established a small Science Program, offering scholarships to postgraduate students bridging the divide between science and public policy, and offering mentoring programs for students, scientists and business professionals.

In the area of national innovation and commercialisation, compared with OECD peers, Australia's performance is overwhelmingly driven by universities and public research institutions rather than by private research.

A great deal of the most innovative research is undertaken by the 50,000 higher degree by research (HDR) students in Australian universities. Despite underfunding of research infrastructure, scientific output has progressively increased, with Australia's index of citation impact now at an all time high, currently 1.08 times the world average.¹⁸ In 2004, Australia accounted for 2.891 per cent of world research publications and ranked 9th among OECD countries.¹⁹ Australian triadic patents (USA, Japan and Europe) have risen steadily since the mid 1980s, up to 0.82 per cent of the world total in 2003 (ranked 14th in the world).²⁰

Many in universities pursue knowledge for its own sake. This is curiosity-driven research. Many others are interested in applied research and engagement and outreach. The portfolio that results is part of the inherent dynamic of the modern university and is a highly productive one, just as is the transfer of research-based knowledge through university education to the future professional, business, community and government decision-makers who are educated through a university. This includes leaders, but also many others. One way of thinking of this is to recognise that every time a child receives great teaching, thank a university. Every time there is a splendid building completed by an architect and a bridge by an engineer, thank a university. Every time there is a breakthrough in cancer treatment or eradication of disease such as smallpox, thank a university.

In economic terms these payoffs are referred to as rates of return on investment. Most scholars conduct their research and teaching without reference to such concepts. But the concepts underpin the social investment in universities and the evidence for their power is strong. For example, we have presented evidence on the return to university activities above (figure 2), based on statistical analysis of the comparative OECD relationships between income and higher education expenditures (and fully allowing for two way causation in this relationship).

This can be further summarised for Australia by the recent work of Leigh who concludes that the average private rate of return for investment in higher education qualifications is 15per cent real, building on numerous like studies with like results.²¹ To this can be added the wider social return that comes from spillovers, such as in faster adoption of new technology and business processes and through enhancement of capabilities from others in working in teams.

Similarly in the research sphere we can point to evidence²² on the private return to education, such as increased profits, reduced costs, or enhanced productivity;²³ private rates of return between 13per cent and 30per cent;²⁴ social rates of return of between 50per cent and 100per cent;²⁵ and productivity growth and spillover effects.²⁶

The golden rule of investment is to invest in activities where the rate of return exceeds the cost of capital. The public cost of capital does not exceed 10per cent real,²⁷ as defined in Department of Finance guidelines. Australia's universities have clearly therefore constituted an excellent investment proposition for past appropriation to them by government. Moreover, there is a strong presumption, given the gap between rate of return and cost of capital, that there remains substantial under-investment in Australia's universities.

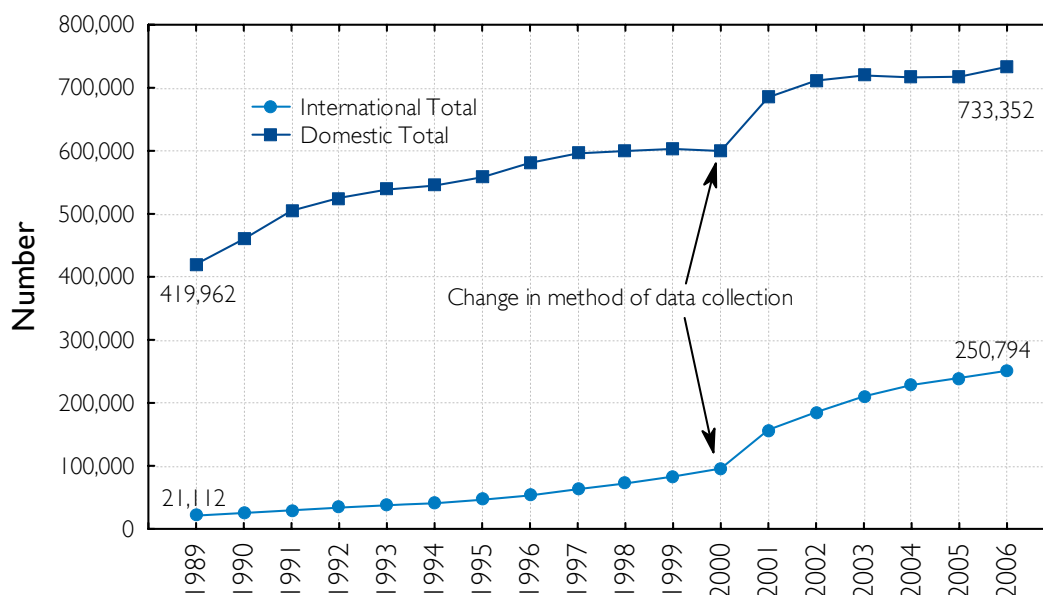
Beyond these tangible outcomes, higher education involves much else that is harder to measure but, as the Review's Discussion Paper acknowledges, is nonetheless vital to the sector's contribution. University study nurtures enquiring minds, allows people from a range of backgrounds to realise their potential, builds social cohesion, and develops future leaders across many fields. Every one of Australia's Cabinet Ministers and six of the seven High Court judges have studied at an Australian University. From a small population base, Australian universities have produced eight Nobel Prize winners and a Fields Medallist (equivalent to the Nobel Prize in mathematics), who have made vital contributions to physics, mathematics, medicine, literature and chemistry. The habits and attitudes developed through systematic higher study, and the experience of campus life, continue to provide the best possible grounding for later success.

The contribution of universities to critical evaluation of political, social and economic life is also a sometimes resented but nevertheless fundamentally important function of universities. The academic autonomy of universities is the foundation for freedom of expression by academics drawing on their expertise to evaluate and review our actions as a nation. This is fundamental to a free and good society. As teaching and administrative burdens grow this function can become more muted than might be judged healthy for the society.

Universities are also key contributors to community life. Even those with no formal study connection to their local university may use university sporting facilities, participate in a professional development or community education course, visit an on-campus gallery or attend a public lecture.²⁸ Universities are important sources of direct and indirect employment and economic activity in many cities. The Tertiary Education Facilities Management Association estimates that Australasian universities spend \$1.5 billion each year on construction and maintenance alone.²⁹

As Figure 3 shows, the number of both domestic and international students attending university and producing such benefits in their subsequent careers, and at times while still studying, has grown strongly over the last decade. This is welcome, since it helps underpin the benefits enunciated.

Figure 3: Growth in Student Enrolments, 1989 to 2006 ³⁰



Australia has a relatively highly educated population by international standards: 23 per cent of working age Australians have a degree level qualification, compared with the OECD average of 19 per cent.³¹ But there are still a number of countries well ahead of us, and others aspiring to catch and exceed such achievements. Moreover in Australia itself, there are signs of a falling school completion rate, especially for young males, as well as there being an underlying levelling off and fall in the basic demography for young school-leavers.

According to the Universities Australia's 2008 unmet demand survey, of 181,006 students who completed year 12, 110,516 (61 per cent) applied for a university place, 92,102 (51 per cent) were offered a place and 69,986 (39 per cent) accepted the place.³² There is broad balance at present between those seeking university places and able to complete a degree and the number of funded domestic places. But this does not allow for precise regional and disciplinary matching and it does not tell us what the participation demand would be under enhanced settings for higher education e.g. improved income support provision.

Australia should aspire to higher tertiary participation rates and so particular attention to improving conditions that facilitate and motivate participation will be needed. From enhanced quality of education per student and from greater tertiary enrolment, greater benefit for Australia can ensue. This is a clear investment proposition in favour of the public interest.

5. Current financial support for the higher education sector

Australia's continuing high performance in teaching, research and external engagement has occurred in the face of a long term decline in real terms of public support for universities. In some ways, reduced reliance upon government funding has encouraged this performance. But a 'tipping point' has been reached, whereby urgent support is needed to sustain the university contribution. Also we could achieve even greater performance if there was even greater investment.

The net result of declining real public funding has been chronic under-investment in infrastructure and increasing pressure on teaching staff and university administrations. The Group of Eight universities estimates that, within that group alone, there is now an urgent infrastructure maintenance backlog of 1-1.5 billion dollars and that a third of university buildings are in a poor or critical condition.³³ It is arguable that such run-down reflected the rational choices of university management. This may be so, given their commitment to university outputs. But this means that over time the capacity to deliver on these outputs declines, unless the situation is redressed.

Another result has been substantial increases in student-staff ratios, to the point that these are now amongst the highest in the OECD countries-and certainly for those universities and countries with which we conventionally compare our efforts.³⁴ Again, it can be said that this reflects enviable gains in productivity, and that is partly true. But this conclusion does not take account of the effect on learning of excessive class size, even if offset by other improvements, and the consequences for staff motivation, retention and recruitment in terms of work-load and stress.

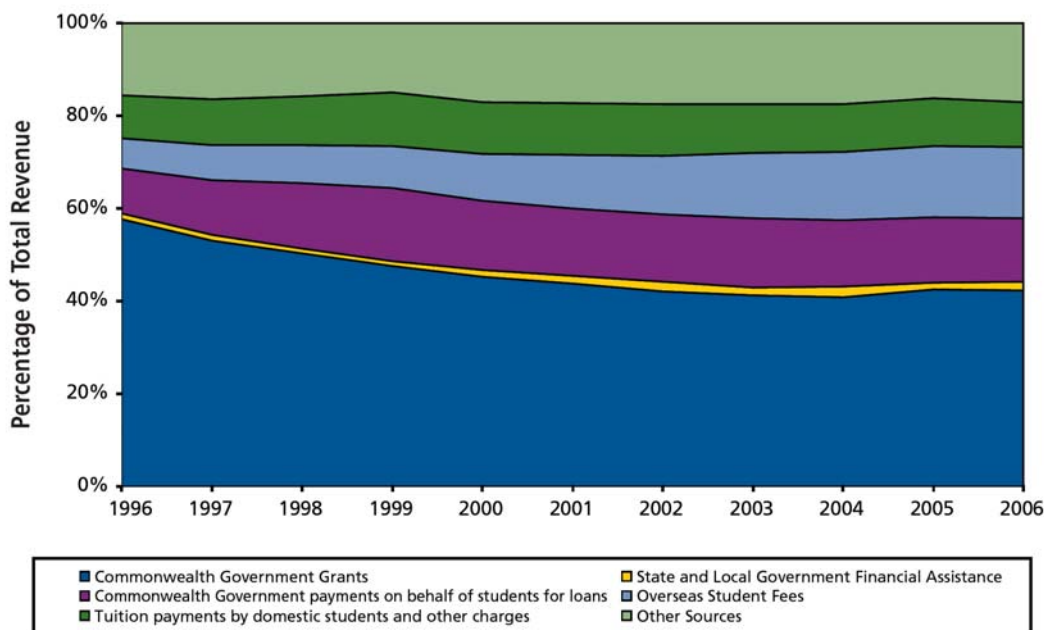
There is also the effect on overseas student attraction as other markets provide smaller classes and more personalized attention and support. Indeed the growth of international student programs in competitor OECD countries and elsewhere (e.g. South-East Asia), when combined with the rapid growth of the domestic university sector within key markets such as China and India, creates an external constraint on the growth of the international student population. This is particularly the case as a strengthening Australian dollar further weakens our competitiveness in the international student market. Equally, there may be good reasons from an internal university point of view to moderate further growth in this area to ensure balance. In the end, apparent physical productivity gain may well undermine revenue productivity in the longer-run for Australian universities.

The HECS payments of private individuals have also helped underpin university revenue growth. But these too have reached levels where Australian students have amongst the highest personal contribution levels and associated private debt levels for higher education across OECD countries.

The following statistics highlight the extent that under-funding of the national university system has reached:³⁵

- since 1989 the gap between actual and CPI-adjusted base funding has grown to around \$1.6 billion and for wage-cost adjusted funding around \$3.1 billion;
- Commonwealth recurrent funding of schools has been indexed on average at twice the rate as for universities;
- student to teacher ratios have risen from 12:1 in 1990 to 20:1 in 2006;
- between 2001 and 2006 university research block funding has fallen by 20 per cent as a share of core research investment (universities, ARC, NHMRC).

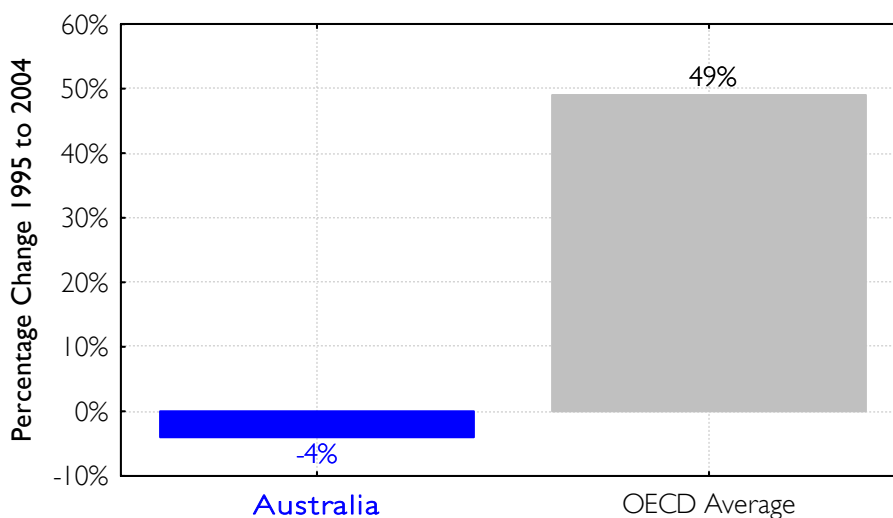
Figure 4: Higher Education revenue sources as a percentage of total revenue, 1996 to 2006.³⁶



Other countries have been making an increased investment in their higher education sector. However, for Australia, general taxpayer funding has fallen to the lowest of all OECD countries as a share of public university revenue (to an estimated 40 per cent in 2008).³⁷ Figure 4 shows this low share of direct government support (including competitive grants) and Figure 5 shows how far Australia has fallen behind overseas standards of support.

In a competitive international environment, under-investment will increasingly reflect on our ability to be a destination of choice for Australia's own best and brightest, and for the best international students. It will also increasingly reduce global integration in our research and hence our ability to assimilate and advance global ideas and develop our own innovation capacity.

Figure 5: Australia versus OECD, average change in public investment in tertiary education³⁸



In terms of revenue sources, the total percentage of university revenue by source from 1996 to 2006 is illustrated in Figure 4 and shows a fall in government support for public universities relative to other sources of funding.

For the last decade, the success of Australia's universities in attracting growing numbers of international students has created a revenue base that has to a certain degree cross-subsidised other university activities and compensated for the comparative decline in government funding. The proportion of international students in Australian universities has grown from 8 per cent in 1996 to 25 per cent in 2006, which is the highest level in the OECD.³⁹

Similarly, though to a smaller degree, the growth in domestic fee-paying postgraduate students and the domestic undergraduate fee-paying students has had the same effect. The fee-paying Masters market has also been strong and executive education operations are complementing that source of revenue. But in a less certain economic climate, training support by businesses for their employees is often one of the first areas of cost-cutting. However it is Government policy that undergraduate full fee-paying places will be phased out from 2009. With respect to international students, there is gathering evidence, indicated above, that its capacity for cross-subsidisation is neither sustainable, nor perhaps even desirable. It would seem an appropriate principle that all components of higher education operate on their own cost base and not operate through non-transparent cross-subsidies.

Yet the present funding system for universities has created a complex system of cross-subsidies, with overseas students subsidising domestic students, large classes of undergraduates cross-subsidising smaller classes of undergraduates, undergraduates generally cross-subsidising postgraduates, and overhead university funding cross-subsidising competitive external research grants. This means revenue structures for universities, based upon the distortions in public funding, have created an unfortunate "pea and thimble" system of internal financing of university activities that reduces efficiency and transparency considerably.

Equally, there exists genuine risk to university economic security in over-reliance on international student fees to plug income gaps. The market has shown itself vulnerable to the effects of reputational changes and perceived risk with either having the impact of bringing about a sharp reduction in the number of international students travelling to Australia and ensuing damage to university systems and finances. Owing to the concentration of international student demand in particular areas of study, and the need to devote substantial resources to servicing international students, it is also arguable that it could be detrimental to universities' broader mission for the percentage of international undergraduate students to increase much beyond 25 per cent averaged across the sector.

International students are not distributed equally across the sector, with most students based in larger universities within major cities. Smaller and more regional universities still have scope to increase their international student enrolments before reaching their individual 'tipping points'.

Risk also applies, as indicated, to domestic postgraduate coursework and executive education markets as economic times become less propitious. Sovereign risk has revealed itself as an ongoing problem too for university activities as individual ministers and governments change – as the recent change of policy for full-fee undergraduate admissions attests. And risk applies too for other sources of revenue such as State and Territory funding, which have not been steady over the long haul. Alumni, endowment, patent and philanthropic and consultancy commercial revenues are notably variable and subject in part to the changing economic environment.

6. Future funding of higher education: a 2per cent guarantee

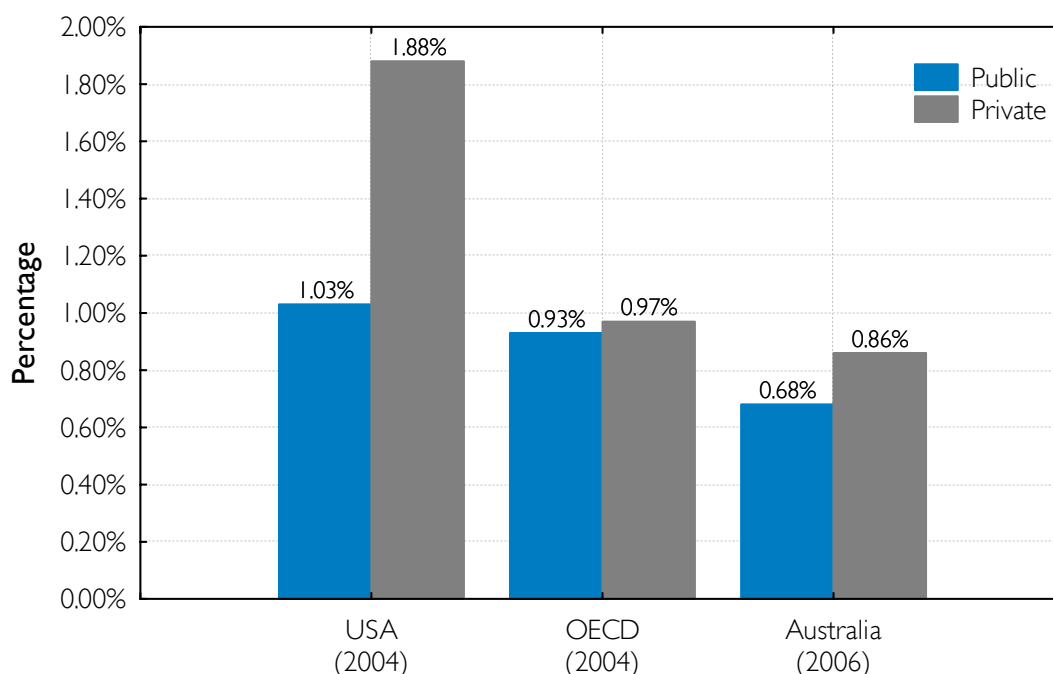
6.1 The Funding Quantum

Given the Government's stated objective of addressing the previous neglect of Australia's universities, a positive policy direction could be set by establishing a national goal for the growth of Australian higher education sector. We propose that a goal of two per cent (2per cent) of GDP by 2015 would provide a single clear objective for an appropriate level of higher education spending with respect to Australia's international competitiveness, social objectives and other national needs. Such a target is derived from current international benchmarking (e.g. the European Commission has recently declared a 2 per cent objective for the European future). On present benchmark comparisons, this goal would bring Australia into the realm of world class university resourcing, placing Australia in the top five best resourced national university systems. In the longer haul it might need adjustment as other countries themselves change.

The higher education sector in Australia is currently at 1.54 per cent of GDP compared with an OECD average of 1.90 per cent. Moreover, as noted above, OECD competitors have been rapidly increasing their investment in higher education, meaning that even a target of 2 per cent of GDP might need future re-evaluation.

Figure 6 illustrates how both the relative size of overall resourcing of the higher education sector in Australia and especially the proportion of public funding are well below the current OECD average.

Figure 6: Public and Private University Funding, as a percentage of GDP⁴⁰

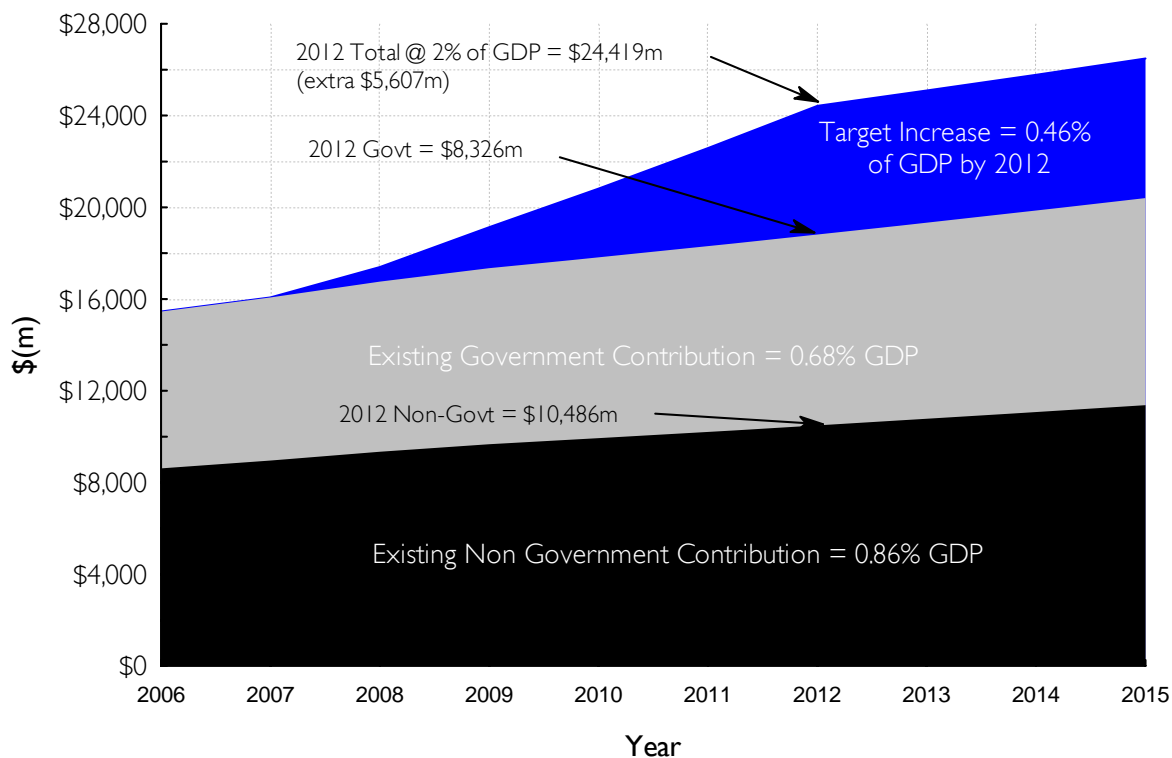


The current dollar value of 2 per cent of GDP in 2015 would be around \$26.1 billion compared with \$20.1 billion if the sector's current 1.54 per cent share of GDP continued.⁴¹ While the expansion of the sector would come from a variety of sources, given the restriction on public funds growth in the last decade, it would be most sustainable if the increase was accompanied by an increased proportion of public funding. As an indication, if universities received a full 60 per cent public funding rather than

the current 40 per cent, this would lead to public university funding in 2015 of \$15.5 billion or approximately double the estimated 2008-09 funding of \$7.5 billion.

Figure 7 illustrates the indicative funding path that would be required to deliver on this 2per cent guarantee under these conditions. It shows status quo funding shares of GDP relative to achievement of the target shares by 2015.

Figure 7: Status Quo v Target Higher Education Funding, 2006 to 2015 ⁴²



This pathway in Figure 7 assumes a somewhat reduced relative private funding effort, as might indeed occur with prohibitions on full-fee domestic undergraduate revenue, limits to likely international student growth, and a stable or declining domestic student pool providing private HECS payments. It instead grows the public contribution more substantially, though to no more than average OECD practice, complemented by our already high private contribution. This would bring universities in Australia into line with the current public funding share for private schools, and would require an extra \$1 billion in public funding annually over the previous year for seven years with suitable indexation thereafter needed to maintain the position then achieved.

A significant increase in other private source-derived activities such as postgraduate coursework, executive courses and philanthropy, the latter in line with the recommendations of a recent Business, Industry and Higher Education Cooperation Council report⁴³, would need to be created if the government contribution was to increase less than for reaching the indicated 60per cent share above. For example, a public-private partnership principle of a 50per cent equal share each might be sought. As discussed elsewhere, it is not likely (or necessarily desirable) that international full-fee paying revenue will be able to continue increasing to the extent that it has in the past decade, so this goal requires a major increase in other private revenue raising efforts. Assuming this to be possible, perhaps along American practice lines, then an extra \$1 billion per annum above the preceding year for three to four years with appropriate indexation thereafter would be required.

6.2 Funding Structure

Increased public funding should be transparent in its allocation, sufficiently predictable to allow for long-term planning by the sector, and of a quantum that provides for a sustainable world class university system. Core government funding should continue to be allocated by formula, based on negotiated student load and research activity as reflected by the established (or modified) metrics. Core funding should include appropriate indexation to provide at least a minimal level of funding increase to cover wage costs. Additional non-core funding could be allocated through a process of compact negotiation to allow universities to pursue their diverse missions. These activities might relate to equity and participation, research networks, commercialization, environmental sustainability, regional economic development, partnerships with external stakeholders (industry, the public sector, community organisations), and international research and education initiatives.

Some examples of where the proposed system of mission-based compacts for universities could be used to meet key public interest objectives include:

- agreement to focus additional resources on areas such as reducing attrition rates (i.e. producing more graduates from the same enrolment);
- targeting professional skills in shortage;
- building executive program capacity;
- reaching under-represented groups for enrolment and completion to ensure their employment opportunities are further improved;
- rewarding staff for year-round use of infrastructure;
- providing flexible reductions in time for degree completion;
- enhancing capstone or complementary studies that provide work-readiness; and
- increasing the capacity of universities to engage with industry in research.

These are examples of ways in which additional funding could immediately address direct capacity constraints for the economy – as well as providing the skills, knowledge and abilities that underpin Australia's long-term wellbeing. Moreover, if particular attention is paid to better using the potential of currently under-represented groups, then both efficiency and equity would be better served.

Universities have welcomed the Government's new \$11 billion Education Investment Fund (EIF), which will absorb the \$6 billion allocated to the Higher Education Endowment Fund and receive an additional \$5 billion from the 2007-08 and 2008-09 budget surpluses. The EIF will be focused on capital expenditure on teaching and research facilities. While the EIF will go some way towards addressing the maintenance backlog in universities, and to meeting new capital needs, there is a danger that, as the EIF will be open to applications for teaching facilities and also to applications from the VET sector and research institutes, the actual funds available for research infrastructure will not be large in annual funding.

Ongoing supplementation from government budgeting is therefore urged. It is also important that the funding from the EIF is not used to replace other sources of infrastructure support, for instance the National Collaborative Research Infrastructure Scheme (NCRIS), when there is a clear need for the Government to ensure additional funding. NCRIS was developed to provide collaborative research infrastructure support on a large scale and at a national level and is a vital element of Australia's research capacity.

Another significant issue for universities is the funding of research and research training through competitive grants and block grants. Under the previous Government's *Backing Australia's Ability* package, there was a welcome increase in funding for national competitive grants, principally through the Australian Research Council (ARC) and the National Health and Medical Council (NHMRC). However, there has been no comparable investment in core research funding for universities. Core research funding in the form of block grants is the linchpin for developing the capacity that underlies university research delivered through competitive grants, partnerships and contracts.

Figure 8: Research Funding, 2001 to 2008 ⁴⁴

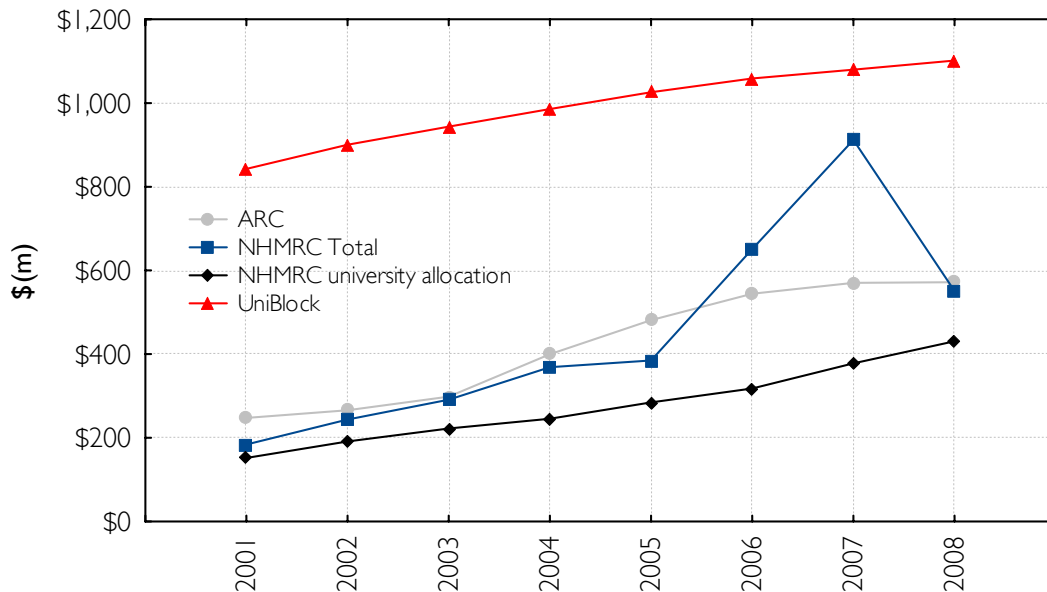
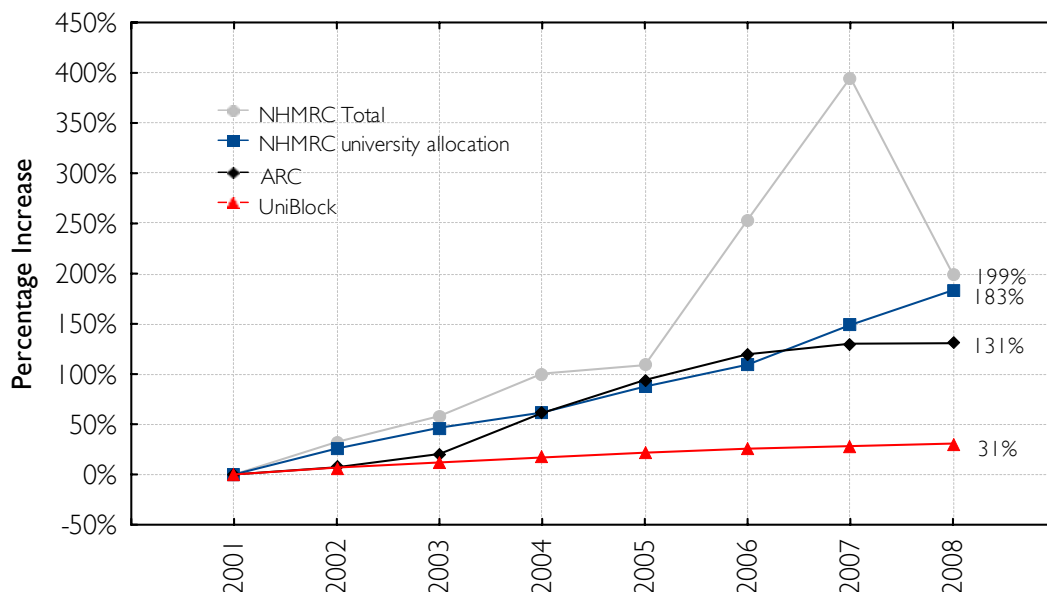


Figure 9: Research Funding as percentage increase, 2001 to 2008 ⁴⁵



Figures 8 and 9 show in both dollar and percentage terms the extent to which research infrastructure support has failed to keep pace with project funding provided through the ARC and the NHMRC. Infrastructure funding to universities has grown by only 31 per cent over the 2001-2008 period, whereas project grants have grown by 200 per cent in the same period. This disproportionate increase has occurred despite the high administration costs associated with competitive grants often necessitating cross-subsidisation from scarce block funds. The perception among universities is that 'winners are losers' when it comes to competitive grant funding, as for reputation reasons they are compelled to pursue competitive grants, which then draw funds away from other university activities.

Australia's research performance is unfortunately increasingly living off the past, with rapidly ageing university infrastructure combining with a 'baby boomer'-led research workforce now approaching retirement in unprecedented numbers. While the number of research degree enrolments has been moderately increasing, the growth in entry level academic positions (Level A/B) has not kept pace, meaning that many capable researchers choose to pursue careers internationally or leave the research field to take up more lucrative positions in the government and business sectors.

Over the period 1996 to 2006, the number of Level A/B positions increased from 18,988 to 21,356,⁴⁶ a very small increase compared to the increase in undergraduate, research training, research and administrative workloads of universities. This in turn means that opportunities for research in many junior academic positions are reduced, and the appeal of these positions to prospective high-calibre researchers is commensurately lowered. Declining academic salaries relative to general wage movements and reduced availability of research facilities and support services only add to this effect.

In the short term, Universities Australia recommends addressing this situation through a doubling of block grant funding – primarily the Research Infrastructure Block Grant (RIBG), the Institutional Grant Scheme (IGS) and the Research Training Scheme (RTS) – to redress urgent maintenance and staff cost issues as a priority allocation from overall increased university support. In the medium term, we strongly support a change to the competitive grants regime so that it covers the full cost of research. This could be achieved through the development of a transparent institutional-level process that takes into account specific costing for project grants. Such an environment could address the problems associated with cross-subsidisation and high transaction costs, reward excellence wherever it is found and also encourage full cost funding from industry partners. However, Universities Australia reiterates that this system can only be successful once block grant funding is significantly increased.

Equally important is the need for the numerous individual program lines of funding to be reduced, as the transaction costs of separate application, administration and reporting are disproportionate to the resources provided. They also provide vehicles for inconsistent and intrusive regulation of university affairs. "Broad-banding" or "pooling" is a desired way forward, just as the Government has accepted for the analogous problems that have existed for specific purpose payments in federal-state financial relations.

6.3 Student support, equity and participation

Universities Australia's 2006 Student Finance Survey report identified student poverty as a major constraint on Australia's higher education system. The survey found 71 per cent of undergraduates engage in paid work averaging 14.8 hours per week to support their studies, while one in eight students indicated that they regularly went without food or other necessities because they cannot afford them.⁴⁷ Current conditions of student poverty have only been made more acute by the deep cuts to student welfare and other campus services resulting from the prohibition of compulsory amenities and service fees arising from the introduction of so-called voluntary student unionism.

It is an unfortunate feature of Australian higher education that income support is amongst the least favourable in OECD countries, and that work obligations during studies and personal debt resulting from studies are correspondingly amongst the highest across comparable countries. In Europe generous income support and no fees has been standard.

Universities Australia is particularly concerned with the declining proportion of students able to access Youth Allowance or Austudy, partly owing to the growth in parental income and asset levels over Australia's long period of economic growth. The 2006 study made a range of recommendations in relation to student income support, of which the two key recommendations were:

- a reduction in the age of independence for Youth Allowance from the current 25 years to 18, so that university students are not assessed on the basis of their parents' income and assets; and
- removal of the assessable income component for all scholarships and bursaries, regardless of their funding source.

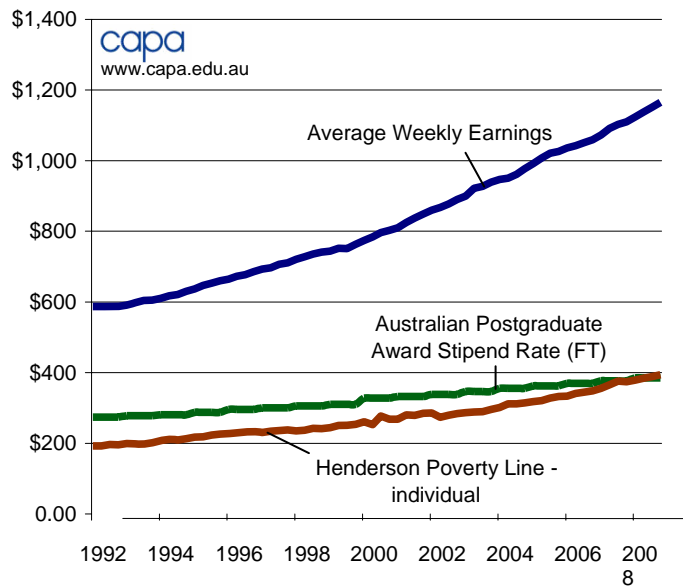
The doubling of undergraduate Commonwealth Scholarships announced in the 2008-09 Federal Budget is an important step that will benefit an extra 40,000 students each year when fully implemented. However, a significant majority of undergraduates will still not be on scholarships, and so scholarships of themselves are not a substitute for addressing issues in the broader income support system. In particular, in an environment of multiple pressures on family budgets, the concept that families of average income will be able or willing to support children through four or more years of tertiary study must increasingly come into question.

The Widening Participation program funded through the Higher Education Funding Council for England appears to be addressing the problem.⁴⁸ This simple and effective program is a performance-related block grant which permits universities to use the funds to support practices that work within the context and mission of the university.

Income support is also a significant issue for many higher degree by research students. The current reality is that bright undergraduate students will have a wide range of career options open to them, many of which will offer pay and other benefits not immediately available through PhD study. Consequently, it is important to have policy settings that make further study as attractive as possible to the best candidates. Universities Australia welcomes the Government's commitment to double the number of Australian Postgraduate Awards (APAs) and relax the requirements of the APA (Industry) linkages. These decisions reverse a long standing neglect of PhD scholarships, which has seen the percentage of students receiving an APA scholarship fall from 7.16 per cent in 1996 to 6.02 per cent in 2006.⁴⁹

While the doubling of APAs is a welcome step, Universities Australia notes with concern that this year the level of the APA stipend will fall below the Henderson Poverty Line for the first time. Given the increasing accommodation, transport and other cost pressures faced by research students, Universities Australia supports calls from the Council of Australian Postgraduate Associations for an increase in the APA stipend to \$26,000 per annum. Figure 10 shows the decline in the stipend relative to average weekly earnings and the Henderson poverty line.

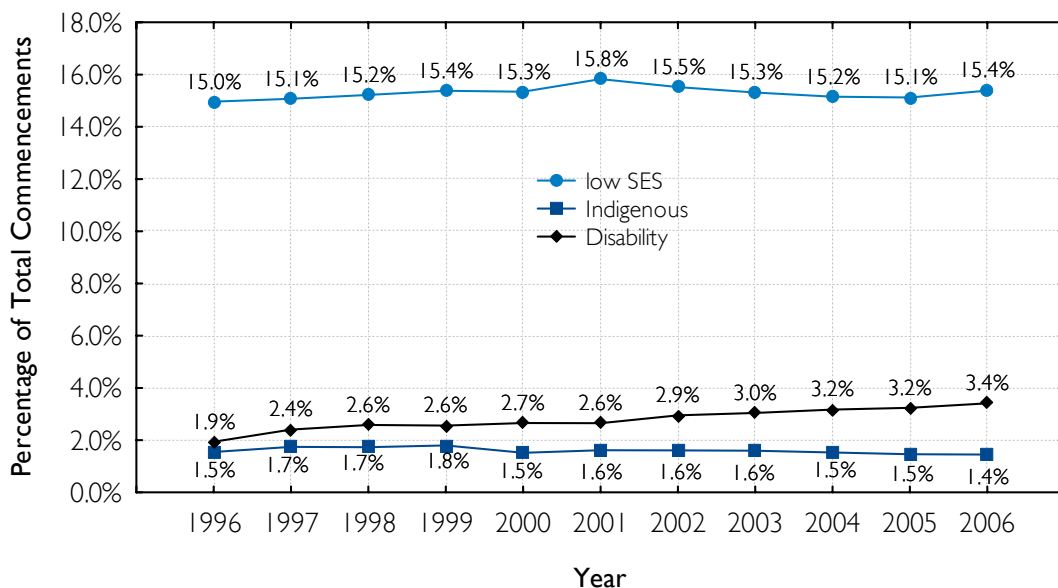
Figure 10: Australian Postgraduate Award Stipend Rates, compare to average weekly earnings and Henderson Poverty Line⁵⁰



Universities Australia believes income support arrangements for students should be subject to far reaching review as a basis for improvement. This review could also address the undue complexity of HECS and the wisdom of its extension to income support, as well as providing fee support.

Increasingly poor student income support is one reason why universities have only had modest success in increasing the participation of disadvantaged groups in university education, despite growing efforts and focus on this area from within the sector. The proportion of people from low socioeconomic status backgrounds, people with a disability and Aboriginal and Torres Strait Islander people in the commencing student population is shown in Figure 11. Even noting the welcome increase in the participation rate for students with a disability, all three groups remain significantly under-represented relative to their numbers in the general population.

Figure 11: Proportion of Commencing Students with Equity Classification, 1996 to 2006⁵¹



Beyond income support, a range of other factors impact on the participation rates of disadvantaged groups, including poor high school performance, low expectations concerning the accessibility or relevance of higher education and a sense of alienation from university culture.

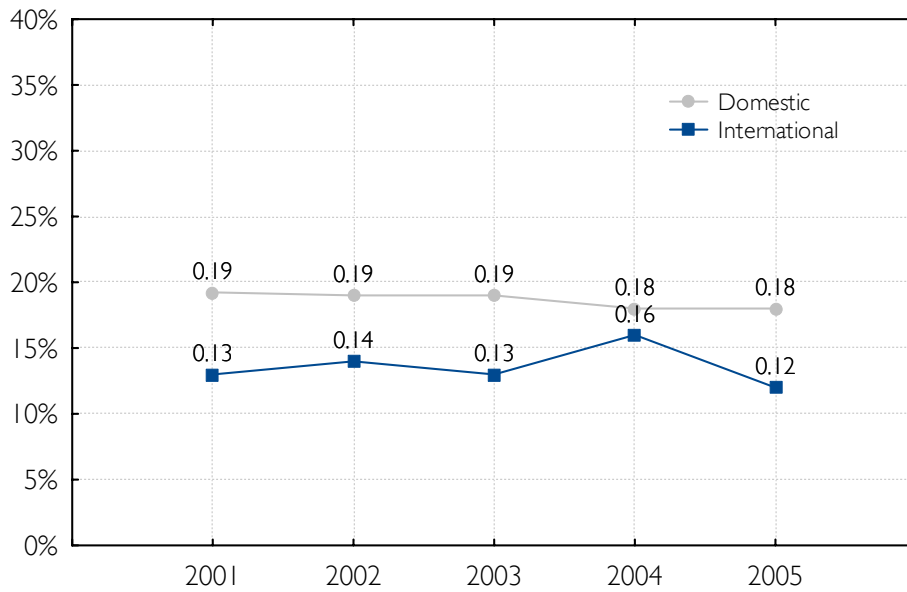
A range of practical measures to address some of these issues is contained in Universities Australia's recently released *Equity and Participation Action Plan* for the sector.⁵² Proposed measures include more effective measurement of participation rates, inclusion of higher education participation issues on the COAG human capital agenda, setting equity targets for universities with attached financial incentives and improved Work-Integrated Learning and home study support. A particular difficulty in this area is the limited and sporadic funding available to equity programs, which often have to be subsidised from already-stretched general university revenue. This is an issue that could be usefully addressed through the proposed negotiation of mission-based compacts.

Both universities and government have given considerable attention in recent years to the specific case of Indigenous higher education. While the overall participation rate remains unacceptably low there have been some successes, for example, a doubling in the number of commencing Indigenous PhD students from 2001 to 2006. Vice-Chancellors, in discussion with the Indigenous Higher Education Advisory Council, agreed in 2007 to pursue an ambitious agenda including a Centre of Excellence to develop indigenous researchers, a national Indigenous workforce strategy for higher education and consideration of establishing an Indigenous Learned Academy. The support of government in pursuing these vital initiatives will be crucial to their success.

As has been widely noted, women now outnumber men in university enrolments, to the extent that some commentators have started to talk about men as a disadvantaged group. At the same time, women remain significantly under-represented in certain fields of study, particularly in the sciences and engineering. This is an issue that can most usefully be addressed through engagement of prospective students at the secondary school level, which is a subject that could form part of the COAG human capital agenda.

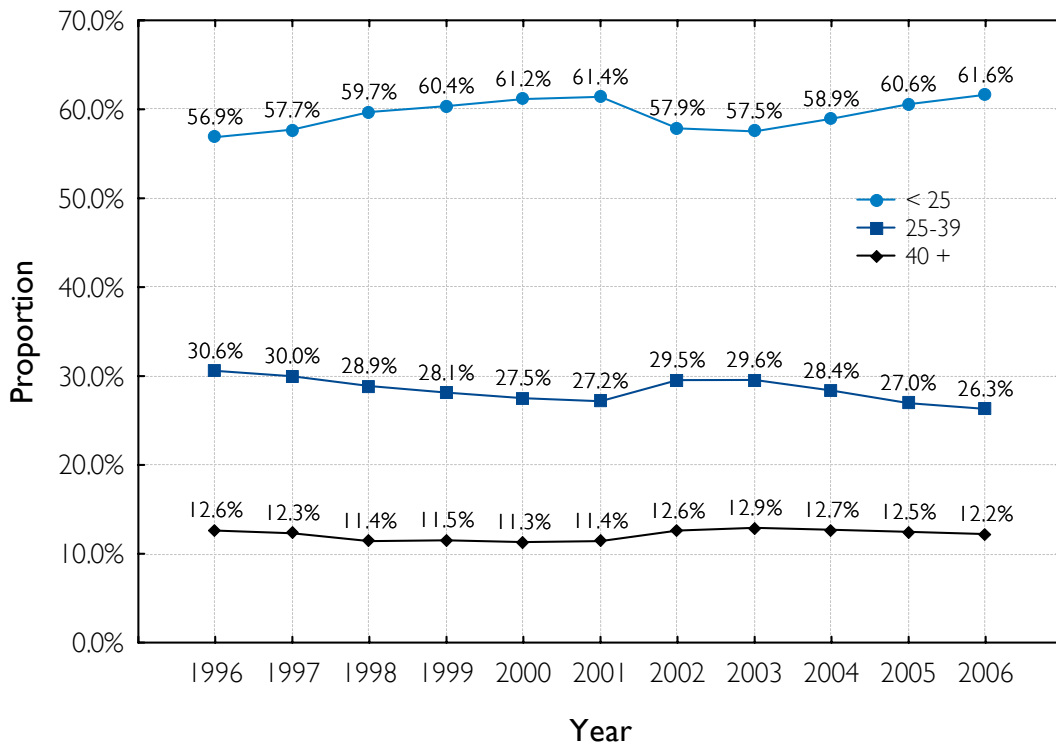
More could be done to reduce the attrition rate within university studies. This is an especially cost-effective approach to increasing graduate availability, improving equity and helping with reducing skill shortages and with productivity growth with relatively immediate effect, compared to schooling initiatives. Figure 12 shows the attrition rate over five years from 2001. The problem for universities is that as the pool of students diversifies the need for greater resourcing and student support increases. Present funding formulae have derived from an historical focus on well-prepared domestic school-leavers moving straight to university for studies. As international students, mature age entry students and more disadvantaged students enter the equation, the costs for successful outcomes increase.

Figure 12: Bachelor Commencements Attrition Rate, 2001 to 2005 ⁵³



With respect to the full engagement of the mature age population in higher education, Figure 13 shows that the proportion of mature age (25+) commencements has been falling in recent years, which may reflect the higher opportunity cost for those with work and family commitments in an environment of increasing study costs and reduced availability of income support.

Figure 13: Proportion of Domestic Commencements by Age Group 1996 to 2006 ⁵⁴



Given the expected fall in the number of school leavers, and the increasing economic importance of mid-career skills development, making university more accessible to mature age students will be an important issue for the sector over the next decade. Increased flexibility in delivery of study, as suggested by the Discussion Paper, may go some way to attracting more mature age students, and many universities are already pursuing options in this area. However, without addressing the issue of full funding of teaching costs and improved income support (e.g. through consideration of making part-time scholarships available), it is unclear whether it will be possible to adequately create a new cohort of students, despite the significant efforts of individual universities.

7. The Future Institutional Framework for Higher Education

Beyond resourcing, the effectiveness of universities in enhancing national progress depends upon the institutional framework within which universities operate and upon their own governance, management and culture.

7.1 Legislative and Regulatory Structures

Universities focus appropriately on their role as autonomous, self-accrediting institutions of higher learning. Internal committees and reporting and collegial decision-making are standard and form the web of peer scrutiny of the quality of a university's activities. But this privilege of autonomy is not unconstrained. In particular, universities operate under a framework specified externally that includes:

- State and Territory or, in one case, Commonwealth, legislation that establishes and governs the universities and imposes scrutiny by the full apparatus of responsibility to legislatures, auditors' general, ombudspersons, freedom of information legislation and more.
- Qualifications frameworks and quality assurance mechanisms, including AUQA, established by governments in Australia, which define acceptable association of education awards with institutional form and examine processes in place to ensure the quality of delivery for those qualifications.
- Conditions of funding imposed by the Commonwealth government in providing its funding share of university revenues, ranging from fee caps, quantity rationing for funded places, specification of fields of study that will be funded, requirements for complementary funding by institutions for research grants and more.
- Numerous state or territory, national, and international professional accreditation bodies.

One area of considerable concern that emerges in the light of these official frameworks is the inconsistency that arises from the absence of effective forward planning and the absence of whole-of-sector perspectives by the Commonwealth Government itself and by other key stakeholders who press universities to be responsive, such as industry. In particular, much greater within department and cross-department coordination of matters relating to higher education is needed within the Commonwealth Government. One example is the neglect by the Skills Australia process of analysis and systematic projection of requirements for complementary and substitute professional and generic managerial skills. Another is the absence of a conception of major "soft infrastructure" planning within the Infrastructure agencies, which is likely to lead to serious problems in delivery of national infrastructure on time and on budget. Equally, the division of responsibility for health research across portfolios encourages problems of absence of full-cost funding for such research.

Similarly major cross-jurisdictional issues arise from operation of Australian federalism. Universities Australia has expressed concern over: the duplicated reporting arrangements; inadequate legislative provisions in areas such as protection of academic freedom; “crowding out” concerns with cross-jurisdictional funding; inconsistent infrastructure and faculties planning requirements, including for multi-jurisdiction institutions; and complex VET pathways for universities (including fee and funding anomalies).

In addition, it is important to recognise that international students represent about 25 per cent of the total number of students enrolled in Australian universities. Overseas students, and former overseas students, have provided over half of the increase in skilled migration over the last decade – they are an intrinsic part of the human capital agenda in this country and need to be recognised.

In this spirit, Universities Australia has argued for issues relevant to universities and their international students to be included in the Human Capital Agenda within the Council of Australian Governments, or some equivalent forum for co-ordination, and specifically for the following to be addressed:

- The State-to-State differences in charges for educating the children of student visa holders;
- The absence of student transport subsidies in Victoria and New South Wales for international students despite their payment of GST; and
- The lack of ease of VET-university pathways for international students.

In relation to VET, Universities Australia would welcome increased development of clearer and cleaner linkages across the tertiary education sector as well as within higher education itself. This would be conditional on preservation of the distinctive nature of universities as detailed already above in this submission.

7.2 University Governance

Previous governments have adopted an interventionist approach to the operation of Australia’s universities. Universities Australia reiterates the need for a balance now to be achieved between appropriate public accountability of universities and the maintenance of their fundamentally autonomous and self-accrediting character. Where governments wish to apply the resources of the university sector to particular national interest objectives, for example the greater commercialisation of research, then this should be achieved through a process of partnership rather than by short-term bureaucratic intervention.

Overall, universities have been supportive of external quality assurance processes such as AUQA audits and the new ERA initiative. If well managed, these processes can complement universities’ own extensive quality assurance mechanisms and can help to maintain public and government confidence in the university system. Universities have also acknowledged benefit from the previous Government’s National Governance Protocols exercise in terms of inducing systemic review of the role of university governing bodies. The linking of university funding to particular workplace relations outcomes, on the other hand, was almost universally considered to have overstepped the mark in terms of undermining university autonomy and compromising management flexibility.

As a general principle, universities should not be subject to a higher degree of regulatory intervention than applies to other large corporations. Owing to their significant government funding, their public critical voice, and their importance to skills development and other government priorities, there will always be a temptation to intervene aggressively in university affairs. It is not at all clear that such

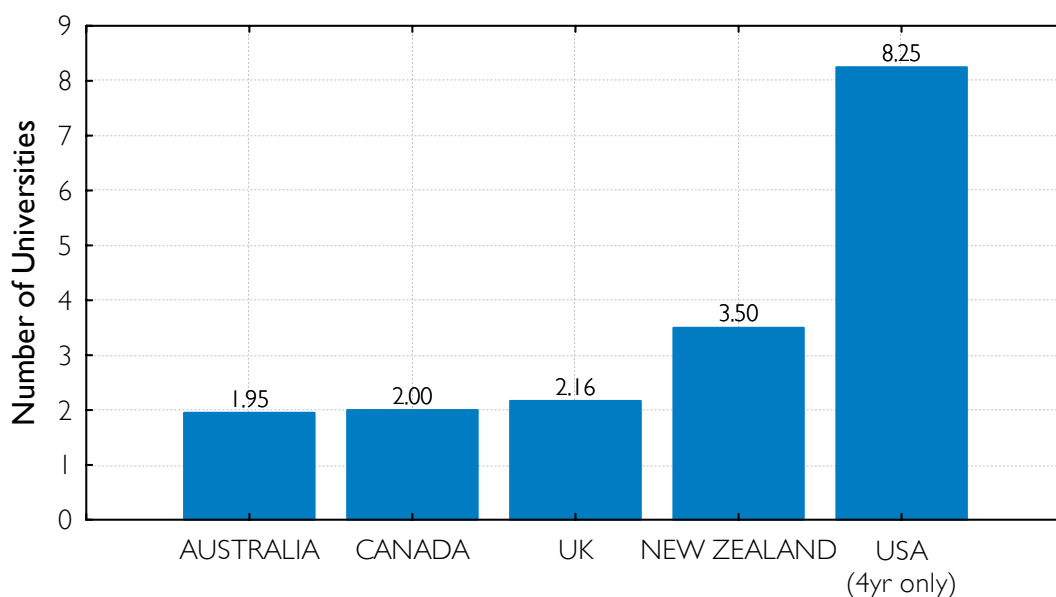
intervention serves the interests of the university sector, its students or the broader Australian community.

Universities themselves are on the whole highly responsive to student demand, changing economic and social conditions and the shifting international environment for higher education. Partnership with government to help realise their vision for engaging with future challenges is therefore likely to be more productive than further regulatory burden. Universities Australia has been unconvinced by suggestions of a need for the creation of a Commonwealth Research Ombudsman. There is no evidence that the incidence of research misconduct is such that it cannot continue to be managed as an institutional staff management issue by the Vice-Chancellor as university CEO under strong, clear protocols that involve external participation in peer review processes convened by the universities themselves.

On the issue of whether Australia has too many universities for its size and whether some government-sponsored rationalisation may be necessary, Universities Australia believes that such a position is hard to support on the evidence. Prominent universities such as Cambridge and Princeton are much smaller than the average Australian university and a country such as Taiwan, with a similar population to Australia has 128 universities as opposed to Australia's 39 institutions.

Figure 14 shows the number of people in the population per university and that Australia actually has a low number of universities compared with a number of key international competitors.

Figure 14: Number of universities per million persons, by country ⁵⁵



Universities Australia believes that instead of deliberately seeking to promote amalgamations or other radical structural measures, government policy settings should facilitate a focus on individual universities' unique areas of strength and on leaving institutions free to pursue greater networking or linkages among universities and with other partners as best suits those missions, including to minimise unnecessary duplication. A great deal can be achieved in this manner without the expense, risk and political fallout of closing campuses and/or losing the identity of regional institutions with strong connections to their local communities.

7.3 University Management and Mission

University management has shown itself as adaptive and entrepreneurial where this has been permitted by the Government's regulatory frameworks e.g. international education. Even though Government provides only 40 per cent of Australian university income, the lowest in the OECD for public universities, the regulatory framework has been pervasive in directing all areas of university activity. The areas where that reach is least have been among the most progressive, but now to the point of imbalance in the system. It is telling that private schools receive 60 per cent of their income from government in Australia and have far fewer reporting and accountability requirements and far superior indexation arrangements for funding.

Universities in Australia have grown to be large and complex entities. The management task is a uniquely difficult one involving as it does such distinctive features as an awkward "co-opetition" framework, where universities are at once urged to compete while also being asked to co-operate. They also embed the tension between collegial deliberation arising from the importance of pooled wisdom and peer scrutiny in academic matters alongside the need for quick, efficient, strategic decision-making in a rapidly changing external environment. Despite these management challenges, academic salaries have remained behind returns for similar functions and skills in the more straightforward profit-making environment of the private sector. For example, private sector CEOs receive 2.5 times the remuneration of university heads for equivalent sized organisations.⁵⁶ Similarly a doctorate produces a lower rate of return than a master's degree, given the high career orientation of the doctorate toward academic life compared to terminating masters' graduates.

At its broadest, university management involves pursuit of three streams of objectives, i.e. teaching, research and external engagement. These are interdependent and have mixed ability to be captured in measurable performance indicators. But the situation can be improved and Universities Australia supports the efforts under the ERA to find combined metric-peer techniques of documenting research performance and the efforts of the Australian Teaching and Learning Council to find measures for teaching. The OECD AHELO project promises further advance in the teaching area by defining exit standards of achievement that can be compared with entry standards, so allowing approximation of a value-added measure. Similarly the Higher Education Funding Council in England has made major progress in funding knowledge transfer based upon related income measures.

Universities Australia notes the Government's commitment to introducing 'mission-based compacts' as a funding vehicle for universities. We believe compact negotiation should be based on an 'envelope plus' model, where the existing (or modified) formulae for teaching and research funding are retained as the core university funding envelope, and additional funding is negotiated for agreed priorities. These could include the development of innovative research networks, new teaching models or enhanced equity initiatives. The following overall principles should apply to compact funding:

- transparency
- sustainability
- simplicity
- accountability, and
- institutional autonomy.

It has yet to be determined how distinctive individual missions under compacts will be linked to co-operation between universities. The Government has used the concept of 'hubs and spokes' to describe its core approach to such linkages, however this concept remains to be fully developed. Universities Australia prefers the notion of 'networks' to 'hubs and spokes', as it implies a more flexible and less hierarchical arrangement. We look forward to working with Government to put concreteness into these notions. Networking is not a notion that is unknown to universities and more so perhaps than in private business. The not-for-profit status of universities does allow collaborations

of a kind not permitted the private sector, despite increasing imperatives favouring more competition than has been the case in the past.

There are multi-faceted networks in operation which bring both benefits and challenges in terms of communication. Some of the networks are:

- Domestic university groupings such as those between the Australian Technology Network (ATN), Innovative Research Universities Australia (IRUA), the Group of Eight (Go8) and state Vice-Chancellors groups.
- International university groupings such as Universitas 21, Association of Pacific Rim Universities, International Alliance of Research Universities, Commonwealth Universities Association, International Association of Universities.
- Professional groupings and meetings across universities for peer groups such as the Deputy and Pro Vice-Chancellors, Senior Administrators, Deans, Directors, Department Heads, Librarians, IT Directors and career advisers.
- Allied business service organisations emerging from the sector such as AARNET, Graduate Careers Australia (GCA), IDP Education Australia Pty Ltd, Higher Ed Services and sectoral service entities such as the Martin Institute, Australian Teaching and Learning Council (ATLC) and the Australia and New Zealand School of Government (ANZSOG).
- Disciplinary associations and meetings and academic honour groups, ranging from the Economic Society of Australia or the Historical Society of Australia through to the Academy of Sciences.
- Collaborations across particular universities, as with recent agreements between the Australian National University and the University of Melbourne and between the University of Canberra and Charles Sturt University.
- Research funding dependent on networks such as the ARC Centres of Excellence and the NHMRC or for networks such as National ICT Australia (NICTA)

It remains to be defined precisely what additional forms of networking are needed and are in need of government support and encouragement.

In pursuing their missions, universities have increasingly come to recognise the importance in this of establishing partnerships with other stakeholders beyond the Commonwealth Government. State and Territory governments, and sometimes local governments, have engaged knowledge communities more lately, e.g. Office of the Knowledge Capital established by the Melbourne City Council and the “Smart State” initiatives of the Queensland Government.

Social science defines three basic forms of social organization: central power (statism), decentralised individualism (markets) or social co-operation based on trust (networks). These correspond to dominant processes in politics, economics and social life, respectively.

In universities a fully state dependent model, as in Continental Europe, has been shown wanting, as evidenced by the urgent reforms now in prospect there. Equally, strong market-led reliance as in the USA raises social equity and standards issues unattractive to Australians. As a consequence a hybrid model of state and market has emerged for Australia, with largely implicit co-operation elements. It is perhaps timely for this co-operation element to be explicitly integrated further through systematic development of enhanced network arrangements that might even better suit the Australian ethos and the public benefit from universities.

This extended approach could be termed a “partnership” model of universities and it would embed broadly balancing elements of each of state, market and co-operative principles. Such a partnership model between government, industry and higher education, and across universities themselves and other tertiary providers, may distinguish a new way forward in the structure of Australian higher

education. The potential role of government and market demands are reasonably well known. But Universities Australia looks forward to working on definition of new support for networks with both the government and other stakeholders.

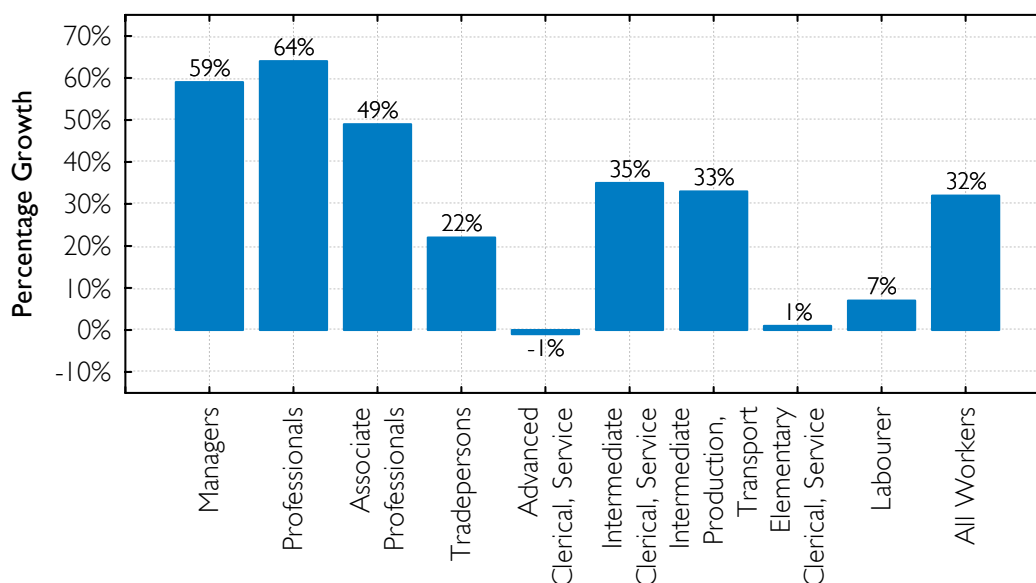
7.4 Labour Force Issues

As Australia enters more uncertain economic times, the ability of universities to address skill shortages, improve productivity, assist with fiscal discipline, promote national savings, improve infrastructure provision, and reduce current account deficits is worthy of understanding and promotion.

Within these areas of contribution, Australia’s skilled labour shortages are widely acknowledged. These shortages are significant in the trades and the Government has introduced a much expanded vocational training program in response. But they are even larger in the professions and management. It is little understood that resource booms generate as much or more demand directly and indirectly for graduate jobs as they do for other occupations. It is also sometimes forgotten how a thriving knowledge economy based on value-adding complement the benefits of other industries and makes prosperity sustainable.

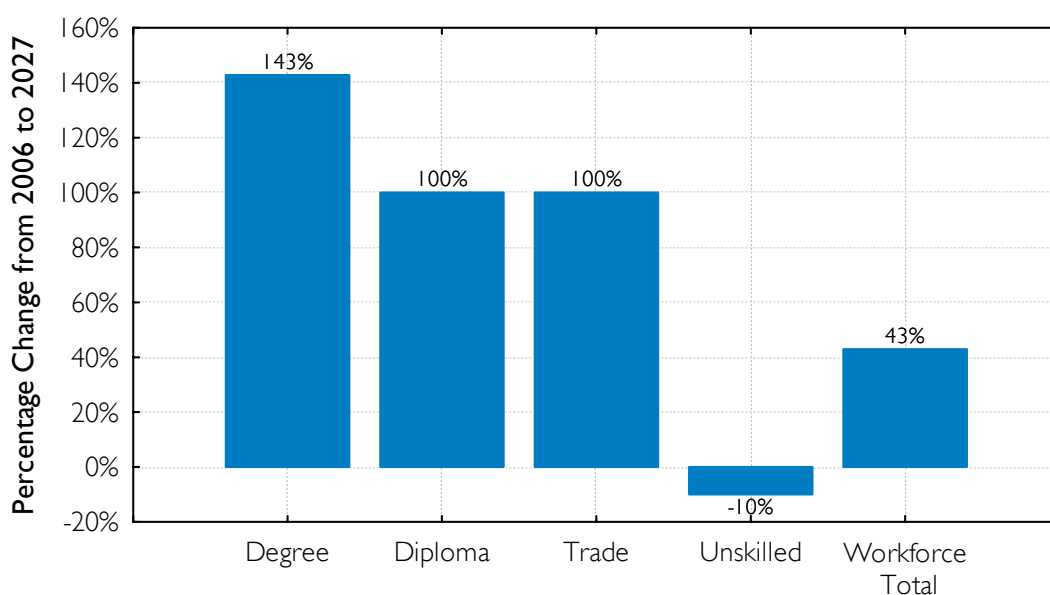
The following graph demonstrates the employment growth arising from the Western Australian mining boom between 1996 and 2007 and in particular employment categories.⁵⁷

Figure 16: Employment Growth due to WA mining boom, 1996 to 2007 ⁵⁸



The employment growth pattern shown in Figure 16 for Western Australia under the minerals boom in that state over the last decade is now being experienced in South Australia as it enters a new minerals and defence outlay boom there. The following graph (Figure 17) reflects the expected skilled employment requirements there as a consequence of that newer boom.⁵⁹ The same huge increase in required university graduates is seen, and this mirrors like national trends.

Figure 17: SA Mining and Defence Boom 2006-2027: Projected Skilled Employment Percentage Change by Qualification Level ⁶⁰



A frequent criticism of the university sector is that it fails to produce sufficiently 'work ready' graduates with the teamwork and practical problem solving skills required for work in a business or government environment. Sometimes this is much overstated and misses the major changes in incorporation of employability skills alongside knowledge content learning in curricula. For example, the LSAY survey finds that when asked about employability skills graduates indicate very favourable evaluations of their studies (Table I).⁶¹

Table I: Graduate evaluation of generic job skills ⁶²

Skill Area	Importance of job skills	Degree to which university studies prepared student for current job
	Proportion indicating skill as being Very important or Important (per cent)	Proportion of those considering skill to be Very important or Important indicating that they were prepared Very well or Well (per cent)
Communication	98.6	89.9
Teamwork	96.5	88.9
Problem solving	96.0	93.2
Initiative / creativity	89.5	78.7
Planning / organisation	95.1	91.8
Self-management	97.0	92.1
Learning skills	98.1	95.0
Technology	90.2	79.4
<i>Average %</i>	<i>95.1</i>	<i>88.6</i>

It is also clear that this favourable evaluation is increasing steadily over time, as seen in Table 2.

Table 2: Employability skills evaluation, change between 2003 and 2006

Skill Area	Satisfaction rating (per cent)	Change 2003 – 2006
Communication	89.9	7.2
Teamwork	88.9	10.8
Problem solving	93.2	8.4
Initiative/creativity	78.7	-0.6
Planning/organisation	91.8	8.9
Self-management	92.1	6.2
Learning skills	95.0	4.8
Technology	79.4	3.5
<i>Average %</i>	<i>88.6</i>	<i>6.1</i>

However, without undermining the role of universities in providing a foundational disciplinary (rather than vocational) education, there are some important steps that the university sector can take in partnership with government to provide even better preparation of students for their future careers.

Similarly particular attention has increasingly been paid to relationships with business, unions and community bodies. In 2007, Universities Australia proposed the establishment of a National Internship Scheme to bring together the experience in place in many organisations and universities to allow many more Australian university students to undertake structured work integrated learning during their studies.⁶³ The scheme would expand on existing pathways for the work-readiness of Australia's university students to support improved productivity, reduced skill shortages and enhanced equity and access to rewarding careers for graduates.

Universities Australia recently proposed the following steps in relation to the establishment of the scheme:

- a more active commitment by the Commonwealth to promoting an expansion of internships and work integrated learning;
- a commitment by Commonwealth, State and Territory governments to lead by example through expansion of internship opportunities within their own departments and agencies;
- establishment of a joint government/industry/university steering committee to define the scope, structure, mechanisms and costs of such a scheme – either as part of the Council of Australian Governments human capital agenda or as a separate initiative; and
- establishment of a National Internships Council to provide advice to the Commonwealth Government on regulatory and tax expenditure setting for work integrated learning.

An initial pilot of the scheme is being developed through collaboration between the three South Australian universities (Flinders University, The University of Adelaide and the University of South Australia), businesses and government departments, facilitated by Universities Australia, Australia 21 and Business-SA. While the scheme is directed initially at coursework partnerships, with doctorates increasingly including coursework elements, the scheme has the capacity to provide for direct research internships.

Other strategies to enhance relationships with business, unions and community bodies include:

- Advocacy for a new Knowledge Finance Sector in Australia including consideration of innovative financing proposals;
- University collective and individual membership of business-linked bodies such as the Australian Services Roundtable and CEDA and close liaison with business associations such as the BCA, AIG and ACCI;
- Working with BIHECC to develop new philanthropy settings to induce more private giving to universities as endowments;
- Joint projects with universities such as Universities Australia's own activities in a "Skilling Australia" project with key unions and the Dusseldorp Foundation and an "Earning and Learning" workshop with Professions Australia.

Naturally there is an even more extensive range of such relationships for individual universities, too legion to list here, but perhaps understated because of lack of systematic documentation. For example, when counts are made of formal research projects with universities, the sum is modest. But if a count is made of numerous informal linkages (e.g. meetings, phone calls, consultancies, executive courses) the inter-relationships are quite pervasive.⁶⁴

One of the greatest management issues facing Australian universities relates to workforce succession. The Group of Eight Universities estimates that 50 per cent of PhD graduates from research intensive universities go on to careers outside the research sector.⁶⁵ While this can be seen as a positive outcome in terms of the skills that PhD graduates bring to a wide range of roles in public policy, business and other areas, it is of concern given the increasingly competitive international higher education environment and the likely mass retirement of 'baby boomer' academics in the next decade.

With the long timeframes involved in research training, and the difficulty of making mid-career transitions into academia, early action to keep the best research students working in their primary field is highly desirable. The strong interest held by many research students for their subject matter means that many more PhD graduates may consider remaining in the university sector if the number of entry level fellowships increased alongside improved salary and conditions for these positions relative to other career options.

There are also benefits to be gained for Australia from attracting high standard international students to undertake research training at Australian universities. Some of these students will remain in Australia to pursue research careers, providing a direct long-term benefit to Australia. Others will return to leading roles overseas, but will remain well-disposed towards Australia and will retain connections with many Australian colleagues.

While Australian universities lead the world in the proportion of undergraduate international students, the number of international students undertaking advanced research programs lags behind other countries. In Australia, 21.6 per cent of PhD students are international students, while in the UK the comparable figure is 45.0 per cent.⁶⁶ While the reasons for this disparity are complex, one initial step that could promote Australia as an international research degree destination would be to increase the number of International Postgraduate Research Scholarships and to include an APA-equivalent stipend (the scholarships currently only cover tuition fees). Some valuable government initiatives in this

direction are in train. Another immediate measure would be to loosen the restrictions on AusAID-funded Masters students proceeding to higher degree studies, in cases where their sending country is supportive of their remaining in Australia for further study.

Career development is also an important issue within the academic workforce. Many high quality academics currently move between different untenured low level positions over a period of years and may not have the requisite skills to take on leadership roles when the anticipated mass retirements of senior academics takes place over the coming decade. This can be a particular issue for women academics who often juggle their early academic career with family responsibilities and who without suitable opportunities and flexible working arrangements may be lost to the system entirely.

In this respect the Government's program of Future Fellowships is a welcome initiative, which has the potential to create a critical mass of attractive mid-career positions that can provide promising junior academics with a pathway to university leadership. By itself, however, it will not address the casualisation of the academic workforce which is a key consequence of the overall under-funding of the university system. It is hard not to return to themes therefore of funding levels and structure, for to do otherwise would be to continue to short change investment in Australia's future.

8. Conclusion

The vision for the future of the Australian higher education system is one of enhancing the contribution to national goals that can uniquely be made by institutions of research and learning. The system to deliver on this must be based on excellence, diversity, inclusion and international engagement, and acknowledging the particular role that universities play in pursuing broadly based teaching and research in the public interest. A structural framework which ensures that regulation of higher education is fit-for-purpose and preserves the autonomous, self-accrediting nature of universities is critical.

To achieve this vision a goal of 2per cent of GDP for higher education is required for the higher education sector, with at least 50per cent public funding established. The public funding should allow for the full cost of teaching, research and external engagement programs, and have the ongoing appropriate indexation of public funding.

There must be a far reaching review of the adequacy and consistency of student support arrangements, including the removal of income assessment from all scholarships and an increase in the value of the Australian Postgraduate Award. Within this context there needs to be greater participation by Indigenous Australians, other disadvantaged groups and mature age students in higher education.

A review of the Australian higher education sector needs to design a framework that allows anticipation and adjustment for the key challenges ahead, globally, nationally and within the higher education sector. This framework should facilitate integration and partnership with other education providers and with other stakeholders. The outcome will be a world class system suitable for meeting the requirements of the 21st century.

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