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Meeting Australia's tertiary education needs

Submission to Senate Inquiry

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Summary

Australian higher education policy should be directed towards the objective of universal and equal access to tertiary education, including university and technical education. In this submission,it is argued that the achievement of this goal requires both a substantial expansion of public expenditure and an increased focus on the needs of the university system as a whole, rather than of universities as separate and competing institutions. It is shown that the only significant sources of additional revenue to meet the core education objective of the universities are government expenditure and contributions from students. Contributions under the HECS scheme, and by virtue of the unfavorable tax treatment of investments in education, are already close to the full cost of education for courses with a high potential for generating increased earning power, such as business and law. Hence, further increases in student contributions are an undesirable last resort. If such increases are necessary, they should not be introduced in a way that exacerbates existing inequalities.

Meeting Australia's tertiary education needs

Education is crucial to Australia's economic future. More than any other factor, the existence of a skilled and flexible workforce is the primary determinant of relative economic growth. Because technological change continuously substitutes capital inputs for unskilled and semiskilled labour, the average level of training and education required to maintain productivity levels comparable with those of leading developed countries is rising over time. The demand for workers without high school education has already fallen to very low levels, and the same is now happening for workers without some tertiary training and education. Nations with a policy focus on meeting education needs are now adopting a goal of universal access to tertiary education, including technical and university education.

By contrast with global trends, Australia's performance has been dismal. We are a long way from achieving even the target of universal high school completion, which is now clearly inadequate. Moreover, in this respect, Australia has stagnated or declined. At the beginning of a period (1992-93 to 1997-98) widely hailed as a 'productivity miracle', school completion rates were actually declining. By the end of this period, the number of new university places for domestic students had been frozen by government fiat, and has remained essentially unchanged ever since.

For most of the 1990s, public policy towards education was driven by the implicit assumption that public expenditure on education was wasteful consumption, crowding out more valuable investment in physical capital. Although overt hostility to education has declined, and there has been some recognition of the need for investment in human capital, what is needed is a systematic reorientation of policy.

In this respect, the government's current policy proposals offer little. Although any increase in expenditure is welcome, proposals for such increases have been tied to an ideological wishlist, including continuation of failed attempts to make the higher education

system operate like a competitive market. The associated proposals are at best irrelevant to the needs of the higher education system and at worst positively harmful.

The object of this submission is to set out the case for a policy objective of universal and equal access to tertiary education, and to consider the changes in education policy needed to achieve that objective.

The objectives of the tertiary education system

Although universities and other tertiary institutions undertake a wide range of tasks, their primary purposes, as far as public policy is concerned, are the provision of tertiary education to Australians and the undertaking of public good research.

This submission will be concerned primarily with the tertiary education objective. The central assumption is that the goal of public policy should be the provision of universal access to tertiary education. This requires both a target of universal school completion and the provision of adequate post-secondary education places for both school leavers and adult entrants.

The target of universal school completion will not be dealt with in detail in this submission. In addition, although technical and further education (TAFE) is a critically important component of a tertiary education strategy, the current institutional structure means that policies for universities and TAFE are largely separate. The submission will therefore focus on issues relating to the university sector.

The tertiary education objective

Any realistic approach to rescuing the Australian university system from its recent decline must begin with the need for the reversal of the funding cuts of the 1990s. The most appropriate approach is not to nominate a funding level and consider how the available funds can be spread, but to identify Australia's needs for education and research, then consider how these needs can be met. In an information-based economy, nearly all

workers will require some form of post-secondary education. It follows that the guarantee of universally available public education, which has until now been confined to primary and secondary schooling, must be extended to tertiary education, including universities, TAFE colleges and other forms of post-secondary education and training, such as apprenticeships.

An important first step in this respect is further integration of funding for universities and the TAFE system. In important respects, this would result in a recreation, on a more expansive scale of provision, of the former binary system, with TAFE colleges providing primarily vocational training and universities a more academic approach.

The fundamental requirement as far as government is concerned is the creation of sufficiently many adequately funded places to allow all young people to undertake some form of tertiary education, while restoring staff-student ratios at least to the levels prevailing prior to the Vanstone cuts of 1996. Assuming an additional 100 000 undergraduate university places (an increase of 20 per cent), and an increase in Commonwealth funding per student of 20 per cent, this would entail additional expenditure of around $1.5 billion per year, or about 0.025 per cent of GDP. Allowing for a commensurate increase in State and Commonwealth funding for the TAFE sector, it would be necessary to increase total funding for universities and TAFE to around $6 billion per year or 1 per cent of GDP. This is still a modest expenditure for a vital national investment.

The tertiary education system

Universities are complex institutions that can be viewed in a number of different ways, from the traditionalist idea of a community of scholars to the neoliberal concept of the enterprising universities. In considering an objective of universal tertiary education, however, the most natural way of thinking about universities is an extension of the school system. This view is particularly applicable in Australia because of the strong (and economically rational) preference of Australian students to attend universities in their own

home communities, rather than, as in the United States and United Kingdom, moving to a geographically distant university and living in a residential college or dormitory.

The central premise of Australian public policy on schools is universality. As far as possible, students should be able to receive an education of high quality, covering a standard range of subjects, regardless of their social class or physical location. This policy objective has required substantial redistribution of resources from schools that are inherently well-endowed, with good physical facilities and considerable capacity to attract contributions from parents, to those that are disadvantaged by being located in poorer or more remote areas.

Although school policy in recent years has been affected by movements to encourage competition and consumer choice, this has been constrained by the basic obligation to provide universal school education. It would be unthinkable, for example, to allow a public school to go out of business as a result of poor management decisions, thereby depriving students in the area served by that school of access to public education. Yet without the possibility of failure and bankruptcy, competition is largely ineffectual as a method of ensuring efficiency.

Public policy with respect to universities has been marked by a lack of clear thinking concerning the responsibility of government to provide universal access to tertiary education. On the one hand, it has become evident that the public expects governments to provide tertiary education. For example, it seems clear that the closure of a university serving a regional community

The decline in Australian tertiary education

During the 1970s and 1980s, Australia made substantial progress towards universal access to tertiary education. Rates of school completion and attendance at universities rose rapidly. Although there was some reduction in expenditure per student in the university

system during the 1980s, there was a general increase in the quantity and quality of education services provided. Public expenditure on education rose in real terms and as a percentage of national income.

Much of this progress was reversed in the 1990s, largely as a result of the decisions of successive Commonwealth governments. The worst damage to school education was done in the early 1990s as State governments reduced spending in line with cuts in grants imposed by the Keating government. Cuts in education expenditure were encouraged by policymakers at the Commonwealth level, where high levels of education spending were seen as detrimental to national savings, as in the Fitzgerald report. It should be noted, however, that research undertaken in the Commonwealth Treasury refuted the Fitzgerald analysis and correctly classified education expenditure as investment in human capital.

Until the last years of the Keating government, the higher education system suffered only minor ill-effects. The introduction of the HECS system in 1989 allowed for an expansion of resources in the system without an increase in net Commonwealth expenditure. Moreover the design of the system, with repayments only being made after graduates' incomes exceeded average weekly earnings, ensured a reasonable matching of costs to benefits.

The restructuring of the system under John Dawkins provided the basis for future expansion, but also implied future growth in costs. By converting colleges of advanced education and institutes of technology to universities, the Dawkins reforms added a mandate for public good research to institutions that had previously focused primarily or exclusively on teaching. A second-round effect was to raise the academic standards expected of the TAFE system which filled niches abandoned by the new universities and were expected to provide a basis for articulated entry into university courses.

Changes of the general kind introduced by Dawkins were necessary if a goal of universal tertiary education was to be realised, but they implied a requirement for substantially increased expenditure. In fact, cuts were imposed, beginning with the decision

of the Labor government not to provide funding for an enterprise bargaining round required to partially offset the erosion of relative wages for university staff.

Far more damaging were the cuts introduced in the 1996 Budget. Although some of the cuts, particularly those affecting research, were subsequently repealed or modified, the adverse impact of the cuts affecting tertiary education has grown over time. The most striking effect is that, despite growing need, the number of domestic students commencing university has remained essentially unchanged since 1996. At the same time, the resources allocated to domestic students have declined as resources have been diverted to income-generating activities such as teaching of full fee-paying overseas students.

The effects of cuts in higher education may be seen most clearly by considering impacts on staff–student ratios. Table 1 shows changes in the number of university staff for the period from 1990 to 1999, a period in which the total number of students increased by around 70 per cent. The number of international students quadrupled and the number of higher degree students tripled . In general, the staff requirements for providing adequate teaching to international and higher degree students are greater than for domestic under-graduates, so it is reasonable to conclude that the total teaching load has approximately doubled.

As can be seen from Table 1, the total number of academic staff was effectively static during this period, but there was a large increase in the proportion of part-time staff (most of whom are academic rather than administrative staff). Thus, an effective doubling of workload was combined with a reduction in the number of full-time equivalent academic staff.

Table 1: Staff at Australian Universities

	Academic	Other	FullTime	Fractional	Total
1990	34184	33,117	56,970	10,331	67,301
1991	35848	35,279	60,223	10,904	71,127
1992	34500	39,455	62,299	11,656	73,955
1993	35272	40,307	63,624	11,955	75,579
1994	35662	40,423	63,963	12,122	76,085
1995	36235	41,195	64,762	12,668	77,430
1996	36542	42,224	65,625	13,141	78,766
1997	35953	41,363	63,267	14,049	77,316
1998	35057	41,215	61,618	14,654	76,272
1999	34926	41,114	61,561	14,479	76,040

Source: Department of Education, Training and Youth Affairs, Selected Higher Education Statistics

The irrelevance of market-oriented reforms

Particularly in the period since 1996, public policy towards universities has been driven by the belief that improvements in the provision of tertiary education could be generated at no cost (or even with a positive reduction in costs) if universities were more market-oriented and businesslike. The ultimate policy outcome implied by this belief (and espoused by its more ideologically consistent advocates) is one in which education is provided by for-profit corporations competing on a basis of price and quality.

Even in the relatively short period of seven years, the unrealism of this policy has become apparent, and important policy changes have gone in the opposite direction. For example, the introduction of the Postgraduate Education Loans Scheme (PELS) operated on the HECS model, marked the effective abandonment of a pure fee-paying model in

the area of higher education where this model had been most widely adopted. Nevertheless, the development of policy is still bedevilled by the chimera of a competitive model, promoted both on ideological grounds and by some institutions for which it is clear that the rules are rigged in advance.

In a genuinely competitive industry, individual firms would rise or fall depending on the skill of their workers, the wisdom of management decisions and so on. By contrast, in the recent period of pseudo-competition in Australia, the outcome for an institution could be predicted, with a high degree of accuracy from its starting position. Relative standings roughly correspond to the classification set out by Marginson and Considine (2000), who class universities, in rank order of status, as:

- Sandstones (the first universities in each state, established in the 19th century);
- Redbricks (the remainder of the 'Great Eight', namely ANU, Monash and UNSW);
- Gumtrees (postwar universities founded between 1960 and 1975);
- Unitechs (former institutes of technology); and
- New Universities (former colleges of advanced education).

These relative standings have been stable for many decades, except that the status of Unitechs has risen while that of Gumtrees has fallen somewhat. Even this change, however, reflects changes in policy settings that have favoured the Unitech sector as a whole, rather than superior performance by particular institutions.

The stability of relative standings reflects the fact that changes in student demand working through reputation effects operate more slowly than the processes of change that operate within universities. Where they operate effectively, reputation effects tend to be part of a self-reinforcing cycle, so that initial improvements in performance promote growth in demand, which in turn facilitate further improvements in performance. By contrast, in the absence of deliberate policies aimed at reducing inequality in standards, relative rankings tend to be determined by long-standing sources of relative advantage (or disadvantage) such as the institution's history of excellence or otherwise, the body of

graduates (now called alumni, in recognition of the success of US universities in obtaining funds from this source), the possession of high-value centrally located campuses and so on.

These relative positions are too entrenched to be affected by the decisions of individual university managers. For example, the 'sandstone' universities have followed radically different strategies over the last decade, from Monash, which attempted (with only modest success) to make itself 'the first global university', to Sydney which has adhered fairly rigorously to a traditionalist model. Yet all have done better than any of the 'gumtrees', the group most disadvantaged by the changes in policy.

The case of Melbourne University is particularly striking. Melbourne has engaged in a series of unsuccessful attempts at partial or complete privatisation, including Melbourne University Private and its leadership role in the establishment of U21Global. These failed policies have generated huge financial losses. However such losses have been met with ease in view of Melbourne's strong asset base. This includes obvious items such as land that can be redeveloped generating large profits. But it also includes assets such as the domain-name business of Melbourne IT, sold for a large profit during the dotcom boom. Properly speaking, this was an asset of the Australian university system as a whole, which built up the Internet prior to its commercial development. But it was natural that if there was to be a salable asset associated with this public good, that it would turn out to be the property of a centrally-located sandstone, and, in this case, Melbourne was the lucky winner.

The main effect of policies aimed at promoting competition has been to induce rapid growth in expenditure on marketing initiatives. The net benefit for the publicly funded university system as a whole is close to zero, while the costs have been imposed at a time when resources for the core mission of the universities were already inadequate.

Moreover, far from promoting diversity, pressure for competition has promoted convergence on a single, generally substandard model, focusing on courses with high

short-term market appeal, modest intellectual demands and low costs of provision. A particularly striking example is the proliferation of Master of Business Administration (MBA) programs. The provision of a high-quality MBA program is extremely difficult, while the provisions of a substandard program is very easy, a reflection of the absence of well-established disciplinary standards applicable to 'business' as a whole, as opposed to relevant academic disciplines such as economics and psychology. Studies in the United States have concluded that only a dozen or so MBA programs there yield net benefits. This would suggest that Australia could probably support at most one good-quality program, although the geographical dispersal of the student population would probably imply a minimum requirement of four or five. In fact, there are over 30 such programs on offer. Although the poor quality of management education in Australia has been repeatedly deplored, it is an inevitable outcome of the pseudo-competitive model governing tertiary education.

The need for additional public funding

The most appropriate approach is not to nominate a funding level and consider how the available funds can be spread, but to identify Australia's needs for education and research, then consider how these needs can be met. In an information-based economy, nearly all workers will require some form of post-secondary education. It follows that the guarantee of universally available public education, which has until now been confined to primary and secondary schooling, must be extended to tertiary education, including universities, TAFE colleges and other forms of post-secondary education and training, such as apprenticeships.

An important first step in this respect is further integration of funding for universities and the TAFE system. In important respects, this would result in a recreation, on a more expansive scale of provision, of the former binary system, with TAFE colleges providing primarily vocational training and universities a more academic approach.

The fundamental requirement as far as government is concerned is the creation of sufficiently many adequately funded places to allow all young people to undertake some form of tertiary education, while restoring staff-student ratios at least to the levels prevailing prior to the Vanstone cuts of 1996. Assuming an additional 100 000 undergraduate university places (an increase of 20 per cent), and an increase in Commonwealth funding per student of 20 per cent, this would entail additional expenditure of around $1.5 billion per year, or about 0.025 per cent of GDP. Allowing for a commensurate increase in State and Commonwealth funding for the TAFE sector, it would be necessary to increase total funding for universities and TAFE to around $6 billion per year or 1 per cent of GDP. This is still a modest expenditure for a vital national investment.

The analysis above also implies the need for a more systematic redistribution of funds to offset the historical and locational disadvantages of the poorer universities. Such a redistribution would arise naturally from an explicit acceptance of a requirement to provide universal and equal access to tertiary education.

The options of higher student contributions

Under current funding policies, a continuing decline in the quality and quantity of tertiary education provided to domestic students is inevitable. The only feasible sources of significant additional revenue are contributions from the Commonwealth government and from domestic students. It is therefore important to consider whether additional contributions from students are justified on equity and efficiency grounds. Since it seems likely that increased contributions will be required in any case, it is important to consider the relative merits alternative approaches to increasing contributions.

The HECS scheme introduced in the 1980s was an important and positive innovation in educational financing. Criticisms that HECS involved the end of ‘free’ tertiary education were unfounded, since the system replaced by HECS was not, unlike public primary and secondary education, freely accessible. Places were rationed by the use of entry standards,

against which year 12 students were assessed. Entry standards for university courses were determined, not by assessing the minimum standard a high school student would need to achieve in order to be ready to undertake a given university course, but by limits on the available amount of public funding and therefore on the number of available places. Although this procedure is still in force, the expansion in the number of places has greatly reduced the number of students denied entry to university.

The HECS fee for vocationally-oriented courses such as law and economics now exceeds the cost of the teaching resources typically allocated to such courses, and is only modestly smaller than the full cost, taking account of administrative support and so on. The interest-free and contingent nature of the HECS loan amounts to a subsidy of between 30 and 50 per cent relative to the nominal amount of the fee. However, this subsidy is offset by the fact that, in general, investments in human capital are treated less favourably by the tax system than other investments. In particular, there is no provision for depreciation and no easy way to convert returns into lightly-taxed capital gains. It seems reasonable to conclude that the HECS scheme has reduced or eliminated the public subsidy to the purely income-enhancing role of the university system.

Public funding is appropriate for the public or external benefits of higher education, arising from example from the diffusion of learning about social and natural sciences and the humanities. The change to a differential system of HECS, although never supported by clearly articulated externality arguments, largely succeeded in matching public subsidies to social benefits. The high charges for relatively low-cost law and business courses eliminate most of the public subsidy provided for these courses, which may be assumed to generate mostly private benefits with few externalities. The largest subsidies are for science courses, followed by the humanities. This is consistent with most judgements about the distribution of externalities.

This analysis implies that an increase in HECS charges or in the proportion of full-fee paying places would constitute a tax on higher education relative to other

investments aimed at generating increased earning capacity. Nevertheless, in the absence of a substantial increase in public funding, there is no real alternative to higher HECS charges. It is therefore useful to consider the merits of the proposal that universities be free to choose increases ranging from zero to 30 per cent.

Clearly, this proposal would further undermine the universality of the tertiary education system. Depending primarily on their location, and to a lesser extent on tertiary entrance scores, some students would receive a higher-cost education at relatively well-funded institutions while others would receive a lower-cost, lower-quality education. Under present policies, these differentials would be magnified over time, something which is clearly anticipated by advocates of flexible fee systems. The primary effect of the proposed policy would be to allow institutions with a long history of relatively generous funding to convert their existing advantage in assets into a continuing advantage in income.

Consideration of differential HECS between institutions should be deferred until there has been substantial progress towards a goal of universal and equal access to tertiary education. At that point, if price competition were still considered a useful way of promoting diversity, it could be reconsidered.

Alternatives to improved funding

Much discussion of Australian university policy is premised on the idea that universities can use funds from a wide range of activities to finance their core functions of domestic tertiary education and public-good research. In this section, it is argued that, while such activities have constituted an increasing proportion of the work undertaken by universities, the net contribution to the financing of core functions is modest and likely to remain so. There is, therefore, no alternative to funding from some combination of public expenditure and contributions from domestic students.

Fee-paying overseas students at Australian universities

More than in any other developed country, the Australian university system has relied heavily on full-fee paying overseas students to maintain its economic viability over the last two decades. Approximately 17 per cent of all students at Australian universities are now full-fee paying overseas students, and the proportion in favored courses (business-oriented degrees in city-centre universities) exceeds 50 per cent.

The provision of education services to overseas students is an important activity in its own right. However, the main issue of interest is the extent to which the intake of fee-paying overseas students allows the provision of education to domestic students at reduced cost.

The most favorable case is one in which overseas students are admitted to existing courses in universities with spare physical capacity. In this case, the only additional cost to universities is the marginal cost associated with the provision of extra tutorials, course materials and so on. The difference between the fees paid and the marginal cost of extra students can be used to offset the fixed costs of providing the course to domestic students.

This analysis was applicable to the initial stages of growth in the overseas students market. However, as the number of overseas students has risen and competition between universities has intensified, the gap between fees and costs has declined. In some courses, the majority of students are full-fee paying. This means that any main benefit to the core function of the universities must arise from cross-subsidies between profitable and unprofitable courses, rather than from a contribution to fixed costs. However, such cross-subsidies are vulnerable to erosion through completion between universities.

The logical limit of the process has been reached by Central Queensland University, where domestic and international students are almost completely separated. Services to international students are provided in building rented in capital city central business districts .Any benefit to students at the main Rockhampton campus arises purely from a

financial cross-subsidy. Although, as a first mover, CQU may have obtained financial benefits, it is evident that these will be eroded over time.

In summary, although numbers of international students have continued to grow, the net benefit per student has declined, leaving the overall impact ambiguous. Analyses based on the proportion of gross revenue contributed by overseas students are entirely misleading. In analysing the success of the universities in meeting their core objectives, only

Global and multi-campus expansion

One of the characteristic features of universities throughout their lengthy history has been the fact that they have typically been physically located on a single campus with specific off-campus facilities such as university farms, teaching hospitals and so on. Offshoots have typically either failed or progressed to full independence over time. Multicampus institutions have typically either been broken up or have adopted 'federal' structures like that of the University of California system in which, for all practical purposes, each campus is a separate institution. By contrast, for-profit education providers (some of which adopt the title 'university') have frequently adopted a multicampus structure.

The reasons for the failure of multicampus institutions to prosper are not entirely clear. However the central factor is that, in its standard modes, tertiary education offers few opportunities for economies from multi-campus teaching. Requiring students to commute between campuses imposes intolerable constraints on timetables. On the other hand, equity considerations typically require some parity of offerings, so that even in the absence of shared student load, constraints are imposed.

In the short run, university administrators can require staff to commute between campuses, typically requiring individual staff members to bear the costs of travel time. But these costs must be brought to account eventually, as staff either demand monetary

compensation or seek employment elsewhere. This rapidly leads to the result that unless campuses are in close proximity, their operations become almost entirely separate.

Despite this historical experience, much Australian higher education policy has been based on the assumption that some form of global multicampus expansion can yield net benefits that can be used to defray the costs of the core domestic education mission. In practice, however, most institutions that have embarked on large-scale expansion appear to have curtailed their ambitions, implying that the financial benefits of expansion were limited or negative. In particular, it appears that the establishment of campuses overseas has been, on average, an unprofitable venture, except, perhaps, where such campuses are established primarily as feeders for full-paying overseas students into Australia.

Internet-based global expansion

Since Internet technology is new, it may be, and has been, argued that the analysis above has been rendered irrelevant by technological developments. Gilbert (2000) and, to a lesser extent, Schwartz (2000), argue that the traditional university is technically obsolete. Gilbert uses the metaphor of 'handloom weavers' faced with steam technology to describe the supposed impact of the Internet, which, he claims, will eliminate the need for traditional lectures and tutorials. He does not note, or perhaps is not aware, that similar arguments were made with respect to television, videocassette recorders and desktop computers.

The most practical expression of this belief has been the creation of Universitas21, an international network of (mostly public) universities with the principal objective of creating a global private institution, now referred to as U21Global. The creation of this institution, in collaboration with Thomson Learning and with a stated budget of $US90 million, was announced in press releases of October 2000 and November 2001. It appears that Australian universities, and particularly the University of Melbourne, were to make the bulk of the financial contribution.

As of late 2003, the sole result of this project has been the launching of an online MBA program, based in Singapore, with a single full-time academic staff member. Most teaching is undertaken by adjunct faculty whose primary appointments are at institutions considerably more obscure than the Australian institutions lending their reputations to U21Global (American Intercontinental University, Atlanta; Athabasca University, Alberta; Troy State University, Pacific Region, Japan and so on). Given that the number of online MBAs advertised on the Internet is well into the thousands (a Google search for the term "online MBA" produces 97200 hits), it seems unlikely that this offering is going to revolutionise the market.

It is to be hoped that the expenditure initially announced has been scaled back drastically, in view of the modest outcome. However, the losses incurred in attempts to commercialise Internet-based education are by no means confined to Australia. A number of major American universities, including Columbia and New York University have written off multi-million dollar investments in similar ventures. Only non-profit initiatives, such as those of the Massachusetts Institute of Technology, have had significant respect.

In summary, there is no reason to expect significant financial returns from Internet-based education. This is scarcely surprising in view of the fact that the Internet had its origins in the public-good research programs of traditional universities and was designed to facilitate the free exchange of information rather than its commercial exploitation.

Research and commercialisation

Recent government policy has strongly encouraged universities to focus on work which can attract the direct support of ‘industry partners’ and on the commercialisation of intellectual property developed as a result of university research. The costs and benefits of this policy approach have been discussed previously. The important point, for the purposes of the present submission is that any net financial contribution towards the core public policy goals of the university is certain to be small and may well be negative.

The financial contributions made by business represent an addition to the funds available to universities. Nevertheless, there are limits to the extent to which private businesses are willing to contribute to public-good research, even research with an applied focus. Inevitably, the more reliance on external funding is increased, the more closely the resulting research will approach commercial consultancy.

These limits are most evident in the various attempts at commercialisation of research undertaken by the universities themselves. Although superficially attractive, the idea that universities can generate substantial profits from commercialising research results is ultimately spurious. Most university research results cannot be commercially applied immediately. In most cases, the optimal course of action is to license the invention to a commercial firm. Only where application requires the continued participation of the original research team is university-based commercialisation desirable.

The profitability of this kind of activity is limited by the fact that the researcher or research team is free to leave the university and capture any commercial benefits of their discovery. The leverage of the university is limited to its right to assert intellectual property in the discoveries of its employees (a right which has generally proved valueless) and in the possible unwillingness of researchers to leave the university for the private sector (an unwillingness which has declined as the attractiveness of university employment has diminished). In practice, the returns to universities from the exploitation of research discoveries are likely to do little more than offset the costs incurred in the process.

The findings of the recent ARC study on commercialisation of research, while presented in optimistic terms, largely confirm the analysis presented above. The return from commercialisation of intellectual property is estimated at 2 per cent of total research expenditure. The figure is only marginally higher in the United States where commercialisation has been a routine practice for many years. Even these low estimates may be overgenerous since it is necessary to take account of overt or hidden cross-subsidies.

Inevitably, the core focus of most ‘commercial research’ arms of universities is

consulting. The standard arrangement for such consulting is that the university takes a percentage of the consultancy fee in return for management services and professional indemnity. Since academics can purchase these services themselves at relatively modest cost, the potential for large profits is limited to the value of the leverage the university can exercise in giving or withholding permission to undertake outside work. In practice, the use of this leverage by commercial consulting arms amounts to a diversion of academic time from research and teaching. If this diversion were costed, it is unlikely that the commercial arms of any of the Australian universities would be profitable.

From the viewpoint of academics, the rise of consulting opportunities represents an offset to the fact that salaries have declined substantially in real value. However, the growth of consulting has coincided with demands for increasing hours of teaching and pressure to produce measurable research outputs. In part, as with the Australian workforce in general, academics have responded by increasing the hours and pace of work. A second adjustment has been the abandonment of various forms of community service, such as the provision of information and advice to community groups, and to similarly unrewarded activities within universities. More generally, demands for an increased quantity of teaching and research output have been met by a diminution of quality.

Recent government policy, embodied in the White Paper of 1999, has encouraged the shift towards consultancy. Under the system prevailing in the 1990s, the general research funding system (called Research Quantum) was allocated to universities in proportion to success in attracting competitive grant funding from bodies such as the Australian Research Council. The effect of the White Paper was to spread the same amount of support more thinly, by rewarding universities for their consultancy income on the same basis as competitive grant funding.

In summary, much of the apparent increase in external funding obtained by universities over the past decade is illusory, since it is offset either by the increased costs associated with commercial and semi-commercial activities or by the diversion of resources from

the core activities of research and teaching. Thus, there is little or no net surplus to offset the reduction in public funding for research and teaching. The Research Quantum provides an effective financial subsidy to consulting work undertaken by, or in conjunction with universities. This subsidy is increased by the fact that opportunity cost of the time spent by academics in consultancy in may not be fully costs.

Proposals for industrial relations reforms

One of the most important insights of the literature on public policy is that it is generally undesirable to bundle unrelated policy issues into a single policy package. An illustration of this point is the announcement that increases in funding for tertiary education will be tied to the adoption of a range of industrial relations policies by university management.

This announcement may be viewed in two ways. First, the Commonwealth government may be regarded as taking the view that, contrary to the general thrust of recent policy in this area, that universities are simply Commonwealth government agencies, which should be subject to direct ministerial control. The logical corollary is the abolition of the expensive apparatus of University Senates, Vice-Chancellors and so on, and its replacement with direct Commonwealth public service employments. There are powerful arguments in favour of such an approach, but it does not seem to have been one that has been seriously considered by the government.

An alternative, more plausible, view is that the government is using its financial leverage in this sector to encourage the adoption of reforms that have not proved popular with employers and employees in general. This is poor public policy. Precisely because universities are under severe financial pressure, they are less well-placed than other enterprises to engage in costly industrial experiments. If the government wishes to provide financial incentives for the adoption of Australian Workplace Agreements, or penalties for non-adoption of such agreements, it should do so on a nondiscriminatory basis,

applicable to all enterprises.

It should be noted that, whether the policy is specific or general, it provides a precedent for future governments, establishing the principle that governments are entitled to demand that institutions receiving public support follow the policy preferences of governments in industrial relations matters. For example, if this policy is accepted, a future Labor government would be fully justified in imposing compulsory unionism as a condition for public funding of universities, private schools and so on,

Concluding comment

The deterioration of tertiary education is one of the most important threats to Australia's future prosperity. For too long the policy debate has been distorted by a focus on second-order ideological issues, on the financial interests of individual institutions. What is needed is a systematic approach to the needs of the tertiary education system as a whole, guided by the objective of universal and equal access.