LH Martin Institute
For Tertiary Education Leadership and Management

A Memory of Elephants on the Modern Campus

Indicative assumptions underlying higher education policy in Australia 1945-1985-2015: academic, statist & market perspectives[i]

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In the contemporary policy debates on higher education in Australia there is more than one elephant in the room – obvious truths that are not being recognised and addressed. Perhaps there is a score of them; or to prefer the more colourful collective noun, a 'memory' (rather than a random 'herd' or showy 'parade') of elephants on the modern campus. And, with apologies to Oscar Wilde: to forget one is unfortunate; to deny many may be careless.[ii]

Current debate on higher education policy in Australia, principally regarding the deregulation of tuition prices for domestic undergraduate education and the related matter of structural diversity of supply, has brought attention to several areas where different participants appear to be working from different assumptions, some of which seem to be at odds with actual practices, policy trends and changing circumstances. Similarly, in respect of university research there are increasingly diverging perspectives of its role and worth.

In seeking to understand the nature of these different assumptions, this paper seeks to outline the dimensions of change and continuity in Australian higher education policy and practice. The analysis is exploratory, as some of the underpinning assumptions have not been made explicit and need to be inferred, and some of the more recent changes are still unfolding and have not yet either taken full shape or passed all tests of endurance. While much of the content material is not new this overview synthesises shifts across some twenty domains over the mere lifetime of the current baby-boom generation (1945-2015). Clearly many of the changes within one domain interact with changes in other domains, albeit not necessarily in synchrony or harmony.

The paper draws on two classic contributions to higher education policy analysis: the three forms of higher education expansion outlined by Trow: 'elite', 'mass' and 'universal' (Trow 1974; Trow 2006), and the three forces of influence on higher education organisation identified by Clark: 'academic oligarchy', 'state authority', and market (Clark, 1983). They can be seen to coalesce as 'academic-elite', 'state-mass' and 'market-universal' orientations respectively dominating at sequential periods in Australia. These 'ideal types' are presented in summary form as three phases: the first phase starting after the Second World War; the second phase starting in the neo-liberal mid-1980s; and the third phase starting around the turn of the twenty-first century circa 2005, although the commencement points of these phases do not align on all domains precisely in any given year. The first phase can be seen as one in which the Australian nation state pulled institutions away from traditional academic orientations and the second phase as one in which the state pushed towards stronger market orientations (Gallagher, 2000). The third phase is one in which market influences are shaping the system and challenging a number of the premises on which it was based and progressed over much of the twentieth century. This latter phase may be depicted as one that is shifting from a process of 'nationalisation' to one of 'privatisation', although, as Peter Scott has observed in respect of the UK so in Australia by dint of the increasingly intrusive regulatory regimen that has been put in place, the push on universities by the state to move to market models renders "privatisation rather to be a higher form of nationalisation not its reversal" (Scott, 2007). Additionally, the third

phase is emerging in a technologically enabled globalising context of flows of knowledge, capital, people and trade, including trade in education services, aspects of which are perhaps diluting national regulatory strength.

The notions of ideal or pure types, on the one hand, and time-based phases, on the other hand, do not necessarily sit comfortably together. Typological constructs are useful for abstracting the distinguishing common features of phenomena but they can exaggerate concordances as well as differences among types and phases. In reality there are aspects of higher education policy and practice in each of the periods under consideration that could be depicted under all three types. There were, for instance, market dimensions in the (pre-Whitlam) elite period of participation when fee-based access was the norm alongside utilitarian (vocational) purposes, as also in the mass participation period of strong statism when fee-paying enrolments were promoted for international and domestic postgraduate education. Importantly, elite forms of higher education, including elite institutions, continue in the universal phase, and various values and purposes from the elite era remain powerful today. Indeed, Trow (1974) saw the elite form not only as the foundation on which mass forms develop in their various ways but also as an essential part of post-mass system continuity. While the elite and mass phases gave emphasis to 'localism' and 'nationalism' respectively, both included elements of internationalisation. However, the higher education 'system' has evolved over time not least in the enlarged scale of higher education participation and university research, and market dimensions have gained increasing potency in the universal era both nationally and globally. The aim of this paper is to identify the dominating type in each phase by looking at the mix of emphases in each of the twenty domains explored. This to accept, for instance, that aspects of the state-dominating phase can be traced back at least to the commencement of federal government involvement in higher education in the 1940s, and that strong state regulation, which can be necessary for fair competition and consumer protection, will play a continuing role as the third phase evolves.

Of course, there is also a variety of academic, state and market perspectives which this analysis does not canvass. There are, for instance, different academic perspectives, whether from the humanities or natural science disciplines, or from the early-career researcher or the established professor, and from a plurality of viewpoints deriving from personal characteristics including race, socio-economic background, gender and political orientation. There are further, and apparently widening, differences between institutional and individual perspectives within academe, as typified by the academic attack on purported 'managerialism' which is seen to have relatively disempowered the academic community and empowered the administrators (Bessant, 1992; Holloway & Holloway, 2008). Interestingly, the dominant academic critique of the policy initiatives post-1985 were not so much couched in terms of concerns about statism but about neo-liberal ideology which sought to bring private sector management models to public sector services (see, for instance, Connell, 2013). There are also various state perspectives, whether from a state/territory or federal stance, or from a central or line agency branch of government. Market perspectives vary, too, according to product or factor markets, industry sectors, boutique or mass consumer markets, and local, national or global, physical or virtual markets. Importantly, Australian higher education service providers operate in four different markets at the undergraduate and postgraduate levels domestically and internationally, and these vary regionally within and beyond Australia. Additionally, there is a fourth more diffuse set of civil society perspectives, including various non-state community sectors and institutions, public media, etc. (Bourke, 2013) which are not considered here.

The analysis is based also on two premises from political science; first, that fields such as education are not only country-specific but also sub-sector specific (Kogan, 2005); second, that patterns of policy and practice are path dependent, with response to change being both opened and restricted by the way previous positions have been reached:

> "Specific patterns of timing and sequence matter; a wide range of social outcomes may be possible; large consequences can result from relatively small or contingent events; particular courses of action, once introduced, can be almost impossible to reverse; and consequently, political development is punctuated by critical moments or junctures that shape the basic contours of social life" (Pierson, 2000)

The continuities amid the changes and the distinctiveness of the unfolding Australian canvas may be seen to result in part from the ways by which structures or systems designed to meet needs at one stage have developed their own conditions for persistence even when the initial reasons for establishment are no longer relevant or better technologies have become available. With regard to the structural form of the Australian higher education landscape Glyn Davis has observed that one institutional type persists:

> "The concept of path dependency helps explain the consistent choices of Australian universities. Choices made in the middle of the nineteenth century have endured, in part because universities did their job well, in part because the direction of travel was reinforced over a century and a half by legislation, public expectations and academic culture. The incentive to remain close to the original idea has proven compelling, defeating even legislated initiatives to create diversity. As a result, Australian higher education is dominated by autonomous, professional, comprehensive, secular, public and commuter universities sharing very similar missions (Davis, 2014).

He goes on to suggest that more market-oriented conditions may shape different structural choices by institutions. The focus of this paper, however, is on another concern: the choices and determinations of policy makers. Path dependency via past decisions both limits policy options for addressing contemporary problems and makes for a smoother transition to new policy positions. A parallel question thereby arises: to what extent will market-driven practices in higher education alter the established policy, regulatory and financing frameworks? Or, how responsive will the policy makers be to change in environmental conditions and operating practices?

While we can identify broad starting points there are no apparent end-points of the three phases under consideration. There are phase overlaps; aspects of the period of academic dominance persist today along with traditional academic values, and statist influences remain in regulations and program funding arrangements, some of which have encouraged more competitive behaviours on the part of higher education institutions while others are constraining if not thwarting the fuller emergence of market mechanisms. A key point is that the three orientations co-exist and are functioning concurrently in uncomfortable interaction with one another. Additionally they form the basis for advocacy of quite different policy analyses and prescriptions.

Normative stances feature in much of the Australian debate, with issues and options presented in assertions of 'what we value and would like to see' rather than assessments of 'what we face' (see for instance Encel, 1963; Bessant, 1992; Myers, 2012). There has always been a normative strain in public policy making and advocacy, where values are contested, but there is also a positive tradition that seeks to appreciate, estimate and weigh available evidence (Robert & Zeckhauser, 2011). Importantly, while the value orientations represented in the three phases may be in conflict, there are also differences in the representation of reality by various advocates whether of policy change, policy continuity or policy reversal. That is, some advocates of particular regulatory and financing policy options are working from assumptions about factors that have ceased to exist or have shifted from a major to a minor role. These factors include: the composition of the student body; the structure of academic staffing and conditions of employment; the structure of higher education supply; the nature of the student experience and modes of teaching, learning and assessment; graduate destinations; the conduct of research; sources of finance; and community expectations. It may well be that some advocates do not like what change has brought about but policy cannot be based on denial of reality and nostalgic hope that vexed things will default to a benign 'normal'; there needs to be some understanding of the way things are now, where they have come from and how they may change in the future.

By way of illustration, higher education price controls were introduced in Australia in 1974, when the Whitlam government at the federal level took over funding responsibility from the states and territories and abolished tuition fees. Thereafter the Commonwealth fixed the funding rate per student as well as controlling the number of student places to be funded in the university and colleges of advanced education (CAE) sectors. Governments frequently referred to 'manpower forecasting' to base decisions about increases in the quota of student places by field, especially in the accredited professional fields, as the population grew. At the same time, student access to the quota of funded places was based purportedly on meritocratic ('ability-to-benefit') criteria. The payments to universities for their profile

of student enrolments were intended to meet their general operating costs for teaching, research and community service. At the time, whereas most of the students had been in receipt of a government scholarship or company cadetship, those who were paying their own way could not obtain student loans. Most of the university students were full-time on-campus studying a credentialed curriculum. Academic work was integrated and continuous, with a large proportion with full-time tenured appointments. Academic salaries and employment conditions across the nation's universities were fairly uniform for each level of appointment.

That is, the model of funding universities at a common rate per student unit, weighted by field, arose in the context of centrally controlled student numbers and common academic salaries for integrated academic roles when most of the students and most of the academic staff were engaged full-time on campus, and the national government paid most of the costs. Additionally, university-awarded degrees were regarded as equivalent irrespective of source institution, in part because the entry standards for students in the elite (pre-mass) period of participation were broadly commensurate (often based on matriculation exams) and continuity of academic staffing permitted a socialisation of academic norms and expectations of degree quality. Those assumptions were not extended to the CAE sector.

That model is no longer the dominant one. Indeed, several of its features have either disappeared (e.g. the binary divide) or been modified substantially (e.g. patterns of academic staffing), and there are consequential anomalies if not inconsistencies and contradictions in the contemporary policy framework. Yet some argue for a continuation of regulatory and funding arrangements that no longer fit the current and emerging circumstances. Thus conflicts in policy advocacy reflect not only different value stances, and differences in meanings attached to key value considerations, such as 'equity' and 'excellence' but also, and importantly, different understandings of the operating conditions. A more common understanding of the actual circumstances may lead to wider agreement on, at least, the nature of the problems that policy needs to address. As in other complex areas of human behaviour, however, there are varying perceptions of the 'objective' conditions in higher education, and shifts are more often blurred than clearly delineated. Hence this analysis focusses on key points of difference among the phases/types being explored. In doing so some calls may well be made that others will contest, such as the extent to which a proposed shift has actually been effected or whether it is a temporary or permanent change. Currently, for instance, there are tensions arising around the global movement of people, with some indications of a rising preference for neo-protectionist nationalist policies in global openness, including trade and investment, against the tide of recent decades to increasingly open globalisation.

Education policy typically involves both continuity and change. Continuity can be seen to be based on the interaction of persisting values and cultural norms with path dependency (Pierson, 2000) alongside institutional resistance and self-interested advocacy coalitions (Sabatier & Jenkins-Smith, 1991). Change may be seen to result from responses of policy makers and/or institutions to external drivers in environmental conditions, including shifting societal formations and expectations, economic and technological factors, and a government's reform agenda which may be abrupt and disruptive of the established order or incremental (Becher & Kogan, 1992; Streek & Thelen, 2005; Christensen et al., 2006). At times, attempts to initiate or resist change may be predicated on ideology irrespective of changing conditions, while recognising that perceptions of ideological stances themselves tend to be ideologically-grounded (Paris, 1995), whether as opposition to statism or marketization or both.[iii]

Underlying the ideological debates in the sphere of education are broader differences in policy orientation, primarily relating to the role and size of the nation state. Various models of the common ideological tensions are available, such as those that distinguish between open and closed systems, parochial and cosmopolitan orientations, centralised and decentralised models of administration, individualised versus communitarian values and incentives, welfare dependency versus personal responsibility, and free versus regulated operations (see for instance OECD, 2008). Those who favour a larger role and scale for the state generally propose a broad and elevated taxation revenue base alongside centralised regulatory controls over the activities of persons and firms, typically limited to local circumstances. The Australian Greens, for instance, oppose even HECS, on the grounds that higher education should be free and that its costs for all should be met by taxes on company profits and high income earners. Irrespective of the merits of such a policy position, apparently framed to attract a youth constituency, there is the problem of achieving a

fair and sustainable taxation base for the agreed activities of governments. However, the sorry saga of failed Australian taxation policy reform in recent decades, exacerbated by the structural spending increases of governments over the 'resources boom' period up until 2012 with ongoing out-year commitments, makes it more difficult post 2015 to achieve anywhere near the revenue base needed to support the Greens policy in higher education. Consequently, more realistic, more sustainable and less regressive policy and financing options have to be considered.

The main phases

Four main stages[iv] may be identified in the evolution of higher education policy in Australia, noting that the starting points overlap on some dimensions of this evolution: (i) pre-1945; (ii) post-1945/pre-1985; (iii) post-1985/pre- 2005; and (iv) post- 2005. Each stage has given rise to new models of participation and provision but these have mostly layered on rather than replaced the pre-existing models. Thus, as noted above, we see a persistence of earlier types of higher education, albeit in modified forms, co-existing with expansion of new types which have become the dominant model in each successive stage. Some characteristics of later stage development can be seen in formative phase at earlier stages.

The pre-1945 period was one where higher education was state-referenced rather than nation-referenced, ('state' in this sense referring to provincial levels of government in the Australian federation) and for the university sub-sector, one where academic preferences and internally-referenced norms dominated, albeit within a mainly – although not exclusively – vocational view of higher education as preparation for professional work. University research in this period, too, was often more utilitarian than pure basic. This phase is not explored in any detail below, although legacy features from it can be observed in the subsequent phases, at times in romanticised form. The following three phases are the subject of this paper.

The post-1945/ pre-1985 period represented a transition from a small and relatively elite system towards a pre-mass system. It also saw considerable growth of government investment in basic research. This stage in itself involved several periods, not always continuous in policy direction. First was the Menzies Government response to the Murray Commission's report of 1957 which saw the Commonwealth formally fund universities and the establishment of the Australian Universities Commission to help steer university policy and financing. Second was the response to Martin Committee's report of 1964 which saw the creation of the binary divide between universities and colleges of advanced education. Third was the election of the Whitlam Government which abolished tuition fees in 1974 and made the Commonwealth the main funder of public higher education. Fourth was the strengthening role of the Commonwealth Tertiary Education Commission in shaping and prioritising the development of the system. Fifth was the willingness of governments to fund researcher-initiated, long-term basic research in universities.

The post-1985/ pre-2005 phase opened Australia to trade in education services, reversed the Whitlam policy of free higher education for Australians by charging tuition fees (at nationally common prices by broad field of study) and introduced income-contingent loans to be repaid when graduates earned an income premium over non-graduates. That period also saw closure of the binary divide and the formation of a 'unified national system'. Increased accountabilities were incorporated into funding programs along with competitive funding of research, incentives to raise the equity profile of student enrolments, and quality assurance regimens. The domestic postgraduate market was progressively deregulated, and the undergraduate student contribution to costs was raised. This phase also saw a growing interest on the part of government in application-oriented research, such as through the Cooperative Research Centres program and the Linkage program of the Australian Research Council alongside continuing support for investigator-initiated and use-inspired basic research.

The transition from the post-1985 to the post 2005 phase coincided with growth in international student demand for higher education and the development of information and communications technologies which enabled more expansive demand and new forms of supply of higher education and research services. These developments include: Microsoft windows (1985); public Internet WorldWideWeb (1991); blogging (1997), Google search engine (1998); iPod (2001), YouTube (2005), Twitter (2006); Facebook (2007); Apple iPhone (2007); iPad (2010); MOOCS (2012).

The post-2005 phase followed on the decisions of the Howard Government, notably in 2003, to pursue a privatisation agenda by extending income-contingent loans through FEE-HELP to students enrolled with accredited private 'higher education providers' whose expansion was encouraged. It also involved (after 2008) the deregulation of tuition volume controls for domestic undergraduate education.

The post-2005 phase is 'emergent' chiefly because there remain many uncertainties about the trajectory of future development, the survival of recent innovations, and the resilience of current institutions. These matters are considered in more detail under 'context' the first of the twenty domains of change and continuity explored below. At this point it is necessary to note that the uncertainty applies also to the policy field. The 2008 decision to remove caps on funded undergraduate places is yet to be embedded in policy, with the current Government seeking to cement student volume deregulation in tandem with tuition price deregulation, while the Opposition is proposing negotiated funding levels via mission-based funding compacts, reducing the number of students dropping out, aligning university funding with regional and national priorities such as boosting the number of graduates in science, maths, engineering and technology, and winding back progress towards further privatisation:

> "Labor believes that the primary obligation of government in higher education is to defend and extend Australia's world-class public university system. That obligation is not compatible with degrading the system by withdrawing funding or forcing it towards creeping privatisation" (Senator Kim Carr, Address to Universities Australia Conference, 12 March 2015).

The change of the Coalition Prime Minister from Tony Abbott to Malcolm Turnbull on 15 September 2015 reduced the Labor Opposition's prospects of regaining government in the near future. The Greens and cross-bench senators continue to oppose the Government's Bills for tuition price deregulation, but the Government has neither ruled out its former (version 2) proposals[1] nor committed to implementing them, and has not advanced any further compromise positions. Thus it is not clear how the policy standoff will be resolved. Probably it will not be until the 2017 Budget that the Turnbull Government's higher education financing policy will be clarified, and even then, it will not be certain that the Senate, which may or may not change in its political composition, will support the Government's preferred direction, whether through transitional measures or other trade-offs. Nevertheless, it is not apparent that the marketization of Australian higher education which commenced some thirty years ago will again be statist bound, not

[1] In 2008 the Rudd Government introduced 'demand-driven funding' for university places by removing previous caps on funded undergraduate enrolments but it maintained the tuition price controls over such places introduced in 2003. Subsequently the Gillard Government removed sub-Bachelor degree programs from the demand-driven system. In 2014 the Abbott Government's first Higher Education and Research Reform Bill sought to amend the Higher Education Support Act 2003 to: provide demand-driven funding to diploma, advanced diploma and associate degree courses and extend government subsidies to bachelor and sub-bachelor courses at private universities and non-university higher education providers; remove the maximum student contribution amounts; remove the maximum student contribution amounts that providers can charge students in Commonwealth supported places; merge the FEE-HELP and HECS-HELP loan schemes, including the removal of the FEE-HELP loan fee and lifetime limits, HECS-HELP upfront discount and HELP voluntary repayment bonus; establish a Commonwealth Scholarship Scheme to support disadvantaged students; replace the CPI indexation of HELP loans with the 10 year government bond rate; lower the minimum repayment threshold for HELP debts; enable providers to charge Research Training Scheme students capped tuition fees; remove the lifetime limits on VET FEE-HELP loans and the VET FEE-HELP loan fee; and replace the Higher Education Grants Index with the CPI. The Government's second Bill introduced on 3 December 2014 removed the imposition of a real rate of interest on HELP debt (the 10 year bond rate) and reverted to indexation of debt by the CPI. It sought also to give the Australian Competition and Consumer Commission the power to monitor university fees and ensure domestic students' fees are lower than their international counterparts, establish a "structural adjustment" fund for the universities adversely affected by the changes, and provide for HECS indexation relief for primary carers of children up to five years of age.

least because the nation state cannot afford to fund the enlarged scale of student participation on the current basis without changing modes of delivery and reducing per student funding, arguably though not inevitably, at the risk of eroding educational quality. Productivity improvements in the delivery of higher education and more focussed investments in research can be envisaged among the measures that might be taken to safeguard quality while making more efficient use of available resources. Even so, past rates of real increase in government outlays on higher education in aggregate with a broad maintenance of real funding per student unit (over the period 1997-2015), cannot reasonably be expected in the future and, thus, private financing will need to play a greater role on both the demand and supply sides. The scale and scope of private provision may itself also be influenced by decisions relating to the structure of public supply, such as by the incorporation of lower-cost public providers formally in the national higher education system. The role of and priorities for public funding in that context will need to be clarified. To what extent, for instance, should public funding be directed to diversifying the structure of public supply or to promoting greater private provision?

In search of a balanced policy position that opens rather than closes Australian higher education to future possibilities, the following domains are explored: (i) context; (ii) purpose; (iii) orientation; (iv) scale; (v) structure; (vi) culture; (vii) student access; (viii) student experience; (ix) teaching; (x) learning; (xi) educational qualifications; (xii) educational assessment; (xiii) university research; (xiv) university engagement; (xv) academic workforce; (xvi) workplace relations; (xvii) student financing; (xviii) institutional financing; (xix) governance; (xx) regulation.

Policy Domain 1: Context

Several aspects of the context for higher education and university research appear to have changed significantly over the three periods under consideration. Six of these are considered briefly below: (a) geography; (b) demography; (c) modes for learning and teaching; (d) modes for research; (e) public/private value; (f) trust in expertise.

Geography

The geographic reach of higher education has moved from the local to the national to the global (Marginson, 2004). Students and academic staff now are drawn from all three spheres concurrently. Policy convergences can also span across the world, such as in the quality assurance movement and agreements relating to trade in education services.

In the pre-1985 period, universities, teachers colleges and other tertiary training institutes primarily faced State or sub-State regional communities, providing local opportunities to meet local needs. Tertiary education institutions were charged with contributing to nation building, primarily through the production of graduates with required professional or technical skills. However, these contributions were mostly referenced to local labour markets.

The national orientation of higher education policy and of the universities and other tertiary education and training institutions began during but took shape after World War II. Following the Soviet Union's successful Sputnik launch during the Cold War in 1957, the national government boosted funding for university research to develop Australia's scientific knowledge and knowhow. National funding for higher education evolved after the Menzies Government's responses to the 1957 Murray Committee and the 1964 Martin Committee. It then became more financially tied to the federal coffers after the Whitlam Government's funding intervention in 1974 and then became more nationally regulated after the 1988 funding framework put in place by the Hawke Government, with subsequently tighter quality assurance requirements and increased conditionality attached to specific-purpose payments under the Howard Government. The *dénouement* of the nationalisation narrative was the formation under the Rudd/Gillard Government of a national regulator with powers relating to the registration and accreditation of higher education providers including, for the first time, public universities.

The international orientation of universities is a longstanding feature. Since their establishment, Australian institutions have drawn their academic leaders from Britain, North America and elsewhere. The Colombo Plan for aid to South and South-East Asia, initiated by the Menzies Government in 1951, began a process of internationalisation of the higher

education student body. This process was augmented and accelerated with the opening of Australia to trade in education services in 1986 initiated by the Minister for Employment, Education and Training, John Dawkins. A further phase of development can be seen in the 'new Colombo Plan' initiative of the Abbott Government in 2013.

The subsequent globalisation of higher education and research, however, involves more than incremental growth in the internationalisation of the student body and the academic workforce, and, the internationalisation of curricula. It now involves collaboration among institutions of different countries in the development and use of major research facilities, data gathering and analysis, and joint work on global issues. On the one hand, globalisation builds interconnections and creates interdependencies involving greater integration of economies and societies through flows of products, capital, technologies, information and people. On the other hand, globalisation intensifies competition for intellectual talent, access to networks of capability, and participation through co-investment in platforms for education and research. More recently, since 2003, world university rankings and ratings have had a (disproportionately) powerful effect on the behaviours of national governments and institutions (Hazelkorn, 2011), not least in raising profile status to attract paying students and investment (Wildavsky, 2010). Aspects of the global reach of corporates can also cut across or even by-pass national legislative frameworks, such as IT vendor certificates in respect of worker credentialing and certification by global assessment houses. An important implication is that Australia's higher education institutions will need operational flexibility to function successfully in the more open global marketplace, and government policy and financing frameworks will need to enhance rather than impede that operating flexibility.

An emergent possibility in the context of globalising trade in services is the offshoring of research capability (infrastructure and people). This would enable Australia researchers to gain access to research capability that the nation alone could not afford to develop and sustain. It could lead, however, to a one-way outflow of talent if Australia did not invest in research capability of sufficient scale and sophistication to attract and retain top talent.

Demography

Long-term population projections released by the Australian Bureau of Statistics (ABS) in November 2013 suggest that, on 'medium' assumptions, Australia's population will grow from 22.7 million persons in June 2012 to 30.5 million in 2031; 41.5 million in 2061; and 53.6 million persons in 2101 (Population Estimates and Projections Australian Infrastructure Audit Background Paper 7). The population aged 15-64 is projected to rise from 15.8 million in 2014-15 to 19.9 million in 2034-35 (Australian Government Treasury, *The 2015 Intergenerational Report).* In 2011, some 25% of the working age population had a higher education qualification (ABS, Australian Social Trends 2012). Maintaining that proportion would represent an additional 1 million graduates by 2034-35. A five percentage point rise in the degree qualified proportion would represent an additional 200,000 graduates by 2034-35, bringing the total output to 1.2 million at an average annual rate of production of 60,000 graduates on top of the current annual level of output of 129,600 (Department of Education: Award course completions for domestic students by level of course and broad field of education, 2014). Cost-effective means of meeting future domestic demand will be required.

During 2000–2012, the number of tertiary students enrolled outside their country of citizenship more than doubled, from 2.1 million to 4.5 million, with an average annual growth rate of almost seven per cent (Draft National Strategy for International Education (for consultation) April 2015). Sixty percent of young adults in larger-scale countries belonging to the OECD are expected to enter higher education in their lifetime (OECD, Education at a Glance, 2013). UNESCO estimates suggest that the demand for higher education worldwide will have expanded from 97 million students in 2000 to over 262 million by 2025 (Katsarova, 2015).

The demographically-driven enlargement of demand for higher education on a global scale transcends the absorptive capacity of many emerging nations through traditional campus-based attendance, particularly at public institutions. It also exceeds the servicing capacity of developed economies through conventional 'consumption-abroad' modes of supply. Thus cyber-technology and blended learning modes are in the ascendancy over the post-2005 period. These forms of supply of higher education services are normally designed to cater for a larger scale of enrolments at lower

per-learner unit costs, although some blended approaches can be expensive, and not only where they involve intensive interactions among learners, teachers and learning materials and exercises:

> "There is a widely held belief that online courses are a cheap form of provision. There is also a complete under-estimation of the effort and costs involved for institutions in developing their digital capacity and fully embedding new technologies and pedagogies across their operations – both within conventional provision and in newer forms of online offerings. This requires dedicated expert staffing resources, training and professional development for teaching staff infrastructural investment and, most importantly, significant time and effort on the part of the academics delivering the courses. To put it into a simple equation: the use of technology, open and online learning is scalable; human resources and their knowledge, skills and competences are not" (High Level Group on the Modernisation of Higher Education, 2014).

To enable investment in the development of more diverse delivery options, whether as a means of serving new leaner constituencies or remaining competitive in providing for established student markets, higher education institutions will need to be able to earn additional income from online courses. Regulations that prohibit or severely limit course design and delivery and tuition pricing flexibility will be pernicious in this context.

The ageing of the world population brings with it new costs and challenges. These include a lower ratio of 'working-age adults' to 'retirees' in developed economies like Australia where in 2054-55, life expectancy at birth is projected to be 95.1 years for men and 96.6 years for women, compared with 91.5 and 93.6 years today (Australian Government Treasury *The 2015 Intergenerational Report)*. There arises the associated need to raise productivity, along with higher costs of care and health service provision which tend to crowd out fiscal room for increased spending in other public service sectors. Longevity also creates another source of growing demand for further learning:

> "Tomorrow's education system will recognize and respect that our human endeavors and life stages have moved from discrete to blended. Play-learn-work are still segmented activities, but not for much longer. Not only will we increasingly be learning while playing and working, we also will conceptualize less and less that our life span is segmented into four segments: play (childhood), learn (childhood to adult), work (adult), and play (retirement). Universities have focused the largest portion of their educational resources on the learning phase from childhood to adulthood. However, with longer life spans and improved health outcomes, universities are increasingly seeing a demand for education preparation for a second phase of work, or the "encore years." Career and work choices at this time are likely to be less driven by livelihood factors and more likely to be driven by passion and perceived impact (Sullivan, 2014).

This sector of demand for further learning, except for that portion building new skills for longer workforce participation, includes a segment mainly consuming education services, whether leading to a qualification or not, rather than investing in human capital formation. Arguably in respect of the latter group, further learning could enhance active ageing and lower direct costs of public health, as well as contribute to enlarged national economic output. Nevertheless, for most of the leisure learners, it would not normally be appropriate for their consumption to be provided at the expense of general taxpayers such as through tuition subsidies or income-contingent loans. It is also not self-evident that the price of leisure learning offerings should be centrally controlled, given that the range of consumer interests will seek a variety of learning options with varying costs.

Modes for learning and teaching

In the pre-1985 phase, the amenity of the physical campus was paramount, providing the commons for learning and scholarship. In the post-1985/pre-2005 phase technological infrastructure was important in providing specialised facilities and wiring up the campus. In the post-2005 phase technological infrastructure is paramount in meeting the rising expectations of a more tech-savvy student body, securing access to information, enhancing analytical capacity and forming collaborative networks.

Modes for learning have diversified as learners from different backgrounds and learning in varying environments have access to faster, cheaper and more convenient information and communication technologies. The pace of technological development and the scale of its applications are daunting:

> "In 2012, there were five billion devices connected to the internet, including computers, phones, music devices, vehicles and appliances. This will grow to 22 billion by 2020.[v] All surfaces have the potential to become an interface point with this networked technology. Some even predict that devices and information and communications technology (ICT) systems could be controlled directly from the brain.[vi] In this networked world, learning could be democratised by near-universal access to virtual universities, while collective intelligence could supplement individual intelligence"[vii] *(*McKenzie (2015).

A 2014 report to the European Commission, echoing some of the conclusions reached by Barber et al (2013), placed the technological challenges in the context of wider industry restructuring:

> "Growing momentum towards open educational approaches and resources, and advances in technology-enabled learning, have resulted in the emergence of a plethora of digital platforms and portals which offer easy access to educational resources and course materials from institutions across the globe, and allow individuals to undertake a vast range of courses online. New types of short, focused online courses are emerging. The concept of higher education provision itself is being fundamentally challenged with the potential to "unbundle" its core components. Higher education institutions are no longer the sole provider of higher education services, with a range of specialist companies now providing elements of the higher education package such as course platforms, examination and certification services, learning support, learning analytics, etc. The degree programme itself is facing competition with moves towards shorter, more targeted types of courses "(High Level Group on the Modernisation of Higher Education, 2014).

One important contextual feature, however, is the uncertainty about the extent of technological transformation of higher education. There has been much hype, for instance, from the mid-1990s when Internet usage expanded rapidly with the advent of Google and other search engines, and even more so subsequently with the multiplication of MOOCS from 2012, about the 'transformational' or 'disruptive' effects of ICT applications, with some suggesting the demise of campus-based learning altogether (Barber,2013), others pointing to MOOCS and/or SPOCS as the business models of the future (Burd et al, 2014), and others identifying the modularisation of learning and open-badged assessment as game-changers (Pearson, 2014). An MIT review reported that the digital revolution can be felt across a number of industries, from publishing to media to retail, with the following trends surfacing across the spectrum:

1. *Massive scale of adoption*: YouTube, for example, claims a viewership of over one billion unique viewers and over six billion hours of video watched every month.
2. *Increased potential and demand for disaggregating or unbundling products*: Newspapers have become disaggregated into individual articles available piecemeal online. These are often curated and aggregated by other online sites such as The Huffington Post or Drudge Report. Apple unbundled albums into 99-cent songs, and users re-aggregate individual songs into their own playlists.
3. *Blurring of boundaries*: Traditional boundaries in various media and platforms are becoming less distinct, creating new opportunities and greater potential for collaboration. The availability of online video through YouTube, iTunes, Hulu, and other sources, for example, has blurred the boundaries between traditional television programming, cable, computers, and mobile phones. Telecommuting has the same effect on the division between offices and homes. Online retail has blurred the boundaries between brick-and-mortar stores such as Walmart, electronic commerce sites such as Amazon, and auction sites such as eBay.
4. *Affordability and access*: The public conversation about the affordability of higher education and the impact of cost on access for all of those desiring to go to college is growing. There is also a growing conversation about the value of education that does not immediately result in jobs. (*Institute-wide Task Force on the Future of MIT Education: Preliminary Report,* cited in Eric Denna (2014). The Business Model of Higher Education, EDUCAUSEReview, 24 March.)

A rather threatening scenario for higher education has been offered as follows:

> "In fifty years, if not much sooner, half of the roughly 4,500 colleges and universities now operating in the United States will have ceased to exist. The technology driving this change is already at work, and nothing can stop it. The future looks like this: Access to college-level education will be free for everyone; the residential college campus will become largely obsolete; tens of thousands of professors will lose their jobs; the bachelor's degree will become increasingly irrelevant; and ten years from now Harvard will enroll ten million students….The live lecture will be replaced by streaming video. The administration of exams and exchange of coursework over the internet will become the norm. The push and pull of academic exchange will take place mainly in interactive online spaces, occupied by a new generation of tablet-toting, hyper-connected youth who already spend much of their lives online. Universities will extend their reach to students around the world, unbounded by geography or even by time zones. All of this will be on offer, too, at a fraction of the cost of a traditional college education" (Harden, 2012).

The more sober mainstream view is that new providers and provision models will emerge alongside established higher education institutions integrating new technologies and techniques into their offerings. That is, conventional modes will co-exist with contemporary technologies. Nevertheless, just as digital technologies have proved disruptive over the last decade in the publishing, music, media, photography and travel industries, the higher education sector, too, will be re-shaped by innovations in products, services and business models. What is uncertain is the extent of transformation that may occur and who will drive it – higher education institutions or external interests and technologies (High Level Group on the Modernisation of Higher Education, 2014).

Some will adapt well to the changing conditions but others may not. The failure to adapt may result from deficient responsiveness on the part of individual institutions, including their inability to offload overhead cost burdens, or from poor public policy settings such as intrusive regulation and insufficient flexibility over modes and prices of offerings, or a combination of both.

A range of possibilities is outlined in the scenarios to 2040 developed by Universities UK (UUK). **The Flight of the Flamingos** 'vision' scenario sees 'networks of universities at the heart of social and economic advance'.

- In 2040, the value of higher education is something that all people in the UK recognise.
- The relationships that universities enjoy with their communities, students, alumni, benefactors, sponsors, customers, partners and government have been radically reshaped.
- Higher education in the UK has played a fundamental role in creating a more equal and sustainable society in a hugely interdependent world.
- UK institutions are leading players in the networked global research field and are conduits of global knowledge into the UK.
- Fresh ideas, increased competition and a greater responsiveness to the needs of different groups have resulted in a richer mix of students, higher education providers and ways of researching and learning.

In this vision, the world of higher education in 2040 has:

- more choice for students and researchers to meet the diverse needs of different social, ethnic and age groups, with new longer-term models of 'being a student';
- more flexibility to dip in and dip out depending on your circumstances, greater opportunity to move between institutions depending on location and need, and more alternatives to a traditional campus experience;
- more 'unbundling' of delivery, loosening the integration in any single organisation between degree awarding powers, content, staff, teaching and facilities;
- more use of IT and digital content, with widespread adoption of new research, teaching and learning methods based around new innovations that facilitate and help create new communities of learners, teachers and researchers.

In this very different world, "universities have led in positively transforming the nature of higher education and delivering these benefits to the country", and "outstanding quality remains one of the main differentiators of UK higher education."

A second scenario is **Icarus**: 'rapid expansion at the expense of a global reputation for excellence'.

- There has been a growth in highly adaptable education models tailored to individual students.
- New models of a university have enabled increased capacity and efficiency in delivery.
- A number of education groups have become powerful global education players through a focus on teaching.
- Many of these groups are heavily focused on revenue generation independent from government influence.
- The new providers are highly influential in attracting more students than ever into the system.

The third UUK scenario is **Lame ostrich**: 'Internecine struggles over continuing market interventions and resistance to change progressively leaves the UK sector behind on the global stage'.

- Higher education continues to be central to the public agenda.
- There is a continuing emphasis on traditional models of delivery.
- Institutions are reacting to complex domestic and international landscapes, sometimes at the expense of some of their core activities.
- New ways of maintaining access to world class research activity have been sought.

In this scenario, key policy orientations reduce rather than enhance the operating flexibility of higher education providers:

> "whilst market-based funding reforms have encouraged more competition between institutions, successive governments have maintained a high degree of scrutiny of and influence over the sector. A set of market incentives have been introduced that attempt to advance a variety of value for money, social mobility and student experience policy objectives, many of which are also subject to scrutiny and penalties for non-compliance. Similarly, the majority of government research funding is now allocated via contracts in order to improve the transparency of funding and ensure that it is effectively directed toward priority policy agendas."

Modes for research

The context for university research has been changing rapidly via the extent of economic globalisation and the movement of people, and rapid developments in communications and information technology supporting an instrumented world capturing and storing massive data sets and enabling rapid and widespread sharing of knowledge and know-how. As the costs of doing research have been rising so have community expectations of useful payoffs from public investment in research. These matters are considered at Domain 13 below.

Public/private value

Another contextual factor is the shift in emphasis from the public benefits to be derived from higher education to the private benefits. In the pre-1974 period, there was a recognition of both:

> "If a little Miss Murgatroyd wants to acquire a Bachelor of Arts degree so that her name will appear prominently in the social columns of the Sunday newspapers, we must tolerate her because we can do nothing about it. Although it may cost Australians only 4d per head to maintain our universities, our drinking bill amounts to £7 a head. Therefore, when we hear somebody say, 'I was reared in the university of hard knocks', we should realize that it is a much dearer education than the classical education for young ladies and gentlemen" Mr Haylen, (Parkes), House of Representatives Hansard, 26 July 1945).

The post 1974/pre-1985 phase gave more weight to society-wide indirect and shared ('spillover') benefits, and this valuing was linked to general taxpayers (regressively) meeting the bulk of the costs. The post-1985/pre-2005 phase saw a fairer sharing of the costs of higher education in recognition of the private gains to individual graduates, with a transition from partial tuition cost subsidy to full fees for postgraduate education. The post-2005 phase raised further the undergraduate student share of costs, and the trend of policy is to move even further in that direction as participation widens and the costs of public provision rise. The current debate in Australia concerns the proportion of the cost of higher education that should be borne by general taxpayers, the large majority of whom are not graduates and do not benefit directly from higher education.

Higher education is not a pure 'public good'. It may be 'non-rival', in that one person's consumption does not diminish another person's use, but it is not 'non-excludable' (it is possible to exclude people who do not pay) nor 'non-rejectable' (it is possible for a student to not take up an offer of a place or a scholarship). Higher education rather is a 'merit good' which, unlike a 'public good' can be provided privately. However, provision on a private basis alone, without some government subsidy, could lead people to under-invest in their own education if they had to pay the full cost, and the society would be adversely affected by a less skilled workforce and by exclusivity and stratification. Additionally, merit goods like 'experience goods', are consumed without full information about their benefits either to the individual consumer or to the wider society. Thus it is difficult in advance for policy makers to know the effects of lowering public subsidies for tuition costs and where a 'tipping point' might be for different groups of students. The behavioural effects are further complicated in Australia given the availability of income-contingent loans which remove up-front financial barriers to access, limit and smooth graduate debt repayments as a proportion of graduate income, and may or may not dampen student sensitivity to price. With regard to the latter, Australia's market for postgraduate courses, for which income-contingent loans are available, demonstrates a spread of price points across universities (Group of Eight, Policy Note: Tuition Fees at Australian Universities, May 2014).

Some have suggested that higher education or a higher education qualification (whichever is not made clear) is a 'Veblen good':

> "In markets with poor information, such as with respect to the relative quality of universities, the established institutions will likely avoid having low prices compared to their close competitors because doing so can be taken as an indicator of poor quality. This concept is known in the economics literature as a "Veblen good", and is well known and documented in higher education world-wide" (Chapman, 2014).

This is to suggest that price is a proxy for quality because the quality of higher education is not known directly. Of course there are other proxies for quality, such as the relative level of inputs (including student and teacher capacities) and the outcomes for graduates, even though the actual quality of the student learning experience is elusive. More cautiously Stephen Parker suggests that "if the so-called Veblen effect comes into operation the desire will be to keep prices as high as possible, as a sign of quality" (Parker, 2014). His caveats are important, and do not suggest any automatic across-the-board price inflation outcome, nor necessarily any systematic price-hiking or price-gouging, from tuition fee deregulation. Curiously, though, Parker and Chapman both refer to supplier behaviour whereas Veblen was pointing to the effects of 'conspicuous consumption' – buying something to show one's wealth – and a relationship between demand and price. Highly priced goods have a status or prestige value because of their exclusivity, so a 'Veblen effect' occurs when consumer preference for a good increases as a direct function of its price. Veblen goods are a type of luxury good as distinct from a necessity good. In the market-universal phase, higher education comes closer to being a necessity than a luxury as a degree offers entry to an increasing range of jobs. There is thereby a larger mass market with more student consumers less interested in the snob value of their experience or qualification. The Chapman-Parker rendition of the Veblen effect theory provides no way of anticipating supplier behavior; it merely assumes that universities will want to raise prices as a means of signaling quality without regard to other motives and interests of students, on the one hand, and competitor providers' differentiation strategies, on the other hand. Nor is there evidence for the secondary proposition that if an institution does not raise its price it will be perceived to have inferior quality.

It is probable that demand for elite higher education in the market-universal phase will enable some institutions to be price setters but it does not follow that all providers could and would raise their prices and all to similar levels. It is possible that those institutions that command market power will have an opportunity to rent seek. Nevertheless, higher prices can be expected to relate mainly to the nature of the higher education experience offered rather than to the qualification awarded, even though some brands will be attractive in themselves to some groups of students. Thus, those who pay more will generally expect to have a richer educational experience, and are likely to be discerning in their choices and seek demonstrable value for their money. Some students will be more attracted to other aspects of provider offerings, including the relevance of courses to their employment prospects and the graduate outcomes of particular options. Additionally, as more employers seek graduates with job-ready skills and attitudes rather than mere 'academic' preparation, the status of some higher education institutions will become less attached to traditional academic values, allowing more of them to differentiate on non-academic criteria, rather than seek to emulate elite rivals. Other students will prefer convenience of provision through the places, times and modes of learning that are offered. These varying interests of students can be expected to drive different mission foci on the part of providers and different price points in higher education markets.

Trust in sources of expertise
The pre-mass phase involved a reasonably high level of public trust in traditional institutions and expert knowledge:

> "…the tradition of disinterested scholarship had separated the university from political, sectarian and financial gain, imbuing university knowledge with a special reliability unavailable to other knowledge producers. This resulted in a second source of authority. In the area of science especially, the university's separation from commercial interests imbued university research with an aura of objective discovery" (Forsyth, 2012).

Over the mass phase this trust eroded, at least in advanced democracies, perhaps primarily because of deficiencies in the performance of political institutions washing over into adverse perceptions of other civil institutions (Newton & Norris, 1999). In the post-2005 phase expertise is challenged by the democratisation of knowledge (Delanty, 2001) and the availability of content. The 'knowledge society' is one, among other things, where the production of knowledge and its transmission is distributed throughout society rather than confined to a special institution such as the university. Wikipedia co-founder Larry Sanger has noted that "the Internet now makes it possible for society's background knowledge to be shaped by a far broader, more open and inclusive group of people":

> "Professionals are no longer needed for the bare purpose of the mass distribution of information and the shaping of opinion….Perhaps the most important and fundamental authority experts have is the authority to declare what is known" (Sanger, 2007).

Democratisation of knowledge and access, the massive increase in the availability of information online, alongside the expansion of access to university education worldwide, modifies the role of universities as originators and keepers of knowledge in both a physical and philosophical sense:

> "An ever enlarging system that is both more diverse and more costly because of its scale, and one that is more essential to societal functioning, receives increasing attention from external stakeholders and fosters policies to promote greater efficiency and responsiveness. What may be at issue here is the survival of universities as distinctive institutions in a 'knowledge world' where knowledge is created and transmitted by all sorts of organisations and processes. What is being lost are the claims for the 'exceptionalism' and 'uniqueness' of universities" (Brennan, 2013)

Whereas in the past, professional persons derived status from their mastery of a specialist body of knowledge, the key skills of the future are the value-added extension of knowledge, rather than merely its acquisition and employment (Reich, 1991). The knowledge economy requires new information handling skills and knowledge expertise, requiring more specialised and educated employees that can identify and solve problems and create new knowledge products through the analysis and synthesis of existing information. Formerly only propositional knowledge codified by academics was considered valid. In the new economy enabled by information and communications technology, the

procedural knowledge of expertise has become a key commodity, and the acquisition of this expertise is increasingly seen as a priority by intending university students" (Williams, 2007).

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
State/ sub-state region	**National**	**Global**
Limited domestic supply and student demand	Expanding domestic & international student demand	New mass provision via cyber-technology and blended learning
Higher education primarily based on the campus experience	Higher education primarily based on the campus experience but with mixed modes	
Higher education highly subsidised for its **public benefits**	Higher education partially subsidised as a **merit good**	Higher education regarded primarily for its **private benefits**
		Democratisation of knowledge & availability of content
Public trust in traditional institutions & expert knowledge	Declining public trust in traditional institutions	Importance of technological infrastructure & networks
Importance of physical infrastructure	Importance of physical & technological infrastructure	

Policy Domain 2: Purpose

Four continuing dimensions of stated higher education purposes may be identified across all three phases: society, individual, knowledge, and economy. Shifts can be seen from time to time in the order of priority given to each dimension, on the one hand, and the stress placed on particular elements in each dimension, on the other hand. The society dimension, for instance, may encompass democratic functioning through a more highly educated population, extending to social cohesion and inclusion through an emphasis on equity of opportunity. Alternatively (albeit at times concurrently) the emphasis might fall on the formation of leaders, with aspects of social reproduction being seen to reinforce elite exclusiveness. Similarly, the individual dimension, may stress the 'educated person' and the 'opening of the mind', at one time, and personal advancement and access to social networks, at other times. The economic dimension may encompass the supply of skilled graduates to meet labour market requirements, or the commercial application of ideas and know-how. All four dimensions, then, can be found in each stage, with the general consensus that the purposes of higher education are the production of skilled labour, opportunities for social mobility, the production and dissemination of knowledge, and the provision of knowledge-based services to communities.

The priority order in the post-1945/pre-1985 period may be seen as (i) society, (ii) person;(iii) knowledge, (iv) economy. The House of Representatives debate of 26 July 1945 shows various speakers referring to 'good citizenry' and 'the capacity to think clearly' being more important than "gaining knowledge for the avocations which they choose" (Hon. Percy Spender) and it being "foolish to instil academic knowledge into students without also equipping them as intelligent citizens" (Rt. Hon. Sir Earle Page). Menzies made an expansive contribution to that debate:

> "The first function of education is to produce a good man and a good citizen. Its second function is to produce a good carpenter and a good lawyer, and the good carpenter and the good lawyer will be all the better at their respective crafts if they have become aware of the problems of the world, have acquired some quality of intellectual criticism, and have developed that comparative sense which produces detachment of judgment and tends always to moderate passion and prejudice" (House of Representatives Hansard, 26 July 1945).

The post-war nation building period through the late 1940s and 1950s tended to integrate societal and economic purposes with development of the person. Higher education was seen as a process of forming graduates as professional and civic leaders. The 1960s saw a focus on expanding provision of differentiated higher education so that "students receive the kind of education best suited to their innate abilities and purposes in life" (Martin Report, 1964: Volume 1, Page 165).

In the post-1985/ pre-2005 period the priorities shifted to (i) economy, (ii) society, (iii) individual, (iv) knowledge. There was less emphasis given to cultural role of education for societal benefit and more to the economic imperatives of a more highly educated and skilled workforce (Dawkins, 1987). The shift from 'person' to 'individual' included a stronger emphasis on the private financial returns to a degree. The post-2005 era may be seen to prioritise (i) individual, (ii) knowledge, (iii) economy, (iv) society. The individual learner-consumer has market sovereignty. Knowledge is an essential ingredient of economic competiveness and prosperity.

The policy focus of the three phases has mainly continued to emphasise the vocational role of higher education and the utility of research. Vocational orientation with early specialisation at the undergraduate level was favoured over a generalist liberal undergraduate foundation of the kind that developed in Europe and the United States (Partridge, 1965). Within that, however, some subtle shifts have occurred, from the emphasis of the 1957 Murray Committee on the 'education of the able young' to the 1964 Martin Committee's wider interest in 'manpower' supply of graduates to meet projected growth in the professional & technical occupations. From the post-1985/ pre-2005 to the post-2005 period there has also been a shift from a supply-side labour market 'requirements' approach, with all its attendant manpower forecasting exercises and its focus on the minimum levels of training and qualifications to perform certain tasks (Committee of Inquiry into Education and Training, 1977, Volume 2:197), to a demand-side labour market 'absorption' approach with an interest in increasing societal adaptation to change(Brennan, 2004) and capacity for innovation, with much less concern about graduates being 'over-qualified'.

The common institution in all three phases, the university, has also morphed in terms of its role and standing. Universities were seen, or at least saw themselves, as social institutions that discover, transmit and preserve knowledge beyond immediate utility. This academic valuing of 'cultural' role of higher education (versus its 'vocational' role) and assertion of the intrinsic value of knowledge 'for its own sake' was part of the pre-1945 legacy (indeed pre-20th century legacy) of belief if not practice. Addressing a conference in 1964, Sol Encel advocated three main functions of universities:

- Encouragement of the pursuit of learning for its own sake at the highest possible standard, and in accordance with its own imperatives;
- Research, undertaken both for the sake of 'idle curiosity' and for its possible benefits to the community;
- The development of the university as an independent centre of influence (a) on the cultural life of the community, (b) on social policy (Encel, 1965).

Another view is that of higher education as a 'people-processing system' " in which goals, structures, and outcomes support students undergoing personality development, learning skills, and acquiring credentials that may enable upward mobility" (Gumport, 2000). This view contrasts with that of higher education in the knowledge economy as a 'knowledge processing' system:

> "the commerce of ideas casts a spotlight on the creation and distribution of ideas in the knowledge industry as well as on the growing exchange-value of knowledges in specific markets. From this perspective, public colleges and universities – particularly research universities – may also be seen as competitors in the commercial activities of publications and copyrights, patents and licenses, positioning themselves and the nation for global competitiveness. Such knowledge activities have, on some campuses, come to be seen as essential – even increasingly, as core – pursuits of public colleges and universities. In order to grasp the full import of this idea, higher education needs to be understood primarily as a knowledge-processing system" (Gumport, 2000).

Post 1985, education was discussed more in terms of individual opportunity and social reproduction. Universities were seen chiefly as economic institutions that produce useful graduates and knowledge. While the instrumental role of

higher education has been a constant in Australian policy discourse, its utilitarian purpose normally has been set alongside the broader cultural and personal development purposes (e.g. Murray Committee, 1957, pages 8-9; Dawkins 1988, pages 4-7). Similarly, a ministerial statement of purposes in 2000 reflected a broad view (Kemp, 2000):

> "The Government regards higher education as contributing to the attainment of individual freedom, the advancement of knowledge and social progress. The main purposes of higher education are to:
>
> - inspire and enable individuals to develop their capabilities to the highest potential throughout their lives (for personal growth and fulfilment, for effective participation in the workforce and for constructive contributions to society);
> - advance knowledge and understanding;
> - aid the application of knowledge and understanding to the benefit of the economy and the society;
> - enable individuals to adapt and learn, consistent with the needs of an adaptable knowledge-based economy at local, regional and national levels;
> - enable individuals to contribute to a democratic, civilised society and promote the tolerance and debate that underpins it."

Some narrowing of the instrumentalist purpose may be observed over time, at least in policy rhetoric if not in institutional practice, in respect of learning directed at work-related competences and research of commercial application, and this has continued through the post-2005 period:

> "Through the National Innovation and Science Agenda, the Government will invest $1.1 billion to incentivise innovation and entrepreneurship, reward risk taking, and promote science, maths and computing in schools by focusing on four priority areas:
>
> - Culture and capital, to help businesses embrace risk and incentivise early stage investment in startups;
> - Collaboration, to increase the level of engagement between businesses, universities and the research sector to commercialise ideas and solve problems;
> - Talent and skills, to train Australian students for the jobs of the future and attract the world's most innovative talent to Australia; and
> - Government as an exemplar, to lead by example in the way Government invests in and uses technology and data to deliver better quality services." (Prime Minister Malcolm Turnbull, 7 December 2015)

Initiatives of the National Innovation and Science Agenda include:

- **Linkage Projects scheme**
  When researchers and businesses decide to collaborate, they want to get working as soon as possible.
- **Maintaining world class research infrastructure**
  Our world-class researchers and infrastructure are the reason Australia has historically been at the forefront of global discoveries.
- **Measuring impact and engagement of university research**
  While the success of university research can be viewed in measures of excellence, it can also be found in its economic, social, and environmental impacts.
- **New research funding arrangements for universities**
  Universities have traditionally been rewarded for their research outputs, but to ensure their rate of collaboration with industry increases, we need to encourage joint endeavours that produce outcomes with commercial and community benefit.

In the market-universal era, too, the 'post-welfare state university' plays less of a redistributive social role and more of a role in private accumulation (Williams, 2006). Nevertheless, in this phase, with a much wider participant pool, higher education purposes include enabling acquisition of confidence and raising aspiration among previously excluded groups of people. Universities, however, now no longer have a natural monopoly in catering to diverse leaner requirements but must compete with other service supplying businesses.

Policy Domain 2: Purpose

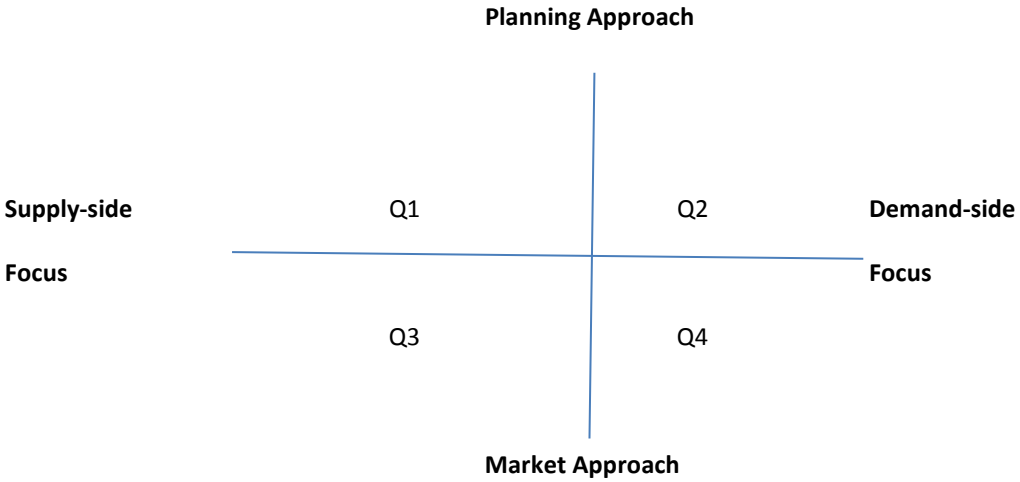
Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Priority: (i) society (ii) person (iii) knowledge (iv) economy	**Priority:** (i) economy (ii) society (iii) individual (iv) knowledge	**Priority:** (i) individual (ii) knowledge (iii) economy (iv) society
Policy focus: Education of the 'able young' (Murray, 1957); Manpower supply of graduates for the profession (Martin, 1964) **Universities as social institutions that discover, transmit & preserve knowledge beyond immediate utility** Academic valuing of 'cultural' role of higher education (V 'vocational' role), intrinsic value of knowledge 'for its own sake' **Legacy purposes from pre-1945 era:** shaping of mind & character; fostering a love of learning; socialisation of citizens; selection, formation & reproduction of elites	**Policy focus:** Skills formation for professional & technical occupations (shift from 'requirements' to 'absorption' approach) **Universities as economic institutions that produce useful graduates and knowledge** Education as individual opportunity & social reproduction Broad instrumentalism of graduates & knowledge	**Policy Focus:** Societal adaptation to change (labour market absorption approach) **Universities as competitive service supplying businesses** Education as acquisition of confidence, aspiration Narrower instrumentalism of graduate competence & knowledge utility

Policy Domain 3: Orientation

The three phases can be seen to involve a shift from strong academic reference to strong state reference and onto strong market reference. Concurrently, the policy and financing framework moved from a supply-side planning approach to a quasi-market supply-side approach and then onto a demand-side market approach (see Figure 1). This is to identify four financing policy options related to different policy objectives (Gallagher, 2000). On the vertical axis is a range of orientations from a central state planning approach to a market-based competitive approach. On the

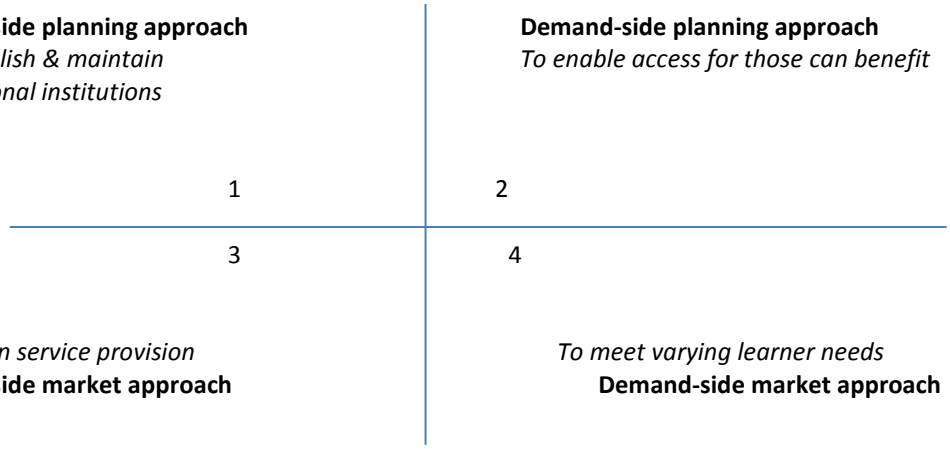
horizontal axis the orientations range from a supply-side to a demand-side approach, or from a provider-driven to a student-driven model.

Figure 1. Higher education policy and financing orientations



A significant albeit contentious assumption of this paper is that in universal systems of higher education participation supply is largely shaped by student demand. This assumption contrasts with the more orthodox view, prevailing from the elite era of centrally-planned systems, that supply shapes demand – that the missions, strategies and behaviours of the supplying institutions drive student participation. In elite systems of rationed student access, such as those where governments fund a quota of student places, university staffing strategies determine the capacity of institutions to teach a set number of students in a given range of course offerings. In those systems, students typically express preferences for admission to institutions and courses of study and institutions select those students they assess as most able to achieve. However, in competitive universal systems there are stronger pressures on institutions to respond to student interests and obtain the revenue necessary to attract the necessary academic talent to teach them. Institutions that are less attractive to students in certain fields then seek to offer courses in alternative fields or to change their modes of delivery. This shift from a supply-side orientation to a demand-side one renders both government policy frameworks and institutional strategies dependent on student interests and motivations. It also underpins innovation in higher education.

Figure 2: Models of higher education policy and financing



Quadrant 1 (see Figure 2) represents a supply-side planning approach whose purpose is the establishment and maintenance of higher education institutions. That is, the policy interest is in the role and contributions of the institutions as education service providers and as economic and cultural contributors to local communities. The typical method of Q1 financing is government grants paid to institutions for teaching and related purposes such as those provided by state governments to teachers colleges in the pre-1985 period and by the federal government post -1957 via block grants for a profile of student enrolments through to today. Mission-based funding compacts negotiated between governments and higher education institutions are also essentially QI models but can operate in Q4 contexts as a complementary mechanism to ameliorate market failure and safeguard Q1 purposes.

In contrast, a Quadrant 2 approach is designed to enable the exercise of student choice and is disinterested about particular providers. In its pure form, Q2 financing is delivered through 'education vouchers' or scholarships that are portable among accredited providers. Vouchers are normally rationed on the basis of merit or need, and can be of a fixed or variable monetary value. While Australia has not adopted a formal voucher model at the undergraduate level (there are voucher-like schemes for some research degree students), indirect vouchers can be seen to operate where the government funds higher education institutions and makes loans available to students and the students have choices over where they enrol. In effect, the government purchases educational places on behalf of students but the choices of students are limited to the number of opportunities bought and their allocation among institutions and fields of study. If vouchers are unrationed, the limiting factor for student choice is the selectivity of particular higher education institutions.

Australia has only rarely applied Q3 financing methods, such as competitive tendering, e.g. the initial funding of Open Universities Australia. Rather, Australia has moved from Q1 to Q4 in financing international education and domestic postgraduate education, and through the post-2008 partial-deregulation of uncapped undergraduate student volume with capped tuition prices.

The tendency to a Q4 approach reflects in part the assumptions of institutional economics that competition among independent organisations is superior to state monopolies as a means of achieving the social benefits of increased innovation and efficiency (Dill, 2013):

1. The public choice assumption that rational user choice is more efficient than government bureaucracy as a means of controlling the rent-seeking behaviour of government-supported organisations;
2. The principal-agent assumption that transaction costs, including monitoring the self-interested behaviour of professionals, can be minimised through better specified contracts.

These assumptions are visible in higher education through:

- The facilitation and freeing of market forces by the adoption of competitive mechanisms for the allocation of government support for universities and by the reallocation of intellectual property rights;
- Empowering users by mandating the provision of academic quality information to students as well as by increasing utilisation of tuition fees for university funding;
- Specifying contractual relations between government and the universities by tying research funding to clearly defined indicators of university output.

The shift from Q1 to Q4 has been via quasi-market development in which the nation state continues to have an interest and to provide support for higher education:

> "[quasi-markets] are 'markets' because they replace monopolistic state providers with competitive independent ones. They are 'quasi' because they differ from conventional markets in a number of ways. The differences are on both the supply and demand sides. On the supply side, as with conventional markets, there is competition between productive enterprises or service suppliers. Thus…there are independent institutions (schools, universities, hospitals etc.) competing for customers. However, in contrast to conventional markets, all these organisations are not necessarily out to maximise their profits, nor are they necessarily privately owned…On the demand side, consumer purchasing power is not expressed in money terms in a quasi-market. Instead, it takes the form of an earmarked budget or 'voucher' confined to the purchase of a specific service allocated to users, or it is centralised in a single state purchasing agency" (Le Grand & Bartlett, 1993).

A balance between the four different approaches is likely to enable the optimal supply of higher education to evolve from a mix of (a) market-driven responsiveness to changing needs and circumstances and (b) government and community support for provision of public value that the market may not sustain:

> "what are commonly understood as market forces in higher education are not markets in the purest sense at all. As long as states continue to fund higher education institutions and subsidize students, institutions at best function in a quasi-market environment. No non-profit university or college in the United States can be said to operate in the absence of any constraining force from state or federal policy. The environment for these institutions is most often a result of three factors: (a) a lack of clarity in the public and political arena about the public purposes that higher education should help fulfill; (b) the inability of state governments to fund their higher education institutions in the same degree as in the past, accompanied by an increase in institutional fundraising, competition for external research grants, and other entrepreneurial activity on the part of both faculty and administration; (c) a considerable amount of discretionary choice on the part of students, which heightens the competition among institutions for undergraduate student enrollments" (The National Center for Public Policy and Higher Education, 2003, San Jose, California).

A different approach appears to be emerging in England, where the Cameron Government seems willing, without yet testing the proposal in the court of public opinion, to make market entry easier for new providers and allow for some established providers to exit:

> "A properly-run market has to have scope for market entry and market exit. If you don't have scope for market exit, you don't really have a market because there is no incentive on institutions to ensure they are competitive. The real test is whether they can sustain demand. It is important that a new regime creates condition for proper market competition and that means allowing market entry and market exit" (The Telegraph, 9 September 2015).

That approach, however, seems to under-value the broader contributions that established higher education institutions make, or could make, to their communities, and the fact that the cost of those contributions impairs their competiveness in the narrower markets for students and research dollars.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Strong **academic** reference	Strong **state** reference	Strong **market** reference
Supply-side planning approach	Quasi-market evolution in supply-side approach	Demand-side market approach

Policy Domain 4: Scale

In the pre-1945 period there were fewer than 20,000 students in higher education across Australia. Over the period 1945-1985 enrolments expanded to just short of 400,000 students. In the period from 1985-2005 enrolments grew to more than 700, 000 domestic students and 100,000 international students. In the decade post-2005, total enrolments have expanded to some 1, 373,230 students (1,025,670 domestic and 347,560 international) in 2014 (Department of Education, 2015). These phases of growth in participation align with Martin Trow's categories: elite (<15% of age cohort) mostly young people participating full-time; mass (16-50%) of age cohort with growth in mature and part-time students; near-universal (>50%) with most participating via deferred access and lifelong learning (Trow,1974). Trow noted that with a larger the proportion of the age cohort participating in higher education the 'meaning' of participation changes:

> "first from being a privilege to being a right, and then…to being something close to an obligation for students in some class and ethnic groups. This shift in the meaning and significance of attendance has enormous consequences for student motivation, and thus also for the curriculum and for the intellectual climate of these institutions" (Trow,2011).

Another aspect of change in the scale of student participation is the timing and duration of learning. In the elite period, a 'front-end' model of learning dominated, with the majority of domestic students commencing within a year or two of finishing secondary schooling and prior to entering the workforce, the 'learner-earner' model. In the mass era the front-end model was topped-up by more mature students working full-time and studying part-time, the 'earner-learner' model. In the universal stage, a 'life-span' model of learning involves people entering and re-entering higher education at different times as they want to broaden or deepen or update their knowledge and skills.

A further aspect of scale change has been the growth of full-time international students on Australian campuses, the 'consumption abroad' mode under the 'study in Australia' marketing banner. In the mass and universal periods there has been not only further growth of international enrolments but also a shift in the mode of supply with increasing 'commercial presence' of Australian providers in foreign countries and 'cross-border supply via on-line learning. Wider options are opening for international students in the home countries, on-line via cyber-technology, in other countries, and part-time with Australian providers.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Elite (<15% of age cohort) mostly young people participating full-time Higher education as a privilege 'front-end' model of learning (learner-earner)	**Mass** (16-50%) of age cohort with growth in mature and part-time students Higher education as a right front-end & topped-up models of learning (earner-learner) Growth of full-time international students on Australian campuses ('consumption abroad' mode)	**Near-universal** (>50%)with most participating via deferred access and lifelong learning Higher education as an obligation Life-span model of learning as wanted/required Growth of 'commercial presence' and 'cross-border supply', with wider options for international students at home, on-line, in other countries, and part-time with Australian providers

Policy Domain 5: Structure

The shape of a state's or nation's system of higher education supply has traditionally been a core public policy determination. The bases for decision-making, notably the rationale and boundaries for distinguishing between institutional 'types', however, have not always been clear even when an explicit policy objective has been to limit 'mission creep'. Additionally, mission complexity and multiplication generates uncertainty and difficulty in specifying and monitoring outcomes (Dill, 2013). Given the importance of status hierarchy in academic systems, those institutions that see themselves being relegated have pushed their claims for advancement by challenging the grounds for differentiation among types.

Australia's approach to the structure of higher education provision has moved from a purposefully designed public system of tiered types from the mid-1960s to a less formally structured unitary system of public universities from the early 1990s and, from 2003, an increasing number of private providers. With the uncapping of funded undergraduate places from 2008 the course of policy moved to see supply structure being a product of student demand rather than one shaped by government policy (Bradley et al, 2008). This neglect of structural policy may be seen as a refusal to countenance stratification, not least on the part of the committee chair whose experience of polytechnic status under the pre-Dawkins binary divide was purportedly less than optimal. The scope for structural responses, moreover, has been curtailed by government regulatory categorisations and criteria relating to university title, an instance of path dependency where policy to accommodate the market-universal phase is limited by decisions and practices of one prior era, the post-1985 state-mass phase. The three phases under consideration may be defined in structural terms as (i) public binary, (ii) public unitary, and (iii) private and differentiated public. The latter presently involves informal rather than formal differentiation, as the formal classification of provider types has yet to adjust to emerging requirements and practices, and informal distinctions are reinforced by world university rankings and other comparative indicators of capacity and performance.

Before 1960 the structure of higher education in Australia comprised universities and sector-specific sub-degree awarding colleges (e.g. teachers colleges, technical institutes). After the Martin Committee's report of 1964 the Menzies Government adopted a binary model of universities, and colleges of advanced education (CAEs), including polytechnics but initially (until 1974) excluding teachers colleges. The rationale of the binary divide was both functional and financial. In functional terms, universities were to be academic and research-oriented while the CAEs were to be vocational and teaching oriented. In financial terms, the CAEs were to be cheaper. Yet, while being 'different' the educational status of the two types was intended to be 'equal', at least in labour market utility and social value if not

'equivalent' in the nature of the student learning experience. Also strange was the subsequent growth in provision, which saw an expansion of universities rather than, as Martin had recommended, an absorption of student growth in the CAEs, with nine new universities added by 1972. Consolidation in the non-university sector progressed through the late 1970s and beyond, with the Fraser Government pressing the amalgamation of 26 smaller CAEs in 1981 under threat of de-funding.

The boundaries between institutional types were initially tight with limited pathways for students and little recognition of their prior learning. These 'heads versus hands' boundaries became increasingly fuzzy as CAEs offered degree programs at various levels of award and ventured into areas of applied research.

Following the Dawkins White Paper of 1988 the binary divide was quickly closed and a public unitary structure was put in place. The 19 universities and 44 CAEs pre-1987 were consolidated into 35 universities by 1991. The resulting 'unified national system' promoted undifferentiated quasi-egalitarian provision. This may be seen as a social levelling agenda: not merely to expand from an elite to a mass 'system' but also to level down the elite universities as illustrated by the 'research clawback' from the pre-Dawkins' universities as a source of funding research in the fledgling Dawkins' universities. The outcome was a formal unitary structure of more homogeneous universities with greater institutional programmatic diversity. The policy intent of creating more formalised pathways and recognition of prior learning, however, was often honoured in the breach in institutional practice.

The closure of the binary divide in the UK around the same time as in Australia was premised on the assumption that "the real key to achieving cost effective expansion lies in greater competition for funds and students. That can best be achieved by breaking down the increasingly artificial and unhelpful barriers between the universities, and the polytechnics and colleges" (Department for Education and Science, 1991: 12). Strangely, that rationale was never advanced in Australia. Rather, the rationale for binary closure was:

- Greater breadth and depth of course offerings available to students;
- Advantages to staff in the form of wider options for career advancement and teaching/research arrangements;
- Economies in administration and other overheads through amalgamations of smaller institutions;
- Stronger foundation for institutional growth (Dawkins, 1988).

That declared policy intent has largely been achieved. It was, however, basically an agenda for efficiency in public higher education provision rather than one of wider higher education system diversification and responsiveness to growth in student participation, including from non-elite backgrounds. With the benefit of hindsight, the Dawkins' reforms may be assessed as just passing the Meatloaf test – two out of three: full marks for opening Australia early to trade in international education services; top marks for over-turning the Whitlam aberration of free higher education for socially advantaged groups and introducing income-contingent loans; fail on creating a uniform, high-cost supply structure on the false premise and promise of equivalence.

The private and differentiated public structure is emergent. Policy decisions are needed but are yet to be made that will permit and promote diversification within the non-university higher education provider category (e.g. liberal arts colleges, community colleges, institutes of technology), and within the categories for universities. Structural diversification is needed in order to cater more appropriately to the more varied mix of students:

> *"In the traditional higher education sector that emphasizes the interlocking missions of teaching, research, and student growth, older learners and part-time learners are over served because their use of the research and student growth components is limited" (Armstrong, 2014).*

Internationally current policy debates over higher education structures address three major concerns: isomorphism, rigidity, and research concentration. First is a concern about isomorphism, the academic drift of vocational colleges and the vocational drift of universities. This 'mission creep' is seen to lead to higher administrative costs, inefficient program duplication, and a reduction in higher education accessibility (Longanecker, 2008). Interestingly, Australia has

not experienced reduced accessibility. The strong drivers of sameness or homogenisation are the power of academic norms that place high value on research-based prestige, reinforced by rewards in the academic labour market, and normative policy settings, financial incentives and regulations set by government (van Vught, 2008). Yet it is unreasonable, unfair and inefficient to place expectations on institutions to become what they are not set up to be:

> "A central problem for higher education policy in every modern society is how to sustain the diversity of institutions, including many of which are primarily teaching institutions without a significant research capacity, against the pressure for institutional drift toward a common model of the research university – the effort alone shapes the character of an institution to be something other than what it is – a prescription for frustration and discontent (Trow, 2003).

Second, is a concern about rigidity. The stratified systems designed in the industrial era of highly segmented labour markets for clearly specialised roles now lack sufficient porosity to cater for the development and recognition of transferable generic skills in the knowledge economy. Functionally-specialised higher education types are too impermeable, and more fluid structures through 'soft' rather than 'hard' differentiation are required. Further development of pathways for learners up and down and across different types of higher education and experimentation with blended models and inter-institutional collaborations is suggested (Wissenschaftsrat, 2010).

A third concern relates to research selectivity and concentration. The rising costs of research mean that it will be difficult even for the most research-intensive universities to sustain their current disciplinary span at international standards of excellence. From a policy perspective, it will become increasingly difficult for nations to sustain a wide spread of research-performing institutions of adequate scale and respectable quality.

In Australia, while there continues to be substantial growth in student enrolments in the public universities there is also more scope for growth of non-university providers especially private for-profit providers offering niche courses. The current un-level playing field in terms of the financial assistance available to public and private providers is holding back the realisation of greater structural diversification within Australia's higher education system. Additionally, within the formally monochrome public university sector there is widening informal differentiation on grounds of capacity, performance and reputation. As in Britain, the formal hierarchies of the former binary system may be replaced "by equally clear and rigid informal distinctions which may prove more durable" (Brown, 2011).

While the new technologies increasingly allow for student-constructed pathways with few if any boundaries across provider types, it is probable that qualitative and other barriers to student mobility and credit recognition will persist. A conceivable scenario is that the elite institutions within the market-universal phase will club together more and command the high status market segment, that footloose private providers will capture a larger part of the mass market segment, leaving a challenged middle group of established institutions with the overheads of physical presences, multiple missions and mixed modes.

The EU's High Level Group on the Modernisation of Higher Education, 2014 report identified three models of the use of new modes of learning and teaching:

> a) Conventional higher education providers offering programmes and courses on campus that make use of online technologies and pedagogies within courses and programmes - better known as blended learning. This also applies to conventional distance education providers.
>
> b) Conventional higher educational providers offering full programmes or short courses online. These courses and programmes can be limited to enrolled students, or open to non-enrolled students with or without credits.
>
> c) Non-university providers offering courses, on-line or in diverse physical places, free of charge or fee charging, with or without credits.

Ernst & Young's 2012 *University of the Future* report suggested that Australia's higher education landscape would be transformed within a decade or two, and posited three business models emerging from the 'disruption' of rising demand, falling public investment, and transforming technologies:

1. *Streamlined Status Quo* – Established universities that "continue to operate as broad-based teaching and research institutions, but that will progressively transform the way they deliver their services and administer their organisations – with major implications for the way they engage with students, government, industry stakeholders, secondary schools, and the community."
2. *Niche Dominators* – Established universities and new entrants that "fundamentally reshape and refine the range of services and markets they operate in, targeting particular 'customer' segments with tailored education, research and related services – with a concurrent shift in the business model, organisation and operations."
3. *Transformers* – Private providers and new entrants that "carve out new positions in the 'traditional' sector and also create new market spaces that merge parts of the higher education sector with other sectors, such as media, technology, innovation, venture capital and the like."

Australia's current policy framework offers insufficient flexibility for different institutions to establish more sustainable market positions, even those that are both 'market-smart and mission-driven' (Zemsky, Wegner & Massy, 2005). The present structure of incentives rewards undergraduate enrolment enlargement, especially in degree programs with lower delivery costs, alongside dissipation of the national investment in research. These incentives for expansion reduce options for enhancing responsiveness to changing student demand, whether through greater convenience, relevance or quality. They also prioritise quantitative growth over qualitative improvement and intensification of learning experiences, with consequential concerns about the adequacy of graduate fit to changing labour market requirements both in terms of fields taught and skills acquired. Additionally, the reputation race spurs enlarged research activity on the part of university teachers, including research of low quality undertaken with the risk of lower quality of teaching.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Public binary Before 1960: universities and sector-specific sub-degree awarding colleges (eg teaching) After 1964: universities, CAEs including polytechnics) Tight boundaries between institutional types Limited pathways and little recognition of prior learning	**Public unitary** Undifferentiated quasi-egalitarian provision and permeable boundaries More homogeneous universities with greater institutional programmatic diversity More permeable boundaries between institutions Formalised pathways & recognition of prior learning	**Private & differentiated public** Growth of non-university HEPS especially private for-profit providers offering niche courses Informal differentiation on grounds of capacity, performance & reputation Student-constructed pathways but uncertain porosity of boundaries across provider classes

Policy Domain 6: Culture

The underlying assumption of the academic-elite participation phase was that pursuit of knowledge is best achieved in single-focussed academic environments where inquiry can remain open and where goods that exceed market reach can be preserved. This rather insular view was reinforced by an internally-referenced valuing of knowledge for its intrinsic worth. Investigator-initiated research and academic scholarship was evaluated through peer-review and published in academic outlets. In the universities, theoretical knowledge was regarded as superior to practical knowledge. The expert-oriented culture gave rise at times to a 'god-professor' authoritarianism, departmental separateness and academic conformity to favoured views:

> "I was immersed in an atmosphere of unhealthy uniformity and stubborn resistance to change; an atmosphere in which good news was often accepted with an almost bovine indifference. Professors were assumed to be equal, not only in the sight of God and law but in every attribute that becomes a professor….I felt an increasing sense of failure, and the failure was great indeed: failure to achieve a oneness in the university, to defeat departmentalism and the professor-god myth, to see that staff were used and rewarded in accordance with their talents and industry, to put Adelaide on the research map; failure to gather round me a small team of men selected for their wisdom, faith and experience; failure to persuade the governing body to discuss great issues and to give to others powers it could not itself use; failure to achieve and open discussion of aims, except on the part of the graduate body" (former Adelaide University Vice-Chancellor A. P. Rowe, 1960).

The underlying assumption in the state-mass phase was that pursuit of knowledge is best achieved in academic environments that connect with practical players and challenges. Both theoretical and practical knowledge and learning were seen to be needed by graduates in modernising economies, as reflected in the merging of the former university and CAE institutions and their cultures. Similarly a blend of basic and applied research was promoted as likely to assist innovation and economic adjustment. Public policy encouraged more interaction between academe and industry, with specific programmatic initiatives such as the Cooperative Research Centres encouraging the formation of research collaboration and industrial application, along with specific funding programs for application-oriented research, with applications for competitive research grants having to identify possible use benefits.

The underlying assumption of the market-universal phase is that pursuit of knowledge is best achieved in multiple and mixed environments. The required culture for success is one of service-oriented responsiveness to varying student needs and interests along with market-smart means of competing with rival providers, while seeking to maintain mission focus and core values (Zemsky, Wegner & Massy, 2005). A more industry-facing and joined-up approach to research is encouraged, including via metrics in funding formulae to value research of community benefit beyond traditional academic references and measures. The move to open science, open data and open source has also shifted the academic culture away from its previous insularity. It has also raised new questions regarding the traditional knowledge preservation and knowledge filtering functions of universities:

> "The filtering process is wildly different than what it used to be. The value of a web of ideas comes from the differences among the participants in that web. If everybody's saying the same thing, there's negative value in networking them. This gives us an idea that knowledge contains difference, rather than knowledge being that from which all disagreement has been driven, that which has been settled once and for all. I think that in many fields we're finding knowledge to exist in networks that contain disagreement and difference. This is not an entirely new idea, for sure. In *Team of Rivals*, Doris Kearns Goodwin's book about Lincoln's cabinet, this is shown quite clearly. A group of people who disagree is wiser than any of the single people in it. This idea is not new but we now have an environment — a medium of knowledge-that makes it manifest; it's the norm. The medium only has value as far as it contains disagreement. That's a very different idea of expertise—expertise consists of a web of people who disagree—than the old idea of expert advice" (Weinberger, 2012).

While disagreement may be well and good, there remains a need to validate truth, verify the reliability of evidence and conclusions drawn, and reveal uncertainties:

> "With the rejection of professionalism has come a widespread rejection of expertise—of the proper role in society of people who make it their life's work to know stuff…epistemic egalitarianism doesn't declare we have the right to say what *really is* known… Experts know particular topics particularly well. By paying closer attention to experts, we improve our chances of getting the truth; by ignoring them, we throw our chances to the wind. Thus, if we reduce experts to the level of the rest of us, even when they speak about their areas of knowledge, we reduce society's collective grasp of the truth. It is no exaggeration to say that epistemic egalitarianism, as illustrated especially by Wikipedia, places Truth in the service of Equality. Ultimately, at the bottom of the debate, the deep modern commitment to specialization is in an epic struggle with an equally deep modern commitment to egalitarianism. It's Truth versus Equality, and as much as I love Equality, if it comes down to choosing, I'm on the side of Truth" (Sanger, 2007).

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Assumption: pursuit of knowledge is best achieved in single-focussed academic environments	**Assumption: pursuit of knowledge is best achieved in academic environments that connect with practical players and challenges**	**Assumption: pursuit of knowledge is best achieved in multiple and mixed environments**
Internally-referenced intrinsic value of knowledge	Externally-referenced, instrumental value of knowledge	Knowledge networks with contesting views & knowledge filtering for validity and rigour
Preserving public goods that exceed market reach Value of open inquiry		
Theoretical knowledge regarded as superior to practical knowledge	Theoretical and practical knowledge valued commensurately	Applied knowledge valued above theoretical knowledge
Expert-oriented	**Service-oriented** responsiveness to students and external environments	**Market-oriented** responsiveness to changing student demand and supply competition
Investigator-initiated research, peer-reviewed and published in academic outlets	External funding for application-oriented research	Open science, open data and open source

Policy Domain 7: Student access

In the academic-elite phase access was rationed on meritocratic grounds (the 'ability-to-benefit' principle). Student admission was based typically on assessment of cognitive ability and readiness, normally based on school attainment. Students enrolled in a packaged program of study for a qualification.

Even in its most elite period (when participation was very low) Australia did not adopt the 'elitist' traditions of English higher education where access was privileged according to social and financial criteria. Rather Australia adopted a 'meritocratic' approach to access. Australia's first university, the University of Sydney, for instance, accepted its initial students through matriculation in 1852 without any religious tests. There was a gradual extension of an 'educational

franchise' first to a male meritocracy selected through examination for a fee, and often granted scholarships, and then to other parts of the population including those in rural areas and female students. However, through the orientation of boys' corporate schools which sourced the bulk of the university's intake, the actual relationship with the universities was often more 'aristocratic' than meritocratic in intent (Sherington & Horne, 2009).

The mass phase combined merit-based access with compensatory programs for student readiness deficits. Admission was based not only on school attainment but also on assessment of aptitude and interest, and for the growing number of adult students, some recognition of their prior learning. Students enrolled in an award program with required core plus elective units.

The phase of universal participation is one of open access. Admissions reflect diverse criteria with emphasis on inclusion of all social groups, and higher education replacing TAFE in compensating for schooling deficiencies. Students can register in a subject unit or module as well as an award course, and can access their study options in an open market for distributed content and aggregation. Universities and other providers will become more agile in allowing students to exit and re-enter their studies.

To cater adequately for varying student abilities, backgrounds and interests it becomes necessary, as participation expands, to enable varying intensities of the learning experience, from strong to mild as suits different students, whether fully-immersed for those wanting a rounded education, to light touch for those mainly seeking credit recognition for what they already know and can do, whether through work or modular study elsewhere. There are additional costs for those seeking a deeper than typical learning experience, involving greater inter-personal interaction and wider study pursuits. For those entering higher education without adequate preparation to succeed academically it becomes necessary to provide support of different kinds at different 'case-mix' costs. The financing policy framework needs to be able to accommodate a diversity of learning cost options.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Rationed access on meritocratic ('ability-to-benefit' principle), typically transparent, based on school attainment & other criteria Admission on assessment of cognitive ability & readiness Enrolment in a packaged program of study for a qualification	**Merit-based access with compensatory programs for student readiness deficits** Admission on assessment of aptitude & interest# Enrolment in an award program with required core plus elective units	**Open access** Admissions reflecting diverse criteria with emphasis on inclusion of all social groups, with higher education replacing TAFE in compensating for schooling deficiencies Registration in a subject unit or module Open market for distributed content and aggregation

Policy Domain 8: Student experience

In the academic-elite phase higher education was seen as a 'post-experience good' where the worthwhile may not be anticipated and where the student is a co-producer of their learning. Students were regarded as scholarly apprentices and members of a learning community. Individual students were responsible for achieving learning. Campus-based learning was a function of 'place' with reflective time and space, purposefully disconnected from the surrounding civic environment. Indeed the campus was 'a landscaped park' (Rothblatt, 2007). There were varying Faculty/Department-specific approaches to teaching and learning, typically tutorial-intensive or laboratory-intensive for interactive learning

with peers and teachers, alongside a strong reliance on the lecture as the main form of knowledge transmission. Student clubs and societies were important for extra- curricular learning experiences and formation of social networks.

In the state-mass phase, higher education was a largely a credentialling process, in some instances akin to a diploma mill. Students were seen more as clients with limited knowledge competence. There was increased reliance on large lectures, seminars and laboratory sessions. Teachers were tasked with more responsibility for student learning. A whole-of- institution approach was taken to management of the student experience including learning beyond instruction. There was increased availability and professionalisation of student support and mentoring services. Student involvement in campus-extra-curricular activities declined substantially.

In the market-universal phase there is more emphasis on the exchange value of higher education, with students purchasing sets of knowledge skills and credentials they can trade on the labour market. Higher education can be separated from assessment and credentialing. Students are seen more as customers with sufficient knowledge to exercise choice and construct their own learning. There is greater specification of multi-functional skills to be developed. Patterns of student attendance on campus and at lectures are variable, even for full-time students. Teaching and learning involve mixed modes: in the classroom, on-line, from home and work-based. There is very limited student participation in clubs and societies. Of increasing importance is learning and socialisation in non-academic settings.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Higher education as a 'post-experience good' where the worthwhile may not be anticipated and where the student is a co-producer	**Higher education as a credentialling process**	**Emphasis on the exchange value of higher education**, with students purchasing sets of knowledge skills and credentials they can trade on the labour market
Student responsible for achieving learning	Teachers responsible for student learning	Separation of higher education and credentialling
Students as scholarly apprentices & members of a learning community	**Students as clients with limited knowledge competence**	**Students as customers with sufficient knowledge to exercise choice & construct their own learning**
Faculty/Department-specific approaches, typically tutorial-intensive	Reliance on large lectures, seminars and lab sessions	Variable patterns of student attendance
Campus-based learning as a function of 'place' – reflective time and space, interactive learning with peers and teachers	Whole of institution management of the student experience including learning beyond instruction	Mixed modes: classroom, on-line, from home & work-based
	Increased availability and professionalisation of student support & mentoring services	Limited student participation in clubs & societies
Importance of clubs & societies for extra- curricular learning experiences and formation of social networks	Declining student involvement in campus-extra-curricular activities	Importance of learning & socialisation in non-academic settings

Policy Domain 9: Teaching

In the academic-elite phase there was no role for government policy relating to teaching. Academic affairs were assumed to be properly matters for academic communities. Nor was there necessarily a curriculum-based approach to the structure of a degree program:

> "In Australia, according to Candy, Crebert and O'Leary (1994) "the concept of 'curriculum' in the university setting was unfamiliar to many academics, who developed and taught units or courses to reflect their own interests with little attention to ensuring coherence or identifying the aims and objectives of teaching". In relation to assessment in higher education, James and McInnes (2001) argued that: "Assessment literally defines the curriculum for most students – by spelling out the learning that will be rewarded it is a potent strategic device for educators" (Hicks, 2007).

Nevertheless, within the decentralised approach to course offerings there was normally a discipline-based sequential structure to a three or four year degree program, with the expectation that a student's knowledge and understanding would be progressively deeper and more rigorous. There was also typically a just-in-case approach to knowledge coverage and cognitive skills development. Importantly, assessment of learning was integral to the teaching process and to student learning itself. The setting and marking of assessment tasks involved professional judgement learned on-the-job in the academic environment.

The state-mass phase saw an increasingly interventionist role for Government policy via requirements for external quality assurance, student evaluation of teaching, rewards for good teaching, funding innovation and disseminating good practice. The implicit assumption was that academic self-regulation was insufficient to ensure good teaching, and that without regulation and incentives to raise teaching quality and status, research would dominate academic effort. These interventions tended to induce greater standardisation, in part through the convergences created through professional development programs and sharing of practices among institutions. Most institutions in many fields adopted a sequenced core curriculum and a set of approved electives, typically designed for 2 credit-based semesters per year with a summer semester option. The electives did not necessarily align with a sequential approach to disciplinary deepening. Assessment could be both continuous during a semester and summative at the end of a semester. Instruction and assessment, however, remained bundled together.

The market-universal phase involves a standards-setting role for Government on the assumption that regulation is necessary to safeguard minimum acceptable standards. It is seen to be necessary to safeguard standards for the purpose of upholding the reputation of Australian educational qualifications and as a means of student consumer protection from unscrupulous providers. Problems arising in the private vocational education and training sector, following the extension of FEE-HELP loans to students enrolled with private VET providers, underline the necessity to have quality safeguards in place in higher education and private provision and participation expands.

The new information and communications technologies allow for the development of innovative learning spaces and blended teaching modes such as via the 'flipped classroom', with on-line materials and simulations replacing texts and lectures. They also enable customisation of structured learning experiences for individual students even within large groups. And they open up greater possibilities for just-in-time modularisation of learning offerings. These technologies also challenge some rigidities of institutional practice, including time-based instruction and normative assessment:

> A shift to customized approaches to learning will require new technologies applied systemically to the entire learning process that can support all stakeholders and manage core and auxiliary learning functions (Reigeluth, Watson & Watson, 2012). A learner-centred approach means the removal of barriers created by traditional, institution-centric structures such as inflexible degree requirements and semester and course timelines that force learning to be time rather than learning based, and assessments that focus on comparing students rather than truly contributing to mastery of learning objectives (Watson, 2013).

The emergent model of teaching implies that transferable skills are more important than subject knowledge whose span is now too enormous to be 'covered' and whose shelf-life in many fields is diminishing:

> "It seems to me in an age of vast quantities of information, instantly available, outdated almost as instantly, the ability to deal nimbly with complex and often ambiguous knowledge is far more important than the accumulation of facts which can be regurgitated. …Content will become a given and there will be an expectation from your employers that you will update your knowledge base yourself, when you need it" (Jane den Hollander address to CEDA, June 2015).

A greater focus is thereby given to structuring learning experiences that develop disciplinary and trans-disciplinary concepts and skills, and build generic as well as function- specific competencies. One direction in the market-universal era is for taught courses to be designed to build job-ready competencies and for work placements to be embedded in formal courses. Another direction is to tailor short courses for employers to round out or deepen the work-based learning of employees.

Whereas government interventions to improve educational practices dominated the state-mass phase, inter-institutional borrowing and networking shapes teaching process improvement in the market-universal phase:

> "Most MOOCs have become a sort of educational global logistic service that helps providers (colleges) in every step of producing, selling, delivering, and servicing some of their products. Quality control of the product is the responsibility of the producer, not the deliverer who drops the product off at your home or office. Thus much of the speculation about what MOOCs will or will not do to revolutionize higher education is misdirected because MOOCs are not developing as competing educational companies per se, but logistic companies. Consequently, their main impact is simply that they have made available an unprecedented number of online courses from major universities that can now be used by other existing colleges and start-ups as tools in a process to improve or transform current educational practices" Armstrong (2014).

The new direction for government intervention may well be to demand greater transparency over higher education providers' processes as well as outcomes. England's universities minister, Jo Johnson, has indicated that as a quid pro quo for greater tuition pricing flexibility universities will be required "to provide greater transparency on what they spend their money on, and give students more information about the teaching they will receive" (The Guardian, 9 September 2015). This move is in response to concerns that academic staff prioritise research over teaching:

> "referring to what academics David Palfreyman and Ted Tapper describe as a "disengagement contract" with students, Mr Johnson said: "This goes along the lines of, 'I don't want to have to set and mark much by way of essays and assignments which would be a distraction from my research, and you don't want to do coursework that would distract you from partying, so we'll award you the degree as the hoped-for job ticket in return for compliance with minimal academic requirements and due receipt of fees'. This is not a contract I want taxpayers to underwrite. Because many universities see their reputation, their standing in prestigious international league tables and their marginal funding as being principally determined by scholarly output, teaching has regrettably been allowed to become something of a poor cousin to research in parts of our system. This patchiness in the student experience within and between institutions cannot continue." (*The Star*, 11 September 2015).

The processes of teaching will also be increasingly under pressure from new students to higher education whose ways and means of accessing information and interacting socially transcend the traditional boundaries of higher education offerings. The upcoming cohorts of students bring with them new capacities and expectations:

> "I welcome the next generation of platform floating, cloud space storing, super googling, pinterest glamourising insta-spotifying students.....The past seven years of learning in primary schools have moulded these next generation students to become independent and collaborative learners, who have grown up secure in a new model of teaching. These are active learners familiar with inquiry-based practice, who have learnt to pivot seamlessly between devices and across different platforms while they deep dive into subject areas that are delivered online, offline and in immersive learning environments" (Valintine, 2015)

These student capabilities will enable information dissemination outside the classroom and more knowledge integration, personalised tutoring and student-peer learning in the classroom (Sullivan, 2014). There is growing pressure for greater professional development of academics for these more interactive and facilitative teaching roles, alongside an expectation that academic teachers will have practical working experience in the fields they teach. Additionally, the informal higher education curriculum is of increasing importance and influence:

> "We might say that the formal curriculum is being pressured from two sides. On the one side is a growing body of data about the power of experiential learning in the co-curriculum; and on the other side is the world of informal learning and the participatory culture of the Internet. Both of those pressures are reframing what we think of as the formal curriculum. These pressures are disruptive because to this point we have funded and structured our institutions as if the formal curriculum were the center of learning, whereas we have supported the experiential co-curriculum (and a handful of anomalous courses, such as first-year seminars) largely on the margins, even as they often serve as the poster children for the institutions' sense of mission, values, and brand. All of us in higher education need to ask ourselves: Can we continue to operate on the assumption that the formal curriculum is the center of the undergraduate experience?" (Bass, 2012).

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
No role for Government policy: Academic affairs are matters for academic communities Discipline-based sequential curriculum for a degree **'just-in-case' approach to knowledge coverage** **Decentralised and bundled approach to instruction** over 3 terms per year Professional judgement learned on-the-job in academic environment	**Interventionist role for Government policy via requirements for external QA, student evaluation of teaching, rewards for good teaching, funding innovation and disseminating good practice:** Without regulation and incentives to raise teaching quality and status, research will dominate academic effort. Standardisation, National Protocols & Quality Audits **Sequenced core curriculum and approved electives,** typically 2 credit-based semesters per year & summer semester option	**Standards-setting role for Government:** Regulation is necessary to safeguard minimum acceptable standards. Disciplinary and trans-disciplinary concepts and disciplinary skills, developing generic & specific competencies Transferable skills more important than subject knowledge Job-ready competencies & work placement embedded in courses **Just-in-time modularisation of learning offerings**

Policy Domain 10: Learning

In the academic-elite phase students were normally expected to accept expert definitions and constructs, and were guided to develop academic literacy and awareness of academic conventions. Learning thereby was teacher-designed and the pedagogy was teacher-centric, with the teacher as a major source of knowledge and teaching as a process of information transmission. There was also structured and interactive learning with student peers through tutorials and laboratory sessions. Learning was a process of recall and application of concepts. Assignments for assessment purposes, however, were for individual students rather than groups.

In the state-mass phase learning was teacher-mediated. Students were expected to digest set texts and other recommended learning materials. The pedagogy was mainly passive, with often large-group lectures, especially in the first year classes of a degree program. Time in tutorials was reduced and the size of seminar groups increased. There was strong focus on assessable tasks, including group assignments and group assessments. Student support services were extended and professionalised to help struggling students.

In the market-universal phase learning is technology-enriched. Importantly, the new information and communications technologies allow for learner-constructed learning. This is the i-Tunes model, with on-line modules chosen by learners from diverse supply sources. On the provider side, there are now facilitated networks of shared data about individual students' learning (formative & summative). These new tracking mechanisms enable documentation of learning undertaken and achieved throughout a person's lifetime. Concerns are arising about the reduced coherence of learning and about variable quality and comparability.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Students expected to accept expert definitions & constructs, and guided to develop academic literacy and awareness of academic conventions	Students expected to digest texts & other recommended learning materials	Technology-enriched learning
		Flipped classroom, on-line materials & simulations replacing texts & lectures
	Passive pedagogy large-group lectures, with reduced time in small tutorials	Customisation of structured learning experiences for individual students
Teacher-designed learning	**Teacher-mediated learning**	**Learner-constructed learning**
Teacher-centred pedagogy: teacher as source of knowledge; teaching as transmission	Group assignments	on-line modules chosen by learners from diverse supply sources
	Focus on assessable tasks	tailoring of short courses for employers
Interactive learning with teachers & peers		Facilitated networks of shared data about individual students' learning
	Professionalisation of student support services provided to help struggling students	Greater professional development of academics for their teaching roles
Individual assignments		

Policy Domain 11: Educational qualifications

In the academic-elite era self-accrediting universities awarded academic qualifications. As the system was small and academic norms were socialised through continuity of academic employment, and as students were admitted mostly on the basis of school attainment, there was general equivalence (parity of esteem) of qualifications awarded by similar mission-differentiated institutional types, whether universities, CAEs or teachers colleges. Graduates were normally qualified to practise (in some fields after practical work). The underlying policy assumption was that it is not only what you learn (field of study) but the institutional experience adds value: i.e. where and how you learn matters.

In the state-mass phase a common national template emerged (the Australian Qualifications Framework) as a descriptive reference, initially as guide for the recognition of the Australian equivalence of educational qualifications obtained overseas by immigrants. The AQF evolved as a means of relating the educational awards of the different education and training sub-sectors, with sector-specific qualifications for the higher education and vocational education and training sectors, except for the Associate Degree. A policy objective in this phase was to enable and promote better recognition of the prior learning of individuals so they did not have to spend time and money in repeat learning of what they already knew. The operating policy assumptions were (a) that the credential matters, wherever and however it is obtained; and (b) the demonstration of competence should be accepted as a legitimate basis for educational credit. Policy sought to increase the transparency and comparability of degrees.

In the market-universal phase, the national accreditation of all higher education providers is referenced to national standards designed by an advisory panel, approved by the Minister and applied by the national regulator (TEQSA). The AQF is a reference to the setting of threshold standards in relation to teaching and learning, viz. that 'course design is appropriate and meets the Qualification Standards', and 'assessment is effective and expected learning outcomes are achieved' (Higher Education Standards Framework (Threshold Standards) 2011, registered 28 March 2013). These standards include, inter alia, that providers:

- take account of external standards and requirements, e.g. published discipline standards, professional accreditation, input from relevant external stakeholders, and comparable standards at other higher education providers;
- provide for appropriate development of key graduate attributes in students including English language proficiency,

and that

- The design of the course of study shows appropriate consideration of entry and exit pathways, including articulation from other studies and to further studies.
- The course of study is designed to ensure equivalent student learning outcomes regardless of a student's place or mode of study.

The AQF as a reference outlines (minimum) learning outcomes for each level of award with indicative measures of the 'volume of learning' in credit units or years. The Threshold Standards properly do not mandate adherence to the specifics of the AQF. This is to recognise the variety of ways and means now available for obtaining a qualification:

> "Rules about the volume of learning and the time required to receive an award may have less relevance when students are pacing their own learning online. Incorporating technology-driven innovations within our current regulatory framework is difficult; for example, the degree in its current form may soon be constructed using digital badges and micro badges collected globally and locally from educational institutions, from industry and from other activities. All of this will count towards employability and a modern education as part of an ePortfolio. There may be a new generation who does not want a whole degree" (Jane den Hollander (2015) CEDA).

The emergent policy assumptions is that competence is learned by doing and through work experience as well as study, i.e. that what you can show you can do matters. This permits accreditation from multiple sources beyond national borders and regulatory reach, and unbundled micro-credentialing in bite-size chunks of learning with specific competencies recognised through digital badges, certificates, etc.

Several questions arise:

- whether there will be more or less differentiation of recognition on the basis of where and how a qualification is obtained?
- the extent to which learning outcomes above the threshold standards will be recognised, if not by policy makers then by higher education institutions, other credentialling bodies and employers?
- the emergence of self-selecting global networks of comparable institutions?
- the widening or narrowing of educational pathways?

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Self-accrediting universities awarding academic credentials Equivalence (parity of esteem) of qualifications awarded by similar mission-differentiated types Graduates qualified to practise (in some fields after practical work) Belief that the institutional experience adds value (on top of field of study choice): **where and how you learn matters**	Common national template (AQF) as a descriptive reference Sector-specific (HE & TVET) qualifications (except for Associate Diploma) AUQA approval & accreditation of courses of study leading to degrees by non-university providers Belief that **the credential matters, wherever and however gained,**	Nationally-accredited higher education providers (TEQSA) referenced to national standards (minimum) learning outcomes for each level of award Belief that competence is learned by doing and work experience **What you can show you can do matters** Accreditation from multiple sources beyond national borders & regulatory reach Unbundled credentialing in bite-size chunks of learning with specific competencies recognised through digital badges, certificates, etc. Self-selecting global networks of comparable institutions Priority on graduate employment outcomes Greater or less differentiation of recognition on the basis of where and how obtained??

Policy Domain 12: Educational assessment

In the academic-elite phase, educational assessment was a form of hierarchical judgement where the student's disclosure is subject to the normalising gaze of the institution and its experts (Barrow, 2006). Assessment was mostly summative and norm-referenced via scheduled assignments and/or end-of-term exams. Assessment for certification of knowledge or performance was embedded in course design and delivery. Cultural norms relating to performance expectations were passed on tacitly through socialisation of full-time tenured academics rather than by codification (Dearing Report, 1997).

In the state-mass phase assessment became a measure of academic effectiveness in enabling student learning. The breakdown of staffing continuity for passing-on cultural norms led to the development of codified standards. More emphasis was given to formative assessment, but summative assessments persisted and both were undertaken at set periods during or at the end of a course of study. The quality audit agency (AUQA) referenced its assessments to the AQF and specification of graduate attributes. Serious problems arose with plagiarism and use of commercial agents to do assessable student work.

In the market-universal phase competency-driven assessment and micro-credentialling are emerging. Assessment is separated from course design and delivery. The validation of learning is de-contextualised from the places and means of learning. 'Just-in-time' assessments and external assessment -only houses are emerging alongside, open badging awarded directly to learners, and maintained and displayed by those learners from their Badge Backpack, independent of employers, and publicly available.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Assessment as a form of hierarchical judgement **Summative & norm-referenced** Assessment for certification of knowledge or performance embedded in course design and delivery Cultural norms relating to performance expectations passed on tacitly through socialisation of full-time tenured academics rather than by codification Common assessments via scheduled assignments and/or end-of-semester/term exams	Assessment as a measure of academic effectiveness in enabling student learning **Formative** Assessment referenced to AQF and specification of graduate attributes Assessment as a measure of academic effectiveness in enabling student learning Breakdown of staffing continuity for passing-on cultural norms, with increasing development of codified standards Formative and summative assessments at set periods	Assessment as independent validation Diverse criteria for judgement **'just-in-time'** assessments and external assessment -only houses, Open badging Efforts to increase transparency & comparability of degrees Major problems with plagiarism and use of commercial agents to do assessable student work Competency-driven, criterion-referenced assessment Assessment separated from course design and delivery validation of learning de-contextualised from the places and means of learning

Policy Domain 13: University research

In the post-1945/pre-1985 phase university research was mostly a mix of curiosity-inspired basic research and use-inspired basic research. This orientation contrasted with the stronger focus on applied research in the pre-war period and during World War 2 itself (Martin, 2007; Forsyth, 2012). Over the post-1985/pre-2005 phase the public policy emphasis was put on funding of application-oriented research particularly in health & medicine and STEM fields. In recognition of science and technology being a strategic resource for nations and firms, and the importance of universities in the national innovation system, government policies have encouraged technology transfer, commercialisation of research, and collaborative university-industry links. This tendency has continued into the post-2005 phase, with a closer focus on economic restructuring in the post-mining boom era and the demise of protected manufacturing.

In the academic-elite phase scholarship was understood to be an integral academic function across all disciplines, not least the Humanities. Research was a function of scholarship in fields where students are taught, except for the ANU where the Institute of Advanced Studies was funded post-war as a research and graduate training university. As interest in the natural and social sciences grew, the underlying policy assumption was that excellence derives from individual stars around whom small groups are built in single universities. This approach contrasts with that of a problem-oriented or 'thematic' prioritisation of research and researcher hiring. The dominant policy approach was to support ('pure basic') researcher-driven or 'curiosity-driven' research, typically addressing long-term fundamental questions and geared to discovering new understandings. The underlying policy assumption was that Government should fund research that industry will not fund. This did not mean that the public funding of university research was not intended to lead to applied outcomes. Rather, much of the basic research was dedicated to finding solutions to real problems but was not constrained by immediacy and commercialisation expectations.

The state-mass phase emphasised a distributive policy of funding research across all of the nation's then expanded set of universities, and building research capacity through academic staff qualifications upgrading (to PhD), professional development and mentoring of new researchers, small grants for emerging researchers, and investment in institution-based and shared research facilities. The apparent assumption was that strength results from research teams and centres within single universities and linked with other knowledge producers and end-users. The policy principle underlying public funding of research was that of selectivity in funding the best wherever found. The two main research funding councils (ARC and NH&MRC) provided competitive research project funding normally for 3-5 year periods. Research came to be seen as a function of scholarship in fields of education and stand-alone research centres. It was increasingly directed to practical problem solving through both fundamental ('strategic basic') and 'applied' inquiry. Policy sought to promote and formalise research commercialisation, on the underlying assumption that government and industry should co-fund research.

The market-universal phase operates in the context of increasing complexity of the research problems to be solved, far-reaching advances in knowledge access on a global basis, and rapid developments in the capacity of research technologies. In this context, affecting not only Australia, a step-change is required to achieve large group productivity for big scientific breakthroughs. Among the policy implications is that the higher costs and longer research periods required for big science extend well beyond the 3-5 year horizons of the competitive grants schemes of Australia's research funding councils. The policy imperative becomes one of concentration of investment in areas of strength rather than the dissipation of available resources through a widely shared distribution. This model also involves the bundling together of basic and applied research, open science (data, methods, and access to publications), and collaborative global networks enabling individual and small group linkages. University research can thus become a more stand-alone function, not dependent on student enrolments in fields where research is conducted. The substantial costs and risks of a more concentrated approach call for greater national prioritisation of research areas. This ought not to be conflated with preferencing research with demonstrable short-term impacts on the awkward policy principle that government should fund research of utility to industry. Such an approach over time would not only unnecessarily socialise industry costs but also lead to research funding directed at only profitable activities and slow the rate at which

core research will be generated thereby narrowing the scope for new researchers and disciplines to form (Cemmell, 2002).

The policy implications of this changing environment for university research include the need to (a) unbundle the per-student funding package and separately identify and fund the full direct and indirect costs of research; and (b) adopt a more concentrated approach to the nation's research investment, with a view to sustaining longer-term research capability as well as improving the translation of research into practical applications both for societal and commercial benefits.

On 7 December 2015, the Turnbull Government launched its National Innovation and Science Agenda with "new incentives, new drivers to ensure that Australians with new business ideas, with new enterprises will be better able to find the capital that gets them started to drive business research collaboration, ensuring that there is greater collaboration between organisations like the CSIRO, universities, other research institutions and business to commercialise ideas and solve problems." Key initiatives include:

> **A CSIRO Innovation Fund and a Biomedical Translation Fund:** "We will provide new tax breaks to remove the bias against businesses that take risks and innovate**,** and we will support greater private sector investment by co-investing to commercialise promising ideas
>
> **Incentives to increase university-industry collaboration**: "We will introduce new arrangements to encourage collaboration between researchers and industry by streamlining and refocussing a greater proportion of research block grant funding toward collaboration. We will also provide an additional $127 million over the forward estimates to research block grant funding."
>
> "We will increase linkages with key economies to enable Australia to improve research, commercialisation and business performance, and access international supply chains and the global market. This will include providing access for entrepreneurial Australians to landing pads in Silicon Valley, Tel Aviv and three other locations, and leveraging the expertise of the Australian diaspora in key markets. We will also provide funding for Australian collaborations with international research-industry clusters, such as Leading-Edge Clusters and Fraunhofer Institutes in Germany."
>
> **Measures of non-academic research impact**: "We will introduce, for the first time, clear and transparent measures of non-academic impact and industry engagement when assessing university research performance. This will be piloted through the Australian Research Council in 2017 and fully implemented by 2018."
>
> "We will also connect more small and medium businesses with researchers by expanding and relaunching the successful Research Connections programme as Innovation Connections, opening up Australian Research Council Linkage Projects to continuous applications to fast track decisions on collaborative research grants, and opening a new application round for the Cooperative Research Centre programme in February 2016."
>
> **Building world-class national research infrastructure: "**We will provide long-term funding certainty for cutting-edge, national research infrastructure to ensure research jobs stay in Australia and Australia retains the capability to be at the forefront of global discoveries. Over the next decade, the Government will provide $520 million for the Australian Synchrotron**,** $294 million for the Square Kilometre Array, while the National Collaborative Research Infrastructure Strategy (NCRIS) will receive $1.5 billion. In 2016, Australia's Chief Scientist will undertake a process to identify national research infrastructure capability needs to inform where funding is required in future years.
>
> We will establish a new Cyber Security Growth Centre to create opportunities for Australian businesses in this critical new sector. We will boost Australia's world class capability in quantum computing research by investing $26 million towards building a silicon quantum circuit, with the potential to create new jobs and new business models.

Research block grants

The initiatives relating to incentives for greater university-industry collaboration drew on the national review of research policy and funding arrangements chaired by Ian Watt. In releasing the report of that review, Education Minister Simon Birmingham said:

> "The Watt Review paints a clear picture of the need for real cultural change in Australia about how we identify and back good research ideas. This means universities must reach out more to industry, and industry in return must link in with universities to make the best use of our world-class research."

The Watt review developed recommendations which in broad terms aim to:

- ensure the quality and excellence of Australian university research and research training
- allocate funding through Research Block Grants (RBG) in a simpler and more transparent manner
- provide incentives to universities to increase and improve engagement and collaboration with business and other end users
- encourage universities to engage in research commercialisation and knowledge transfer with business and the broader community, including through funding incentives and a focus on more effective management of intellectual property (IP)
- ensure that competitive grant criteria recognise the quality of the proposal and support the opportunities for commercialisation and collaboration with business.

The Watt report proposed a new model, to commence in 2017, which substantially simplifies Research Block Grants (RBG) by combining six schemes into two — a Research Support (RS) programme combining Research Infrastructure Block Grants, Sustainable Research Excellence and Joint Research Engagement and a Research Training (RT) programme which combines the current Research Training Scheme, Australian Postgraduate Awards and the International Postgraduate Research Scheme:

> The RS programme recognises that high quality research and end user engagement are equally important goals for publicly funded research and proposes equal weighting be given to two funding drivers to reflect this — competitive grants (Category 1) and business and end user research income (Categories 2, 3 and 4). In relation to the RT programme, the model proposes equal weight be given to student completions, a key measure of the efficiency of the research training system, and research income across Categories 1-4.

Another major proposal of the Watt review was for the ARC to establish a companion to its Excellence in Research for Australia (ERA) research assessment exercise, which has since its inception in 2009 focussed on the academic quality of research, with "an impact and engagement assessment framework, which will have an impact on future research funding." It proposed that following a pilot in 2017, the new assessment exercise should be implemented as a companion to ERA in 2018, "so that quality and impact and engagement can be assessed at the same time on a three year cycle"

These changes reduce the role of academic publications in driving RBG allocations and increase the weight of industry funding relative to funding for nationally competitive peer-reviewed research. They also reduce funding for the indirect costs of research, assuming that universities have substantial capacity to cross-subsidise research from international student fees and the funds they obtain for enrolling domestic students and from other sources of revenue:

> "A number of submissions to the review argued that reliance on student-derived income to support research was unfair to coursework students and undesirable because it required universities to grow student numbers in order to support their research strategies. Some also argued that the sustainability and quality of Australian research may be undermined without increased funding to support a higher level of indirect costs for competitive grants.

> CGS funding is provided to support both teaching and research activities in universities. While the allocation is paid on the basis of student load, the Australian Government places no particular conditions on its use. Universities have discretion about the amount directed to support students and the amount directed to support research. Consistent with the framework set out in the introduction to this report, universities should be autonomous, self-directing and focused on the quality of their research and teaching. It follows from this that universities continue to have discretion to direct funding to these activities to best address their missions and strategic goals.
>
> Investment from broader university funds in research is a long standing feature of Australia's research funding system. The dual funding arrangements, in themselves, cannot meet all university research funding needs and neither the current nor predecessor arrangements have ever done so. Universities are required by the Higher Education Provider Standards14 to carry out research in at least three fields of education and must therefore maintain some level of research, independent of their success at winning competitive external funding.
>
> Therefore, regardless of argument about the adequacy of RBG in covering the indirect costs of competitive grant research, which is discussed in the following section, universities need further, very substantial discretionary sources of research funding. The CGS plays an important role in this regard. This is not a new conclusion. The 2011 Higher Education Base Funding Review highlighted that the use of base funding (the CGS plus the student contribution of Australian Government-subsidised coursework students) for research activities is an accepted part of the research funding system.
>
> Despite concerns about the insufficiency of support for indirect costs, universities have built and maintained high quality research with the present rate of funding of the indirect costs of competitive grant research, which has remained below 25 cents for many years" (Watt, 2015).

The policy approach outlined in the National Innovation and Research Agenda represents a consolidation of developments since around 2005, with an increasingly interventionist role for government in the prioritisation of publicly-funded research and a narrowing instrumentalist view of research. It is not yet clear where the balances will fall between the incentives to undertake longer-term and fundamental research and those promoting shorter-term research of more apparent and commercialisable utility. Clearly there is the risk of the opportunity costs of the new incentives in reducing researcher effort on curiosity-inspired research alongside the possible underutilisation of what research does get done. Currently the balances do not seem to be well conceived. First, there appears to a greater interest in the commercialisation of research as a source of national innovation than in the primary contribution that universities make to national innovation, viz. their graduates. Second, while there are strong signals arising for universities to be industry facing, there is less concern about the absorptive capacity of Australian firms to make effective use of new knowledge, especially in an economy of branch plant corporates and small to medium-sized enterprises. Third, there is a continuing assumption that all universities have the same core mission and that all will contribute optimally to national innovation by virtue of their responses to the same set of incentives via weights in allocative formula for research on a common set of metrics.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Excellence derives from individual stars around whom small groups are built in single universities	Strength results from research teams and centres within single universities and linked with other knowledge producers and end-users	large group productivity for big scientific breakthroughs and distributed linked-up networks of smaller groups & individuals
Scholarship as an integral academic function	**Selectivity in funding the best wherever found**	**Concentration of investment in areas of strength**
Research a function of scholarship in fields where students are taught	Competitive research project funding for 3-5 year periods	Higher costs and longer research periods required for big science
	Research a function of scholarship in fields of education and stand-alone research centres	Research an independent function, not dependant on student enrolments in fields where research is conducted
('pure basic') researcher-driven, typically addressing long-term fundamental questions and geared to discovering new understandings	Increasingly directed to practical problem solving through both fundamental ('strategic basic') and 'applied' inquiry	Bundling together of basic and applied research
	Formalised research commercialisation	Open science (data, methods, & access to publications)
	Professional development for research roles	Collaborative global networks and individual & small group linkages
		prioritisation of research areas & research with demonstrable short-term impacts
Government should fund research that industry will not fund	**Government and industry should co-fund research**	**Government should fund research of utility to industry?**

Policy Domain 14: University engagement

The academic-elite phase saw 'outreach' as supply-driven service to local communities. There was an element of altruistic self-interest on the part of universities in reaching out to the civic and business communities that sustain them. Funding for outreach was embedded in block grants for teaching-related purposes. Much of the outreach activity was decentralised with individual academics arranging their own consultancies and various forms of community participation, including media commentary.

The state-mass era saw 'service' as university participation in social and economic affairs. There was a more commercial motive in some of the activities, along with building future sources of student intake through work in schools, especially in regions with low rates of transition to higher education. Funding for service was embedded in block grants for

teaching-related purposes, with some revenues obtained also from contract research, consultancies, licensing and spin-offs. Research commercialisation developed as a professionally managed university function.

The market-universal phase sees 'engagement' as a reciprocal benefit for universities, communities and commercial firms. The engagement motive has more to do with access to knowledge, know-how, suppliers and customers, and responsiveness to the needs of partners in government, business, the professions and community sectors. There is further professionalisation of research commercialisation and technology transfer at whole-of-institution level. There is some expansion particularly of networking events, consultancies, professional development services, collaborative research, contract research, licensing and company creation. There is continuing outreach to schools and socially excluded communities to raise awareness and aspiration regarding further learning. Engagement is also being further internationalised with partner institutions involved in joint research, joint professorial appointments, shared coursework, and student and staff mobility.

The engagement function is becoming a more extensive, complex and costly function. It comprises many initiatives to increase and widen participation, provide students with opportunities to develop transferable skills through community engagement and to include external stakeholders in core institutional activities. The engagement function partly underpins the revenue growth and diversification objectives of universities, including through philanthropy and community co-investment in facilities and services. The engagement function, however, cannot be sustained on the current funding model where it is cross-subsidised from block revenues for teaching and, to some extent, research block grants, while being tasked to generate net revenues for other university activities, including research. England provides goal-driven 'third-stream' funding for widening participation and industry collaboration. Financing policy options for Australia are considered under Institutional Financing at section 17 below.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
'Outreach' as supply-driven service to local communities **Motive**: Altruistic self-interest of universities in reaching out to the civic and business communities that sustain them Funding embedded in block grants for teaching-related purposes	'Service' as participation in social & economic affairs **Motive:** primarily commercial Funding embedded in block grants for teaching-related purposes, with some revenues from contract research, consultancies, licensing & spin-offs Professionalisation of research commercialisation & technology transfer at whole-of-institution level: networking events; consultancies; professional development; collaborative research; contract research; licensing; company creation Internationalisation with partner institutions, student & staff mobility	'Engagement' as reciprocal benefit for universities, communities and commercial firms **Motive:** Access to knowledge, know-how, suppliers & customers; and responsiveness to needs of partners in government, business, the professions and community sectors ??Goal-driven 'third stream' funding Outreach to schools and socially excluded communities to raise awareness & aspiration Globalisation of curriculum, learning experiences abroad, researching complex global problems

Policy Domain 15: Academic workforce

In the universities, the academic-elite phase saw the 'integrated academic' performing teaching, research and service, with continuous, often tenured, appointment on an upward linear career progression through the academic ranks. There was limited movement between academic and administrative roles, and between academic employment and work outside the academy. Research was essential to academic promotion. In the colleges and institutes, in contrast, academic staff were engaged mostly on permanent appointment. Research was much less important if it was an academic function at all. The majority of academics had teaching-only appointments with many having little if any community outreach role.

The state-mass phase saw the melding of college academics into the university culture and a major exercise to upgrade their qualifications and provide support for their scholarship and research. Within the post-1985 universities there was a large expansion and feminisation of casual appointments alongside greater specialisation. Many roles (e.g. student services) became more professionalised but others not (e.g. teaching). Research performance continued to be the key to academic promotion in the universities.

The market-universal phase sees the 'integrated academic' in the minority on campus. Academic and professional staffing functions are unbundling. Academic career paths may go in multiple directions, whether in upwards progression or down, or sideways through change of role across academic and administrative positions (Coates & Goedegeburre, 2010). As competition for research funding has intensified and as the global reputation race has increased the pressure for higher output in highly rated publications, there has been a 'race to the bottom' in teaching loads for research stars in prestige-seeking universities (Dill, 2013), and a protracted post-Doc treadmill for early career researchers (Edwards & Smith, 2010).

The further emergence of this phase promises to see greater personnel mobility between industry and academe, including joint appointments. Expectations are rising that higher education teachers will have (a) practical work experience in their field and (b) qualifications to teach, as these characteristics have market appeal to students seeking relevant learning and positive employment outcomes as graduates.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
The 'integrated academic' (teaching, research, service), with continuing appointment Upward linear progression through academic ranks Limited movement between academic & administrative roles, and between academic employment and industry work Research essential to academic promotion in universities but less important in non-university institutions	Expansion & feminisation of casual appointments Specialisation and unbundling of functions Professionalisation of some but not core roles (e.g. teaching) Research key to academic promotion in universities A 'race to the bottom' in teaching loads for research stars in prestige-seeking universities Protracted post-Doc treadmill	The 'integrated academic' in the minority on campus Progression up, down & sideways across academic and administrative roles Greater mobility between industry and academe Expectations that higher education teachers will have (a) practical work experience in their field and (b) qualifications to teach

Policy Domain 16: Workplace Relations

White Australia, tariff protection and conciliation and arbitration were the three pillars of Australian social policy for most of the first century of federation (Justice Michael Kirby, 2004). Before 1974 Australian academics had many of their conditions of employment determined by their university employers without external interference; then, after the middle of the twentieth century, by ad hoc decisions of commissions (Gardner, 2012). In the post-1974/pre-1985 period, academic salaries for the then two Canberra higher education institutions, ANU and Canberra CAE, were determined by the Academic Salaries Tribunal established by the federal government. These determinations were generally replicated nationally across universities and CAEs. The total salary bill for the institutions represented two thirds of their operating costs on average. There was limited pay point variation within an academic rank and a limited range of academic ranks.

The post-1985/pre-2005 period saw a transition from centralised to enterprise-based bargaining. In 1983 the High Court of Australia extended the interpretation of 'an industry' for conciliation and arbitration purposes, enabling academic staff associations and employer bodies access to the industrial relations processes previously unavailable through the Academic Salaries Tribunal. That decision overturned the traditional view of academic labour as *sui generis* – in a unique category. By 1986 the university staff association (FAUSA) was a federally registered union followed by the Union of Australian College Academics (UACA) in 1987. From 1987 National Wage increases that had been provided by way of the centralised wage fixation system were supplemented by 'second tier' wage increases available under the Restructuring and Efficiency Principle (Balnave et al 2007). This required a 'productivity offset' for wage rises through trading-off conditions, in part to limit the impact on national inflation (Hancock 1999). The Structural Efficiency Principle encouraged the parties to discuss employee career paths and a training agenda to upskill the workforce and reward employees for acquisition of skills (Balnave et al 2007). The decision also provided for other mechanisms by which employers could remove restrictive work practices by negotiation.

The Commonwealth Tertiary Education Commission (CTEC) in its 1982-84 triennial report pointed to the rigidity and insularity of the staffing structures in the universities and CAEs. CTEC proposed measures for increasing staffing flexibility, including greater use of part-time and contract appointments, greater rigour in tenure and promotions, wider opportunities for staff exchanges with public and private sectors, limited tenure for senior appointments and early retirement options. CTEC's 1986 *Review of Efficiency and Effectiveness in Higher Education* recommended setting common salary scales for lecturers and senior lecturers in universities and CAEs. The 1987 Green Paper issued by Employment, Education & Training Minister John Dawkins, outlined the Government's intention to increase flexibility of staff structures in higher education and pursue a federal award to promote greater staff mobility. Finalisation of Dawkins' 1988 White Paper took account of the Second Tier Settlements for Academic Staff in Higher Education institutions, ratified by the Conciliation and Arbitration Commission on 21 June that year.

On 23 July 1991 the Australian Industrial Relations Commission handed down a decision granting academic staff a new Federal Award providing for a unified, broad-banded salary structure with related position classification standards. The new award provided for salary increases of around 16% rising to 20% over time. The federal government agreed to meet the full costs of the awards. The Commission also ratified the agreement between employers and unions on conditions of continuing employment, probation and staff development including staff performance appraisal (DEET, 1993). In October 1991 the Industrial Relations Commission's National Wage Case decision supported enterprise or workplace bargaining to link pay increases to productivity improvements in the context of wider workplace reform (DEET, 1993).

The *Industrial Relations Reform Act,* 1993 entrenched collective bargaining as the dominant means to regulate wages and employment conditions in Australia. The National Tertiary Education Union was formed in 1993 through the amalgamation of FAUSA, UACA, the Australian Colleges and Universities Staff Association for non-academic staff and two associations of general staff at ANU and the University of Adelaide. The merger of the former CAEs into and with

universities, which was phased in over 1989-1992, brought a higher level of staff unionisation and militancy into the 'unified national system' (O'Brien, 2003). Enterprise-based collective bargaining introduced adversarial relations into the universities and the outcomes, contrary to the policy intent, were similar across all universities in terms of salaries and core conditions:

> "Nationally-determined standards expressed in enterprise agreements became part of the fabric of employment regulation….a model of regulation seen as the way to 'protect' the academic's job" (Gardner, 2012).

It was in this context that the relative funding model for higher education student places was introduced over the 1991-93 triennium. That model set common funding rates per student by field and level of education and involved the smoothing of total payments to institutions within a tolerance band of plus or minus three percentage points. Thereby a nexus was established between common student funding rates and uniform staff salaries. Yet while the student funding rates have remained common, notwithstanding changes to funding levels and some field of study relativities, the intent of industrial relations policy since 1995 has been for pay and conditions to vary more from institution to institution (DEST, 2003).

The Keating Government in 1994, when the government-set funding amount per student was at its highest level in real terms, decided to limit the supplementation of university salary increases negotiated in the first bargaining round to 2.9%, leaving the universities to bridge the gap between that amount and the 4.9% salary increases negotiated. The election of the Howard Government in 1996 saw the forward estimates for increases in university operating grants cut by 6% over three years. The Howard Government's *Workplace Relations Act 1996* built upon the decentralisation that had commenced under the Hawke Government and been accelerated under the Keating Government (Belnave et al 2007). Section 170LK and s170LJ agreements maintained the two forms of collective agreement (union and non-union) that had emerged, but the 1996 Act also provided for the statutory individual agreement the Australian Workplace Agreement (AWA).

The Howard Government's Workplace Reform Programme commenced in 2000, with two funding rounds to institutions conditional on reforms in management, administration and workplace relations. Institutions' applications for funds under the program were based on their certified agreements for academic and general staff. The introduction of Higher Education Workplace Relations Requirements (HEWRRS) in 2005 saw the need for all enterprise agreements to be amended to remove restrictions on the use of casual labour. The HEWRRS also required universities to offer their staff the choice of an AWA.

Post-2005 enterprise-specific bargaining over remuneration and work conditions has led to wider pay point variation within an academic rank (through market loadings, bonuses and performance rewards), and a broader range of ranks. The personnel cost structures of Australian universities, therefore, vary widely. Yet common funding rates per student persist. Those structures require a more flexible and dynamic financing framework for universities. However, after 2008 following the Rudd Government's uncapping of undergraduate places, the Gillard Government, encountering budgetary problems, made a range of decisions to impose 'efficiency dividend' tranches on universities and reduce some specific-purpose funding programs. Those measures remain on the budget ledger but are caught up in the Senate stalemate over the Higher Education and Research Reform Bill 2014.

When the revenue that universities can gain from their core business of teaching Australian undergraduate students is constrained by government under-funding or by fee-capping or by a combination of both, union pressure to maximise wage outcomes and restrict workloads for existing employees leads to three main consequences: (i) blow outs in student/staff ratios, and (ii) increases in casual and part-time staff appointments – both conventional indicators of deteriorating quality in higher education – and (iii) trade-offs in other employment conditions such as intensification of work, performance management relating to annual increments and promotion, and more flexible provisions for

dismissal and regression. The emerging private providers have more options: they can vary prices, institute profit sharing or change their level of activity.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Post-2005
Centralised determination of salaries (representing two thirds of operating costs on average) via national replication of decisions of Academic Salaries Tribunal for Canberra institutions Limited pay point variation within an academic rank and a limited range of academic ranks	Transition from centralised to enterprise-based bargaining Cessation of indexation of operating grants to meet salary rises General expectation of comparability in remuneration and conditions Tendency to pattern bargaining	Enterprise-specific bargaining over remuneration and work conditions Wider pay point variation within an academic rank (through market loadings, bonuses and performance rewards), and a broader range of ranks

Policy Domain 17: Student financing

The financing policy framework for supporting domestic students to undertake and persist in higher education has changed across the three phases under consideration. These changes can be seen in the composition of the three main policy tools: tuition subsidies through grants to providers; scholarships for categories of students; loans for categories of students.

In the academic-elite phase 1945-74, the operating assumption was that the most promising students should be subsidised by government. Indeed, most students were sponsored by government scholarships or employer cadetships, although some up-front costs were met by students or parents. From 1974 to 1988 all domestic students were sponsored free by the federal government and means-tested grants were provided for student living expenses.

In the state-mass phase post 1985, the operating assumptions were that (i) individual beneficiaries should make a fair contribution to the costs of their higher education, as it is regressive for general taxpayers to meet all costs; (ii) the most needy (financially and educationally deficient) students should be subsidised by government. This policy position operated in the context of international and some domestic students paying full fees up-front, and most domestic students (in public institutions) able to access income-contingent loans.

In the post-2005 context, the emerging assumption is that the most promising and/or needy students should be subsidised by higher education providers, on the precondition that the providers should have pricing flexibility and the discretion to redistribute gains from those students who will and can pay more to those students in need of assistance – whether of financial or learning support. Questions arise about value for money in trade-offs between costs of tuition and returns to graduates.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
The most promising students should be subsidised by government Most students sponsored by government or employer scholarships Some up-front costs met by students or parents All domestic students sponsored free by national government (1974-88) Means-tested grants for student living expenses	**The most needy (financially and educationally deficient) students should be subsidised by government** International and some domestic students pay full fees up-front Most domestic students (in public institutions) able to access income-contingent loans Individual beneficiaries should make a fair contribution to the costs of their higher education, as it is regressive for general taxpayers to meet all costs	**The most promising and/or needy students should be subsidised by higher education providers** Domestic students eligible for income-contingent loans & tuition subsidies with all accredited providers (private & public) Individual beneficiaries should normally pay their costs Institutional profits from sale of education services should be dedicated in part to expanding opportunity for those disadvantaged

Policy Domain 18: Institutional financing

Before 1974, universities and colleges were funded through a mix of state and private financing sources, including domestic students and employers and with community support. Since 1974 the federal government has centrally controlled tuition prices and removed an element of revenue discretion from the institutions. From 1974 to 1985 tuition was free for Australian students, and the government effectively paid an amount designed to broadly cover institutional delivery costs. From 1974 the federal government introduced funding for a given set of functions of universities that were seen to be integrated and derived from their core business of teaching Australian undergraduate students. Thus the basic operating assumption was that the costs of teaching, research and service are a function of student enrolments. Until 1988 federal funding was allocated to individual institutions by a 'buffer body' at arms-length from Government. The Australian Universities Commission in the late-1950s developed a funding formula for allocating the 'operating grant for teaching and related purposes'. This formula was used also by its successor funding agencies up until the Commonwealth Tertiary Education Commission in 1987. The effective 'business model' of the institutions was to fill their enrolment quota and spend their allocated revenue budget, expecting annual year-on-year real growth. This was normally forthcoming except for a period between 1982 and 1984 when teacher education numbers fell and grants for the colleges were not increased.

In the post-1985/pre-2005 phase the federal government funded higher education institutions directly through service-purchase contracts, involving principal-agent contractual relationships via a negotiated 'educational profile' on a triennial funding basis. From 1991 the administering department continued to base its funding models on the legacy assumption that the costs of teaching, research and service are a function of student enrolments. General-purpose operating grants were allocated for a centrally-set number of enrolments on a cost-weighted unit of study basis. These per-unit funding rates were common for all universities irrespective of differences in student mix or mode of delivery. The policy assumption was that there should be a 'level playing field' in the structure of institutional incentives, and even-handedness in the treatment of institutions. The design of the 'unified national system' was intended to foster comparable educational quality and horizontal student and staff mobility. The policy was not aimed at system diversification. The provision of operating grants for core functions was supplemented by a number of performance-based grants for specific teaching-related purposes, with increasing conditionality. There was also a framework

introduced to provide performance-based, formulaic allocations for researchers, research projects and research infrastructure.

Progressively the government permitted the post-1991 universities to diversify their enrolment mix and obtain tuition fee income from market-based services for international and domestic postgraduate students along with revenue for services to industry and public sector agencies. The transition to a fully deregulated domestic postgraduate market in the 1990s involved the gradual withdrawal of government funding for 'within-load' student places where tuition prices remained controlled and the opening up of market-based places 'outside load'. Initially, fee-paying places 'within load' could not exceed 20% of enrolments. From 1994 those restrictions were removed along with the protection afforded those undertaking courses for a higher degree by research and for entry to certain professional occupations (DEET, 1993). The effective business model for the universities was to cross-subsidise high-cost fields of teaching and research from surpluses derived from high-volume, low-cost teaching fields.

In 1996 the Howard Government permitted universities to enroll domestic undergraduate students above their allocated quota of places, and to receive a marginal payment for each student equivalent to the HECS contribution amount for each student 'above load'. The policy makers' expectation was that institutions would 'over-enrol' by around 2-5% above quota. A number over-enrolled by more than 20%, however, including the University of Canberra and Macquarie University. The 1996 package of policy changes, which included a 6% cut to the forward estimates of operating grants, also allowed universities to enrol 'full-fee' domestic undergraduate students who had missed out on a HECS place, up to 15% of enrolments in a course of study. That program began in 1998 and was phased out by the incoming Rudd Government by 2008.

In the market-universal phase, post-2005, a number of recent policy changes are rubbing up against the continuation of past policy arrangements. In 2005 the Howard Government allowed tuition fee flexibility up to a price cap of 25% above the standard HECS rate for a degree. From 2005 triennial funding was replaced with annually negotiated agreements. Within two years all universities had raised their tuition to the fee cap for all their degree programs. From 2008, enrolment quotas were removed for domestic undergraduate education but with continuing common, fixed funding rates per student unit of study. With institutions receiving the full 'government contribution amount' plus the 'student contribution amount' per additional place, enrolments surged even higher and faster than they had post-1996 when only marginal funding per student was offered. The policy makers had figured that there was a supply-demand equilibrium and that student demand would not rise dramatically by the uncapping of places, but they forgot to anticipate provider responses to the open-access, open-cheque policy. The bulk of enrolment growth was in lower cost fields and the less research-intensive institutions. The consequent blow out caused the Rudd Government to revise upwards its budget provision by $800 million by 2010 and then the Gillard Government to reduce funding for pathway programs and research and to impose efficiency dividends. The Abbott Government after its election in 2013 proposed retaining the efficiency dividends, adding a 20% cut to the government funding subsidy, altering the relative funding mix, removing caps on tuition prices as well as enrolments, extending the demand-driven system to sub-Bachelor qualifications and providing government funding subsidies to private providers equivalent to those for public providers. The initial Bill imposed a real interest rate on HECS debts. A revised Bill reverted to indexation of the debt by the consumer price index, provided for a pause to indexation for primary carers of children under five years of age, provided for support to institutions with market transitioning needs, provided for a scholarship fund for universities with high rates of low-SES enrolments, and guaranteed that domestic fees would be lower than international student fees. Both Bills failed to pass the Senate.

Post-stalemate, the policy direction is unclear. Some essential funding principles, however, will need to be applied:

- Policy should promote diversification of funding sources, necessarily bringing new stakeholders into play, with higher education institutions needing to be more responsive if not more accountable to them for inputs, processes and outcomes;

- There should be competitive neutrality for 'public' and 'private' providers in terms of eligibility for student grants and loans;
- There should be competitive market determination of prices, traded off against relevance, quality and convenience for learners;
- Research and engagement services should be paid for at cost when actually delivered.

The emergent business model is to sell value added services in bits and packages at prices the market can bear. Armstrong identifies three generic types of business models: solution shops, value-adding process businesses, and facilitated user networks (Armstrong, 2014):

> *Solution shops* describe organizations that focus on diagnosing and solving unstructured problems. Value depends on intuitive and analytic expertise of employees, and revenue model is typically fee-for-service.
>
> *Value-adding process businesses* have as inputs things that are incomplete or broken, and change them into outputs of higher value, typically using rather repetitive processes. Because of the relatively repetitive nature of the model, value tends to be driven by process and equipment. Revenue model typically is based on charge for an output rather than cost of inputs
>
> *Facilitated user networks* facilitate the ability of participants to exchange things with each other. Value comes from linking participants and mediating the process. Revenue model typically fee for membership or for use.

Universities have concurrent, multiple business processes, elements of each of which are vulnerable to new competitors:

> "Most of the research done in universities and colleges closely follows the solution shop model. Teaching can easily be understood as a value-adding process in which faculty guide students through exercises that increases the student's fund of knowledge and skills. Indeed, this growth of knowledge is usually carried out in a process-laden manner, with semesters, grades, degree requirements, regular exams, etc. Student social growth is largely organized around facilitated peer interactions in residence halls, clubs, student government, athletics, etc. More recently, there increasingly are elements of the teaching function that also can be described as facilitated user networks, e.g. flipped classrooms and online discussion groups. Thus most higher education institutions are actually running a mixture of all three different generic business models simultaneously. This has significant implications for the cost structure for most of higher education" (Armstrong, 2014).

The emerging vulnerabilities include:

- Far-reaching changes in job markets produced by globalisation and technology are resulting in entire job categories disappearing over relatively short time periods. Many of these categories have seemed safe because of the high degree of education required.
- Competency based education and prior learning assessment remove "time" from the definition of a credential, and changes the way we look at transfer credits, etc. It also turns attention away from the "inputs" view of quality of education, to a direct focus on "outputs".
- Annual increases in unit price (i.e. tuition) basically can only be held in check if the naturally occurring overall cost increases are spread over a growing sales base (i.e. larger enrollment) in a way that has economies of scale. Most of higher education currently has few ways of expanding enrollment with economies of scale. (Armstrong, 2014).

The research and engagement functions of universities have become more extensive, more complex and more costly. They can no longer be funded sufficiently on the basis of the per-student funding rate alone. Aspects of the research function are funded under separate lines via block grants and competitive schemes but research remains dependent on cross-subsidisation from the teaching function. There is a strong case for research to be funded in the future more

comprehensively (and fully) as a discrete function rather than as a residual of the teaching function. Engagement is not funded directly in any way in Australia in contrast to England's 'third stream' funding approach. If the community values the engagement role of universities and wants the same universities to be competitive in the more challenging environment, consideration could be given to off-loading the overhead cost burdens of the engagement function, and funding it separately. There are structural implications of a more nuanced approach to funding university functions. The following matrix suggests a number of mission differentiated possibilities:

Function	Teaching	Teaching, Research & Engagement	Teaching & Engagement
Scope			
Comprehensive	X	1	X
Focussed	2	3	4
Niche	5	6	7

Comprehensive involves offering a wide breadth of fields of education, i.e. more than fifteen. Focussed (or specialised) involves offering a narrower range of education fields, but a range nonetheless, i.e. more than five but less than fifteen. Niche involves offering only one or a few fields. Only seven of these possibilities are considered to be realistic from a cost-effectiveness viewpoint. If a university were to be comprehensive in teaching across fields of study it should be expected to undertake research in at least some of those fields and to have structured engagement activities flowing from its teaching and/or research work, otherwise it would not be making optimal use of its available academic staff and other resources. Hence, the teaching-only comprehensive option is excluded. Additionally, there is no option presented for a research function without a teaching function, given that universities are not research institutes but have as their core role the teaching of students. Nor can there be engagement without either a teaching or research function.

Currently, Australia does not permit types 2, 4, 5 and 7 unless they are registered as non-university providers. These are, of course, the most likely types for private provider expansion. From this perspective, the present regulatory classification framework can be seen to operate as a mechanism for protectionism of established public universities. Even then, there appears to be no conception in policy that a teaching institution can be significantly engaged with local communities. The opportunity costs of that restriction include:

a. Communities being under-served by institutions that have scholarly expertise and student capacity to contribute to identifying community issues and options, raise aspirations and readiness for higher education, transfer codified knowledge and knowhow for application in local firms and organisations seeking, for instance, to make process improvements through technologies and business practices.
b. Academic staff being frustrated through unsuccessful efforts to obtain competitive research funding which they are pressed to do by dint of designation when they could be making more tangible contributions based on their knowledge and skills.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Funding for a given set of functions General-purpose operating grants for centrally-set number of enrolments, allocated by formula via independent commission **Assumption:** the costs of teaching, research & service are a function of student enrolments (centrally controlled tuition prices since 1974) Mix of state & private financing (domestic students and employers) Commonwealth funding at arms-length from Government **Business model:** fill enrolment quota & spend allocated revenue budget	Purchasing of a set of services (via principal-agent contractual relationships) General-purpose operating grants for quota of enrolments funded on weighted units of study basis Level playing field in the structure of institutional incentives, with apparent even-handedness inducing imitation and sameness **Legacy assumption:** the costs of teaching, research & service are a function of student enrolments Performance-based grants for specific teaching-related purposes, with high conditionality Performance-based, formulaic allocations for researchers, research projects & research infrastructure Market-based priced offerings for international students & domestic postgraduate students Mix of national, student (domestic & international) and industry funding Commonwealth funding negotiated directly with Government ministry **Business model:** cross-subsidise high-cost fields of teaching & research from surpluses from high-volume, low-cost teaching fields	Buying of separate services Competitive neutrality for 'public' and 'private' providers in terms of eligibility for student grants and loans Removal of enrolment quotas for domestic undergraduate education Competitive market determination of prices, traded off against relevance, quality and convenience for learners **Assumption:** Services should be paid for at cost when actually delivered Growth in revenue from investments, commercial activities, philanthropy, and sales of services to firms & communities Diversification of funding sources, Providers needing to be more responsive & accountable to new stakeholders **Business model**: sell value added services in bits & packages at prices the market can bear

Policy Domain 19: Governance

The universities of the pre-1985 era were self-regulated on the lines of the collegial model of a 'republic of scholars' (Bleiklie & Kogan, 2007) with a large elected governing council representative of academic and administrative staff and students. This governance model of representative democracy, together with a strong role for the Academic Board, constrained executive management. The universities were 'loosely-coupled organisations' (Weick, 1976), with authority based in Professors and Department heads, and Vice-Chancellors as *primi inter pares*. The governance framework was designed to promote and safeguard the academic mission of the university. The colleges and institutes were more bureaucratically governed, often by government departments and/or a small institutional executive.

In the post-1985/pre-2005 period, the governance of the universities of the 'national unified system' blended the collegial and the more corporate models of the 'stakeholder organisation' (Bleiklie & Kogan, 2007). This blending involved a larger external, non-academic council alongside representatives of academic and administrative staff and students. Over time, government policy moved to encourage replacing the representative model with a trustee model, to reduce the size of governing councils, and increase the proportion of persons on councils with business experience. The academic reaction to this change branded the new model 'managerialist'. It provided, however, stronger executive management of these multi-million dollar enterprises, with greater use of performance information to support sound and faster decision making. Vice-Chancellors became strategy-setting chief executives, and a stronger role was given to the Finance Committee of Council/Senate. Authority was vested in Deans, DVCs/ PVCs appointed to oversee cognate functions, and ties were tightened between different institutional parts and to cope with 'mission multiplication' of "the wandering university in search of its place" (Enders, 2010):

> "With today's knowledge economies, higher education is expected to educate knowledge workers while producing research to support and advance knowledge work as well as facilitating a social contract that expects institutions to address issues of social mobility and equal opportunity and access for all" (Jongbloed, Enders, & Salerno, 2008).

In the post-2005 stage the larger private higher education businesses are governed by boards of directors and company executives. Non-listed companies tend to be governed directly by the principal proprietors. The enterprise model of public universities is one of a lean governing body of trustees with a balance of internal and external appointments. Universities have focussed more on raising revenue from diverse sources as the scope, scale and cost of their activities increase and the relative contributions of government funding decrease. There is greater specialisation of functional management, e.g. professionalisation of marketing, communications, stakeholder relations management, and an expanded 'advancement' function to promote giving. The span of executive management has widened with the appointment of Executive Deans and Provosts.

Strengthened university governance increases the responsiveness of the institutions to more diverse patterns of student demand and greater provider rivalry. Emerging issues over time include governance with greater transparency and efficiency in use of resources by raising the productivity of teaching, learning, research, engagement and administration. Emerging developments include a separation of customer relationships management, product innovation, and infrastructure management, paralleling in the administrative areas the more strategic and integrated functional oversight seen in the academic areas. Through competitive pressures some institutions will need greater mission differentiation, and the policy framework should enable that.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Collegial model of a 'republic of scholars' with large elected governing council representative of academic & administrative staff and students and strong role for Academic Board **Mission focus** Professorial self-regulation & representative democracy Constrained executive management in universities, with strong role of Academic Board; Bureaucratic management of CAEs Vice-Chancellors *as primi inter pares* Authority based in Professors & Department heads 'loosely-coupled organisations'	**Blended collegial & corporate models of a 'stakeholder organisation'** , with larger external, non-academic council alongside representatives of academic & administrative staff and students **Mission multiplication:** The 'wandering university' in search of its place (Enders, 2010) Managerialism expressed in stronger executive management of multi-million dollar enterprises, with greater use of performance indicators Vice-Chancellors as strategy-setting chief executives Strong role for Finance Committee of Council/Senate Authority vested in Deans, DVCs/ PVCs Tightened ties between different institutional parts	**Enterprise model with lean, appointed governing body of trustees** Specialisation of functional management **Mission differentiation** Universities as businesses Expanded 'advancement' function to promote giving **Transparency** Greater transparency and efficiency in use of resources, (productivity of teaching, learning, research, engagement, administration) Executive Deans/Provosts with broader spans of strategic oversight

Policy Domain 20: Regulation

Regulation policy over the three periods has shifted from localism to nationalisation and then onto privatisation. The regulatory localism of the pre-1985 phase has two dimensions. On the horizontal dimension respect for university autonomy and responsible academic freedom reflected a trust-based approach. The implicit assumption was that only scholars themselves can judge the quality of scholarly work. In that context the self-evaluation exercises of the universities were designed for self-improvement. On the vertical dimension state-based regulations related to institutional functions, powers and accountabilities. These regulations, functional restrictions and reporting requirements were handled more tightly for colleges and institutes than for universities, except in such matters as commercial uses of property of interest to regional governments. External reviews of higher education institutions or fields of education were aimed normally to improve practice.

The regulatory nationalisation of the post-1985/pre-2005 phase saw stronger Commonwealth regulations being layered on top of the state & territory regulations relating to institutional functions, powers and accountabilities. Alongside the gradual loosening of input and process controls to enable the universities to be more enterprising was a tightening of demands relating to educational standards and cost-effective use of resources. The nation-centred regulation included: 'National Protocols' governing recognition of universities, and accreditation of non-university and overseas higher education providers; student evaluations of teaching; quality audits; and conditionality attached to specific-purpose grants for equity, performance improvement, workplace relations and research infrastructure. The approach was been heavily compliance-driven, within a tight policy reform agenda by the government of the day. External reviews, initially

designed on a 'fitness-for-purpose' model relative to the mission and goals of each institution, became more standardised against a common AUQA audit template, purportedly to demonstrate that quality was broadly equivalent across institutions.

The regulatory framework for privatisation has involved a government-established national agency, TEQSA, for accreditation of university programs and use of university title via provider licensing threshold standards and external quality assurance requirements. The fitness-for-purpose approach of the previous period has been replaced with a 'standards-based' model. There are tighter requirements for greater transparency of information to guide student choice, including a mandated set of data provisions hosted on a national, government-controlled portal. Peer assessment and external evaluation has been aimed to verify the claims of providers to external stakeholders, including prospective students.

These tighter arrangements for provider licensing, market information and consumer protection suit a more competitive market in higher education services and an expansion of private provision. Australia's system of income-contingent loans for students also provides another pillar to support further privatisation without adverse impacts on participation of students or disproportionate graduate debt repayment to income ratios. However, aspects of competition policy in higher education need to be addressed if there is to be a more level playing field for private and public providers. The Abbott Government has proposed in its *Higher Education and Research Reform Bill 2014* that students enrolled with accredited private providers should have access to tuition subsidies along the lines of those available in public institutions, albeit at a lower rate than for universities that carry research overheads, and should also be able to borrow via income-contingent loans on the same basis as public students, by aligning the provisions of HECS-HELP and FEE-HELP. Those two measures would provide for competitive neutrality among public and private providers and horizontal equity for students in the public and private sectors. Investment in private higher education would thus be made more attractive and the Australian higher education landscape would become more diversified.

More contentiously, mission-based funding compacts, have the potential to help ameliorate 'market failure' by providing financial support for important areas of scholarship and university engagement activities that cannot be sustained in a competitive environment on the basis of student enrolments alone. The Government's Bill, however, seeks to do away with compacts as they are seen to be an element of a strong state control apparatus (although some critics suggest they are so 'toothless' as to be useless) and are bureaucratic and opaque.

The present stalemate over the passage of the Government's Bill renders higher education in Australia subject to policy drift and confusion. The fall-back framework of the previous government reflects public provider capture and does not permit fair trading for private providers. Nor, with the confinement of public institutions to a single university model, the most expensive supply option, can enrolment expansion be afforded, as the previous government found when it had to make reductions in spending through removal of support for sub-Bachelor pathway programs, general 'efficiency dividend' and cuts to research expenditure commitments. The structural inefficiency in Australian higher education means, on the one hand, that the fiscal costs of moving to universal participation are excessive and, on the other hand, that students are denied the option of paying less for the higher education they want. It also deprives those students who are willing to pay more from having a more intensive educational experience. Additionally, the standards-based model of quality assurance, with its focus on acceptable minimum or 'threshold' standards, is insufficiently nuanced to indicate qualitative differences among higher education providers as a guide to student choice. In a post-mass system there is a need to indicate how institutions and courses differ. It will be necessary to provide greater flexibility in the regulatory framework to promote a more diverse, cost-effective structure of supply and greater responsiveness to varying student interests and circumstances.

Post-1945/ Pre-1985	Post-1985/ Pre-2005	Emergent Post-2005
Localism University autonomy (substantive and operational) and responsible academic freedom (self-governance & self-regulation) Only scholars themselves can judge the quality of scholarly work. **Trust-based** **Self-evaluation designed for improvement** Largely state-based regulations relating to institutional functions, powers and accountabilities **Loose policy interest**	**Nationalisation** National Protocols: recognition of universities; accreditation of non-university & overseas higher education providers + Student evaluations of teaching Both Commonwealth and state-based regulations relating to institutional functions, powers and accountabilities **Compliance-based** **External evaluation designed to safeguard minimum standards and demonstrate equivalence of quality** Fitness-for-purpose judgements of quality by external quality audit agencies **Tight policy reform agenda**	**Privatisation** Government-established national agency for accreditation of university programs and use of university title via provider licensing threshold standards and external quality assurance requirements **Transparency-based** **Peer assessment and external evaluation designed to inform student choice and verify claims of providers to external stakeholders** **Policy drift and confusion**

General observations and implications

A number of broad observations may be made about the score of shifts in policy and practice outlined above. The first observation is that there are effective markets in higher education, where students and graduate beneficiaries are prepared to pay, and that, Australia has in place a unique and robust system of safeguards for student consumers, graduates and educational quality. That is as it needs to be, given that higher education is one of Australia's most significant trade-exposed industries. Importantly, this quality assurance and consumer protection framework has bipartisan support of the main political parties.

The second observation is that the current higher education policy framework in Australia is, in several respects, at odds with the trend of practice (e.g. the continuing assumptions of (a) comparable higher education experience and parity of esteem of an award, (b) similar contributions of all Australian universities to national innovation, and (c) a nexus and inter-institutional equivalence between academic salaries and per student funding rates).

The third observation is that the stance of policy in some domains lacks coherence (e.g. the notion of a 'demand-driven system' when supply is highly constrained, the deregulation of student enrolment volume but not price, and the orientation and funding of research). For instance, whereas students completions have been accepted as a proper basis for funding in respect of higher degrees by research, influencing half of the formula for allocating PhD places to universities, the funding for undergraduate students, for whom the admission criteria have been diluted and obscured through the removal of enrolment caps, continues to be based on enrolments alone. However, it is not evident that the normal public policy concerns of cost-effectiveness, quality assurance, probity and transparency are addressed by laissez-faire admissions and associated open cheque-book funding. The ATAR model of 'rank order of merit' for selecting students in the previously quota-based funding system may no longer fit the universal access stage, and has

been subject to gaming. Perhaps the assertions of some universities that what matters is graduate output rather than student input, therefore, should be put to the test. The results could be revealed for all to see, along with funding consequences for the institutions. Such a step would require either a modified Danish 'taximeter' model, which funds institutions on the basis of study units passed each year, or an agreed articulation of graduate attributes, perhaps more highly specified by discipline group than in the AQF, and a set of assessments of graduate capabilities. The latter approach, however, might well diminish rather than augment the discretion of higher education providers and the calibre of graduates and further stifle system diversity.

This overview of change and continuity in Australian higher education practice and policy also raises several sets of questions. Three of them are considered briefly below: First, how resilient is the national higher education system to change? Particularly, how resilient are the universities? Second, how sustainable is the current funding framework? Third, how well do current policies fit the emerging higher education landscape?

With regard to the first question, it may be argued from an ecological principle that a monolithic system of single-type institutions will necessarily lack the diversity necessary for adaptation to changing environmental conditions. For Australia to strengthen its global competitiveness in higher education services it will be necessary to make substantial focussed public investments in capability development and enable much greater private investment and consumption. The resilience of individual institutions is a product of their governance and the flexibility that public policy gives them to be responsive to change. The more prestigious and the more footloose providers are expected to be able to position themselves better than established mid-ranking institutions encumbered by high overheads. A public policy case for special support arises when such institutions have particular importance as institutions in local and regional communities, but that support would need to be conditional on rationalisation and collaboration of service provision to make the institutions more viable and competitive in attracting students at lower costs. Such support would require a funding line that is separate from that for teaching and those for research.

With regard to the second question about current funding frameworks, some general inferences may be drawn:

a. A post-mass/near-universal system cannot be sustained with quality through public funding alone.
b. Some level of public subsidy is necessary to avoid under-investment in human capital formation and social exclusivity.
c. A wider diversity of students requires a greater variety of inputs with different costs to modify the education process.
d. A broader range of modes of teaching and learning involves varying costs.
e. Government-set tuition pricing limits are necessarily arbitrary and inhibit innovation and choice.
f. Large-scale high-cost research capabilities will tend to be both concentrated and dispersed, and network access will be the critical element of research.
g. A narrow instrumentalist agenda for university research could diminish Australia's international competitiveness.

The current funding framework provides only for (b) above but does not recognise differences in cost structures nor promotes diversity and serious choice for an increasingly diverse student population. Nor does it recognise that different universities contribute to national innovation in different ways. A move to a 'managed market' akin to a 'dirty' rather than 'clean' float of the currency, is not the only option that may achieve a policy breakthrough from political compromise if the Senate is seriously up for that. Rather than continuing with a bureaucratically-managed model, such as setting arbitrary price limits and restricting market access for new suppliers, which would cause further anomalies and restrict choices, it would be better to focus on principles for good market design. As noted above, Australia already has in place well-designed quality assurance, customer protection, and student loan arrangements appropriate to market functioning. The next step to enable more open competition is to provide competitive neutrality among public and private providers and horizontal equity for students by aligning the HECS-HELP and FEE-HELP schemes. A further step is to open competition both in research as well as education by de-coupling the current nexus between public funding for research with that for teaching and reduce the pressures for cross-subsidisation of research and

engagement from revenue for teaching. This step would also expose currently opaque subsidies from teaching payments to research that is either not performed or not well performed, and release an amount for intensifying national investment in research. Additionally, an informed market requires that consumers can know how and by how much there are differences in educational offerings, especially differences in the quality of inputs and processes, and differences in outcomes for graduates from different experiences.

With regard to the third question, there appears to be an amalgam of policy lag, policy drift and policy denial (not accepting the elephants that are in the room!).

The persistence of the elite mode in the universal phase is one of the most conspicuous elephants in the room, alongside a refusal to acknowledge qualitative differences between the elite and other modes of higher education provision and participation. Discussion of this matter is vexed by continuing reference to vertical stratification, by which those at the top are regarded as 'better' than those below them, rather than reference to horizontal variety, by which those at either end of or at any point along the continuum make important and valuable contributions in particular market segments and areas of community need. The vertical comparisons inevitably rank on a single set of typically narrow measures, both exaggerating the quality of those at the top and underestimating the quality and importance of those ranked lower on those measures. That is why L H Martin Institute is participating in an Australian equivalent to the European U-Map and U-Multi rank initiatives with a view to describing university performance on a broader and more inclusive set of measures. In the Australian model of a unitary 'university' structure of public higher education provision there is an understandable pushback against any form of relegation by those institutions wanting to assure the students and communities they serve that they offer better than 'second best' higher education. At the same time, it is unreasonable to place on such institutions the additional burdens of playing in all the same league contests as those with greater inherited capacities in a few of those contests. Does mission focus become untenable for universities in a more competitive environment? If employers want more job-ready graduates and the government wants more tangible university contributions to national innovation, is it not possible, or even necessary, for some universities to market themselves strongly on the basis of distinctive strengths, without having to show that they are still 'true' universities on all of the traditional academic criteria? Or is it necessary to re-establish polytechnics with non-university missions?

The current policy and financing framework broadly reflects an important policy objective to widen opportunity by expanding access to and successful participation in tertiary education and training. It has been focussed to date on quantitative expansion rather than qualitative improvement. If not nuanced in the future it may well result in the university enlargement objective being realised at the expense of lower standards of top level student achievement, just as has been shown in the OECD's PISA results for Australian secondary school students aged fifteen years (OECD, 2013).

Current policy favouring established, comprehensive public universities with a research mission, under conditions of fixed pricing for their core business of domestic undergraduate education, promotes quantitative expansion at the risk of educational quality and at disproportionate costs for government. More diverse supply options are required, and policy and financing needs to encourage their expansion. With a risk that a more differentiated system could involve barriers to student mobility particular incentives could be provided for non-university providers, private and public, to offer sub-Bachelor degree pathway programs purposefully designed for student cohorts that have not been well prepared for higher education.

The core problem in Australian higher education policy, given its narrow supply structure, is that the research that is performed is not adequately funded and universities necessarily have to cross-subsidise the costs of research from the funding they receive for and from students. The pressing challenge is to find ways and means of funding research more adequately. That does not necessarily involve paying more for more research but rather:

- establishing more transparent accounting for the costs of research – the transparency agenda;

- getting better value out of the funds expended by directing them to the strongest areas of research performance, wherever they may be found – the concentration agenda;
- increasing the efficiency with which funds for research are used – the productivity agenda;
- requiring that governments, firms and other funders of research pay the total costs of the research they fund – the full funding agenda;
- diversifying the sources of revenue for research – the diversification agenda.

The underlying problems in Australian higher education are not going away and will need to be addressed seriously, sooner rather than later, by the policy makers and legislators. Otherwise Australia could well see its higher education export industry going the way of its car industry casualty: overly-protected supply of a limited range of high-cost models spurned by savvy consumers buying better value for money alternatives.

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Endnotes

[i] This paper is based on an address to the graduating class of Master of Tertiary Education Management, 21 July 2015, LH Martin Institute, The University of Melbourne.
[ii] Oscar Wilde (1895), The Importance of Being Ernest. Lady Bracknell, Act 1, Part 2
[iii] By way of illustration, University of Canberra Vice-Chancellor Stephen Parker, a rare vice-chancellorial voice in opposition to the Abbott Government's proposal to deregulate tuition fees for undergraduate education, without any self-assessment of his own pro-public /anti-private sector view, asserted that the Government's position was "ideology in search of a problem", *Parkers Pen*, 4 November 2014.
[iv] Sub-stages of these four may also be identified, including particular stages relating to research and internationalisation.
[v] Siemens, Picture the Future of Australia, accessed at www.siemens.com.au/picturethefuture.
[vi] Ruthven, P. (2012). A Snapshot of Australia's Digital Future to 2050, IBM Australia, p 10.
[vii] Franklin & Andrews (2012). *Megachange*: *The World in 2050.* Wiley