The Bradley Review and access to higher education in Australia

Bob Birrell & Daniel Edwards

Monash University & the Australian Council for Education Research

The *Review of Higher Education in Australia* (the Bradley Review) has recommended a massive expansion in the level of domestic training in Australian universities. This article examines the Report's rationale for rejecting the previous orthodoxy that there is no need for such expansion and, to the extent that there is, it would be better focussed on the vocational sector. It examines the scale of the enrolment expansion envisaged and critically examines the Review's policy recommendations to achieve this increase. It concludes that there will have to be a major expansion in university campus construction in the outer suburban regions of all Australian metropolises.

Introduction

The Final Report of the *Review of Australian Higher Education* chaired by Professor Denise Bradley is a crucial milestone in the recent history of the Australian higher education sector. The Review has set the scene for a major expansion in domestic higher education training in Australia. It calls for a sharp increase in the participation rates of under-represented groups and recommends an overall target increase in enrolment which will achieve an increase in the share of 25- to 34-year-olds holding a bachelor degree or above from 29 per cent in 2006 to 40 per cent by 2020. These aspirations are well founded. Domestic higher education training was neglected throughout the economic boom since the late 1990s – at great cost to opportunity for young Australian residents. There has been a flood on new jobs in professional and related fields where university credentials are the minimum requirement, yet during this time there has been almost no growth in domestic undergraduate course completions.

This paper begins with an analysis of the divergent views on the merits of expanding higher education participation. Until recently, the prevailing view amongst policy makers was that there was no need for an increase in higher education participation. To the extent there was a need for the opening up of post-school educational opportunities, the orthodox view was that it lay mainly with the vocational education sector. The Review decisively breaks with this perspective. We explore its reasoning on this issue and broadly endorse its conclusions. This is important, because if the Rudd Labor Government is not convinced by the Review's stance on this issue, it is unlikely to support the Review's key recommendations.

The second part of the paper deals with the practical issues of achieving the Review's recommendations on the provision of higher education opportunity. This is done in the context of calculations of the increase in enrolment levels that will be required if the targets recommended by the Review are adopted. When the projected increase in Australia's population is taken into account, the expansion in places needed to achieve

the proposed increase in participation turns out to be huge. The final parts of the paper explore the issues of how the additional students are to be attracted and where they are to be drawn from.

The changing policy emphasis on higher education

During the eleven years of Coalition Government (from 1996 to 2007), successive ministers with responsibility for higher education insisted that there was no case for increased public funds to expand the sector. This was partly because they believed/hoped that any increase in domestic university training would come from young people paying full fees, but also because they were not convinced that there was a need for more university graduates. The mantra, pushed with more and more vigour as the resources boom took hold in the early years of this century, was that higher education was an indulgence which reflected parents' status aspirations for their children. Instead, the Government insisted that what Australia needed was an expansion in Vocational Education and Training (VET) both at the trade (certificate III level or below) and at the diploma and advanced diploma levels.

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When the *Review of Australian Higher Education* began, this perspective also appeared to hold sway within the senior levels of the Rudd Government. Labor's education policy prior to the 2007 election focussed on secondary school and VET level education and training. Since taking office, the Government has announced that it will create some 500,000 training places in the vocational sector. The only action on the higher education front has been the establishment of the Review.

The Review itself began with an open mind on the VET/university balance issue. The Review's *Discussion Paper,* issued in June 2008, framed its discussion of the issue around a report by the Centre for the Economics of Education and Training (CEET) at Monash University by Shah and Burke (Shah and Burke, 2006). This study projected the training outlook over the decade 2006 to 2018 through a comparison of the projected demand for workers with VET and higher education qualifications with projected supply, given current training rates. The key finding from Shah and Burke cited in the *Discussion Paper* was that there would be a greater need for additional completions in the VET sector than in the higher education sector (*Discussion Paper* 2008, p. 41). Since the study also concluded that most of the extra completions in the VET sector would have to be at the diploma or advanced diploma level rather than at the certificate or trade level (Shah and Burke 2006, p. 44), these findings were significant. If accepted as the basis for higher education policy they implied a cautious stance on university training and close attention to the needs of the VET sector. The *Discussion Paper,* however, did cite an alternative view, put by the present authors (Birrell, Healy and Smith. 2008), which argued that the job creation pattern of the last decade implied that the rate of growth in demand for those with higher education credentials would exceed that for those with VET credentials (*Discussion Paper* 2008, pp. 22 and 41).

By the time the Review completed its Final Report in December 2008 there were no further references to this issue. The Review concludes that for the job markets of the future, 'Estimates of skills demand vary, but suggest that it will be greatest for those with higher levels of skills, qualifications and experience' (Review 2008, p.180). By this the Review means those with bachelor degree level qualifications or above. This conclusion depended in part on work commissioned by the Review from Access Economics (Access Economics, 2008). The firm projected the demand and supply for persons with post-school qualifications over the period 2006 to 2018.

Access Economics examined the likely domestic demand for university and diploma/advanced diploma places, in the light of demographic constraints (numbers of people in the relevant age cohorts) and the potential financial rewards for those with such qualifications. It also projected likely demand from employers for these qualifications. It concluded that the Australian economy was changing in ways favouring those with higher education qualifications – relative to those with VET qualifications (Review 2008, p. 16).

The Access Economics projections put employer demand for those with undergraduate qualifications by 2008 at 145,379, well above domestic university completions in that year of 115,930 (Review 2008, p. 16). Access projected that employer demand for those with undergraduate qualifications by 2017 and 2018 respectively would be 168,298 and 150,588 (the variation attributable to Access Economics' judgement about the phase of the business cycle at this time).

By contrast Access Economics projected employer demand for those with diploma/advanced diploma qualifications in 2008 to be only slightly ahead of completions in that year. It also projected that employer demand for such persons will fall, from 45,729 in 2008 to 42,921 in 2017 and 37,407 in 2017 and 2018 (Review 2008, p. 16).

These findings are consistent with research undertaken by the Centre for Population and Urban Research (CPUR) for the Review (Birrell, Healy, Edwards and Dobson 2008). The CPUR research was based on an analysis of the qualifications of persons employed in managerial, professional and associate-professional occupations which compared recent entrants to these occupations with older cohorts. It was found that the younger cohort was far more likely to possess degree level qualifications and less likely to possess diploma level qualifications than their older counterparts (Birrell, Healy, Edwards and Dobson 2008, pp. 6-9). The authors argued that the possession of a degree was becoming the minimum entry qualification for managerial, professional and associate professional occupations. There may be an element of credentialism in this development, but a more important factor is that from the point of view of employers, these occupations require increasingly sophisticated analytic and communication skills. That is why degree level qualifications are usually regarded as essential for those entering these occupations.

This background helps explain why the Review has overturned a decade of official denial that there is any need for expansion of the higher education sector. The Review does so in dramatic terms. It recommends that the Australian Government should aim for a massive increase in the share of Australians aged 25-34 with degree qualifications from 29 per cent in 2006 to 40 per cent in 2020 (Review 2008, p. xiv). This target appears to be drawn from parallel higher education targets declared by various European nations, including Sweden, the UK, Germany, Ireland and Finland (Review 2008, p. 20).

Implications for expansion of university places

However, the Review provides no detailed estimate of what the 40 per cent target means for future enrolment levels in Australia's universities. The following section provides an estimate of the required enrolment level.

In order to assess the enrolment level required to achieve the 40 per cent target, account must be taken of both the demographic and participation rate factors. To the extent that Australia's population expands there will have to be a parallel increase in enrolments just to maintain the current level of university participation. This is the demographic component. In addition, because the recommended qualification target requires an increase in the share of those with degrees there will also have to be an increase in enrolments attributable to an increase in participation rates amongst the university aged population. This is the participation rate component.

We have assumed that the enrolment increases attributable to the participation rate component will have to approximate the target increase in the required growth in the share of the 25 to 34 cohort who hold degrees, from 29 to 40 per cent between 2006 and 2020. This assumption is based on the fact that there has been very little increase in university participation rates in Australia over recent years. For instance, data drawn from the 2001 and 2006 censuses show that the share of Australian 18 to 20 year-olds who were attending university in 2006 was 28.9 per cent, only marginally above the 28.4 per cent level in 2001 (Birrell and Edwards 2007, 2). The implication is that there is no increase in the pipeline of younger degree holders which will add to the share of degree holders aged 25 to 34 by the year 2020. All of the boost to participation rates required will have to occur after the Review's reforms are implemented.

There is one qualification to this last point. If Australia continues to rely heavily on an influx of migrant professionals, then a significant proportion of those with degrees by 2020 will derive from this source rather than from an increase in domestic training. The Review itself ignores this issue. The implicit assumption is that Australia's future skill needs will derive from domestic training. Indeed, there will be much less need for skilled migrants if the Review's recommendations are followed. However, at the present time, the skilled migration intake is large relative to domestic training. In

2007-08, 26,975 settlers with professional occupations arrived in Australia. Another 18,000 gained permanent residence visas while in Australia, most of whom were former overseas students who had completed university courses here. By way of comparison, there were 111,027 domestic undergraduate completions from Australian universities in 2006.

The demographic component

The Review panel commissioned the CPUR to investigate the size of the demographic component. The CPUR prepared university enrolment projections which applied current (2006) age-specific university participation rates to the latest Australian Bureau of Statistics (ABS) projections for the numbers of persons resident in Australia by age group over the period 2006 to 2031 (ABS 2008). For this purpose the ABS Series B projections were used. These are classified by ABS as their median projection. These assume that the recent high annual net overseas migration intake of around 180,000 per year and comparatively high fertility levels will continue over the projection period. If these assumptions are correct, the number of students enrolled in Australian universities will increase from 716,885 in 2006 to 821,102 in 2021. This represents an increase of 104,217 students, which is the equivalent of a 14.5 per cent growth in university enrolments.

To repeat, this increase will be solely attributable to the current demographic outlook, since it assumes no change in university participation rates. It is one of the many unanticipated consequences of Australia's population surge. Contrary to the concerns of some who are worried about Australia's ageing population, Australia is not running out of young people. Even without any rise in the university participation rate, if the current (relatively low) participation levels in higher education are maintained, the number of university graduates will increase by a far greater annual rate than has been the case since 1996.

The participation rate component

The CPUR provided other projections for the Review panel which tested the enrolment implications of various increases in participation rates. The most ambitious participation assumption chosen by the panel involved an increase in higher education participation rates of two per cent per annum for each age group over the period 2006 and 2016, with stable participation rates thereafter. On this assumption the share of each age group participating in higher education would have increased by about 22 per cent over the period to 2020. In this case – again using ABS Series B assumptions – the total growth in student enrolments between 2006 and 2021 would be 284,034. This represents a 39.6 per cent growth in enrolments from the 716,885 starting point in 2006. The participation rate component of this increase is 179,817 – the rest being the 104,817 increase required to keep pace with population growth. The 179,817 figure represents an increase of 25 per cent on the enrolment base in 2006 of 716,885.

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Would an increase in enrolment of 284,034 by 2021 achieve the Review's 40 per cent degree qualification target? Perhaps not, since the increase in participation involved in this projection is just 22 per cent, well short of the 37.9 per cent growth in share of 25 to 34 year-olds with degree qualifications sought by the Review. On the other hand, such is the scale of migration to Australia of persons with degrees that they would significantly augment the number of degree holders by 2020 without requiring any increase in domestic training.

Another way of looking at the increase in participation required for the Review's degree qualification target is to ask how many of the persons projected to be in the age group 25 to 34 by the year 2020 would have to have degrees if the 40 per cent target was reached. Again, using the ABS median projections, the answer is that the number of degree holders in the 25 to 34 age group would be 1,433,090 by 2020. The Review assumes that in 2006 the share of this age group with degrees was 29 per cent. If so, the number of degree holders in 2006 would have been 839,183. These figures imply an overall increase of 71 per cent in the number of degree holders over the 2006 to 2020 period in the 25 to 34 year age group. Some of this is attributable to the demographic component and the rest would have to reflect an increase in age specific university participation rates as well as an influx of university graduates from overseas.

Further elaboration of the statistics is probably not of much value. This is because it is clear that whichever way one looks at the issue, a massive increase in university enrolment levels will be required if the Review's target levels are to be achieved.

For the purpose of exploring the policy implications we assume that the enrolment outcomes resulting from the panel's optimistic participation assumptions will come to pass. Although these participation rates are probably less than the level required to achieve the Review's target degree qualification level, they are a reliable and conservative estimate of the scale of expansion required. As noted, they imply a 39.6 per cent increase in enrolment levels between 2006 and 2021 or the enrolment of an additional 284,034 students by 2021 on the 2006 level.

Location	*Enrolment increase 2006–2021*			
	Scenario 1		*Scenario 2*	
Sydney	20,334	12.2	61,212	36.8
Rest of NSW	3371	4.8	19,399	27.8
Melbourne	21,718	15.1	57,867	40.3
Rest of Vic	483	1.4	7,955	23.6
Brisbane	21,229	25.9	43,810	53.5
Rest of Qld	15,263	25.7	31,570	53.3
Adelaide	3,154	7.0	13,669	30.5
Rest of SA	-124	-2.0	1,220	19.5
Perth	155,783	24.8	33,193	52.1
Rest of WA	835	9.0	3,050	32.8
ACT	1207	7.0	5,262	30.4
Tasmania	-369	-2.4	2,926	19.0
Northern Territory	1,334	22.9	2,900	49.8
Australia Total	**104,217**	**14.5**	**284,034**	**39.6**

Table 1: Increase in the number of domestic students under two scenarios 2006 to 2021 by capital city and rest of state

There has not been an increase on this scale since the decade 1989 to 1998 when the number of domestic students (at all levels) increased from 419,962 to 599,670 or 43 per cent (DETYA 1999 p. 20). Most of this increase occurred during the recession period of the early 1990s and thus well before the Coalition took office in 1996.

Where are the university students going to come from?

The scale of the projected enrolment increase is enormous. But nonetheless, it is almost certainly justified if Australia's higher education training effort is to be brought into line with the changing demands of the job market. For the past decade, at least half of the net job growth in Australia has been in managerial, professional and associate professional occupations which, as noted, increasingly require a degree as the minimum entry point.

To achieve an increase on this scale will require the recruitment of young people from social strata hitherto largely excluded from university attendance. It cannot be achieved through marginal additions from the better off families that currently dominate ranks of university students. This is because the great majority of young people from these families already attend or have attended university.

The Review recognises this point. Partly as a consequence, it has recommended a raft of measures designed to facilitate the opening up of access to higher education on the part of young people from disadvantaged backgrounds. The Review panel has appreciated that if large numbers of these young people are to take up the university option, the terms and conditions of university enrolment will have to be sharply improved. The Review's recommendations to open up eligibility for, and the dollar amount of the higher education Youth Allowance go some way towards this end.

One focus of the Review's recommendations is on increasing the share of university attendees who come from low socio-economic status families. The panel wants to increase the share of young people from the bottom 25 per cent of families who are enrolled at university from the present level of about 15 per cent to 20 per cent (Review 2008, 45). In order to achieve this outcome it recommends that individual universities intensify their affirmative action measures so that disadvantaged students procure an increased share of annual enrolments.

In our view, the emphasis on affirmative action is redundant. If, as suggested above, there must be a 40 per cent or more increase in enrolments it will be necessary to open up avenues for students from less favoured backgrounds anyway. There will be no need

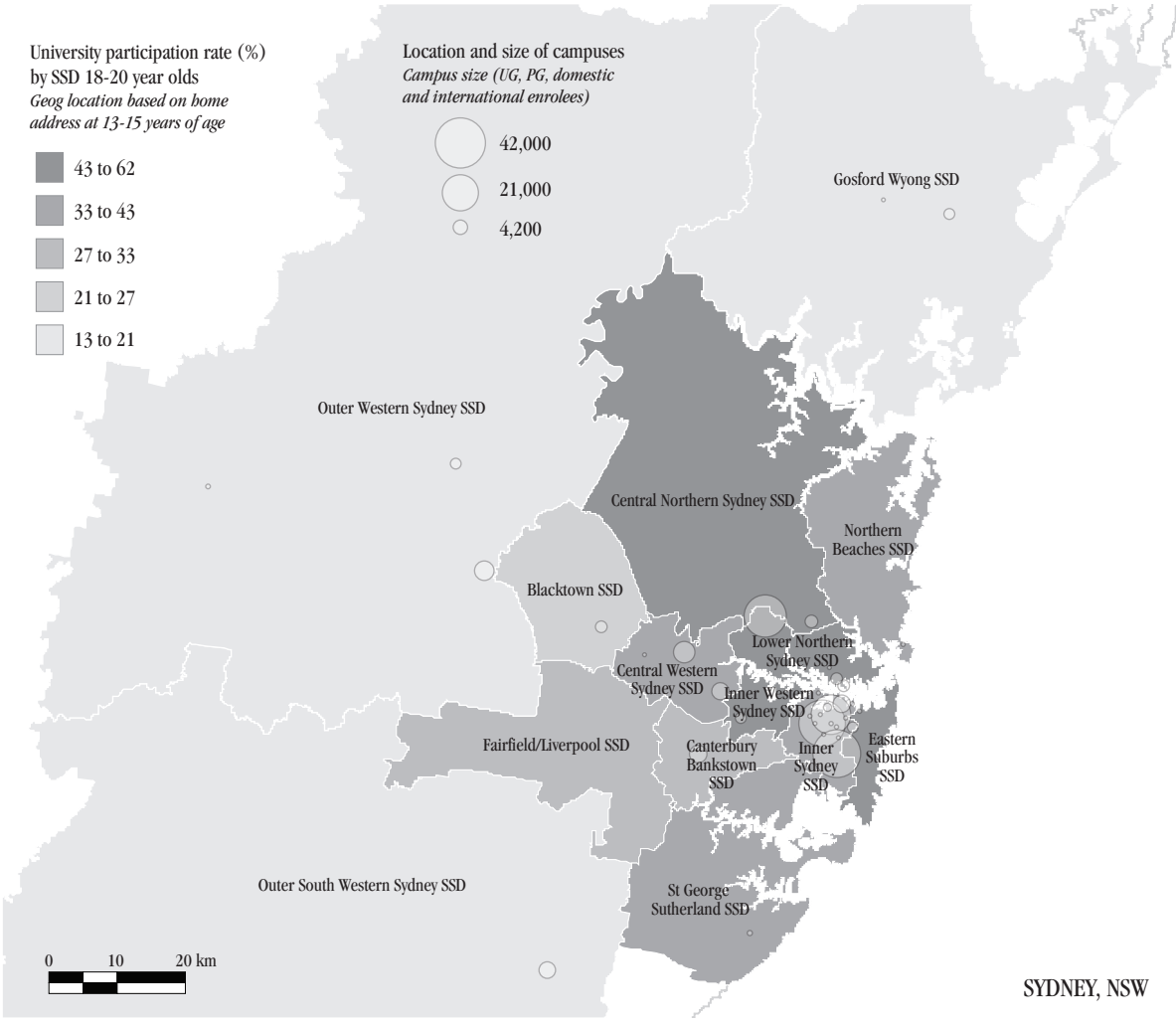

Figure 1: University participation rates of 18 to 20 year olds in 2006 by home location at 13 to 15 years, by Statistical Subdivision (SSD) and location of main university campuses, Sydney

to pursue measures which might displace other applicants who qualify for entry.

The Review panel was well aware of the predicament that some lower tier universities currently face, which is that they can barely fill their existing entitlement of Government-funded places. The Review notes that the Howard Government did move to free up the capacity of universities to enrol beyond the strict government prescribed quotas in place until recently. They could 'over-enrol' to a level of 5 per cent without financial penalty and take as many additional domestic students as they liked beyond this level – though the financial return was limited to the student contribution to the financing of the place. The Review notes that very few universities took up the 'over-enrolment' option, in part because of 'the desire of many institutions to maintain entry standards. Some universities have also made it clear that they do not wish to pursue major growth in their undergraduate cohorts, placing greater priority at the higher degree level' (Review 2008, p. 156).

The Review proposes additional incentives to overcome these expansion barriers. These include an increase in the funding allocated to universities for teaching purposes by 10 per cent and a freeing up of the rights of prospective students to attend the university of their choice. If the universities which are currently blessed with more applicants than places (generally the higher status universities in each capital city) decide that the financial inducement of taking on extra students is worth pursuing, they might increase their enrolment levels.

However it is not likely that these reforms, if taken up by the Government, would achieve much. The

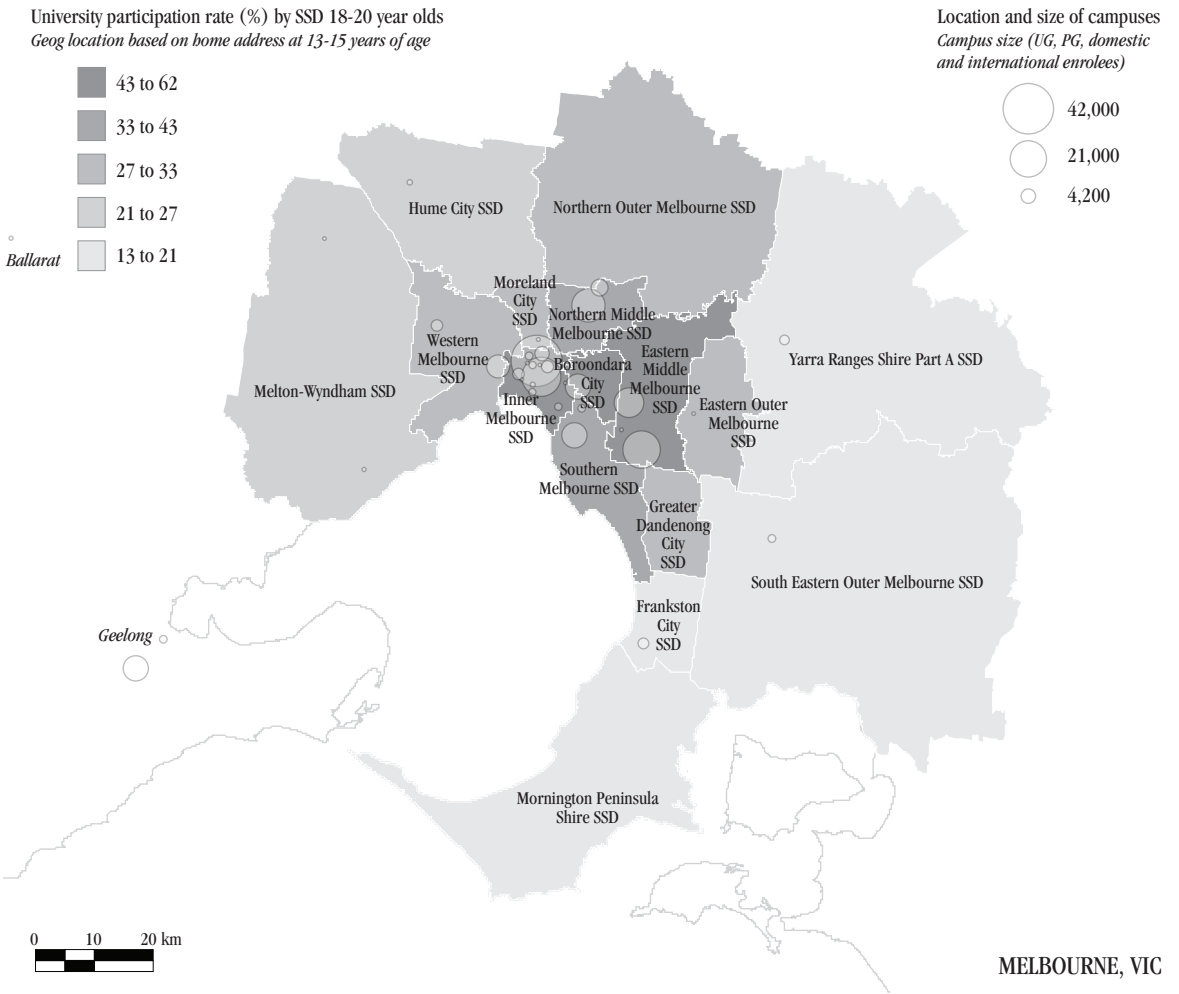

Figure 2: University participation rates of 18 to 20 year olds in 2006 by home location at 13 to 15 years, by Statistical Subdivision (SSD) and location of main university campuses, Melbourne

favoured universities may prefer to focus on quality rather than quantity, or may prefer to use any available teaching capacity to take on more of the lucrative overseas student clientele. In any case, there are physical limits to the capacity of established universities to expand their undergraduate numbers.

How and where will the additional places be provided?

These observations draw attention to an alternative perspective on enrolment expansion. This is to put universities closer to the communities they serve. The recommended scale of expansion implies massive infrastructure investment in the higher education sector. An enrolment increase of 280,000 or so would require the addition of 20 full scale universities catering, at least in their early stages, for around 14,000 university students each. There is simply not the space in existing university campuses to accommodate such numbers. Nor would it be advisable to locate most of the additional teaching and research facilities on existing campuses even if it were possible. To appreciate why requires background information on the geography of university participation.

Table 1 sets the scene for the development of this point. It shows the distribution of students by capital city and 'rest of state' under the two scenarios outlined above. The first is where university participation rates by age group remain unchanged for each capital city or 'rest of state', but population increases according the ABS median projections. In the second scenario, there is an increase in participation rates in each capital city and 'rest of state' by two per cent

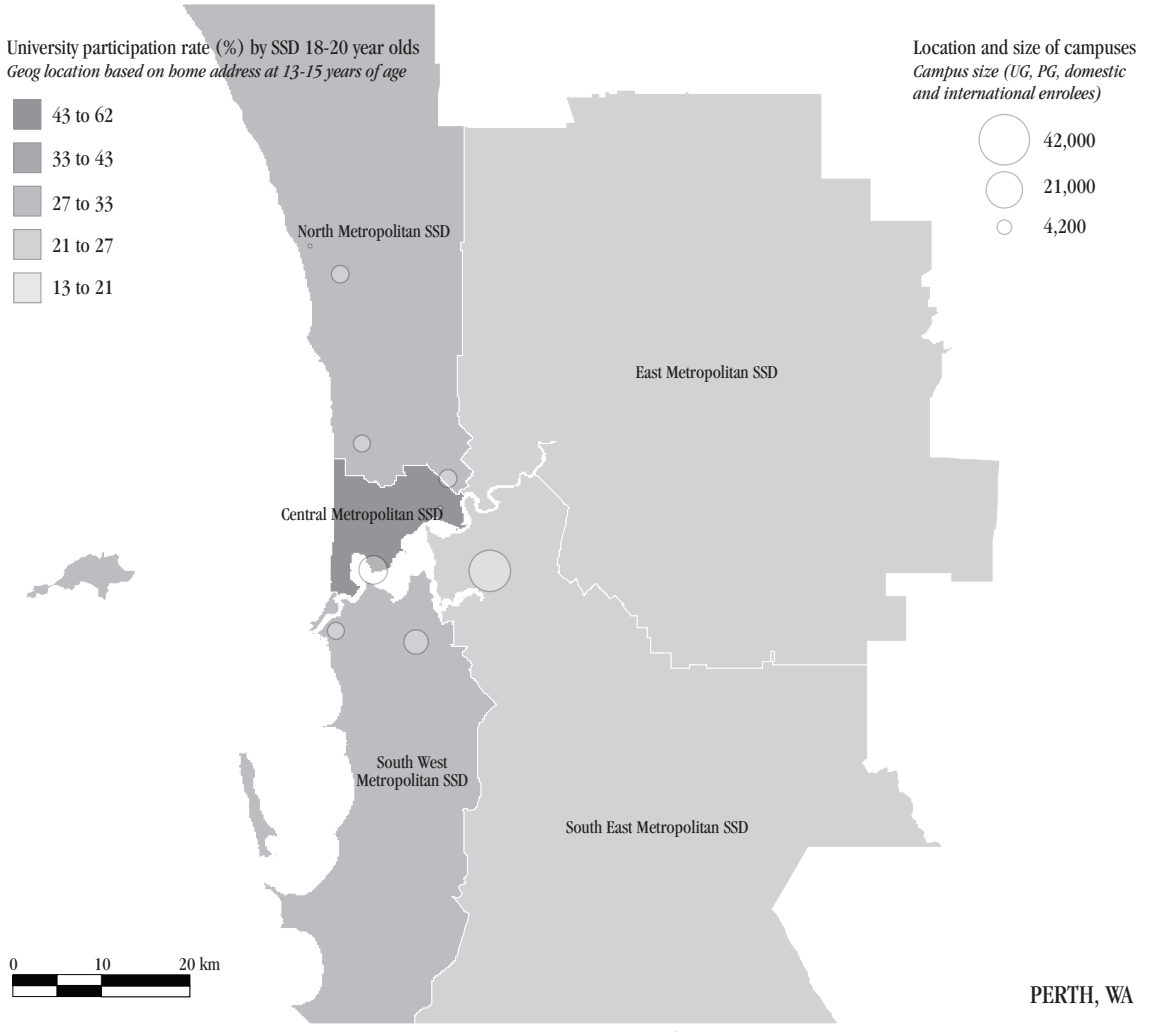

Figure 3: University participation rates of 18 to 20 year olds in 2006 by home location at 13 to 15 years, by Statistical Subdivision (SSD) and location of main university campuses, Perth

per annum between 2006 and 2016. Thereafter these rates stabilise.

It is evident that under both scenarios enrolment growth would occur primarily in the capital cities of Sydney, Melbourne, Brisbane, Perth and to a lesser extent in Adelaide. The overall share of the enrolment increase between 2006 and 2021 in these five cities is 78 per cent for the first scenario and 74 per cent in the second scenario. It may be that efforts to increase opportunity in regional areas (as recommended by the Review) would modify this prospect a little. However, given the demographic outlook, it is inevitable that most of the additional enrolees will be drawn from young metropolitan residents.

Within these cities the bulk of the young people who would have to be attracted would be located in outer suburban locations. Most of the expansion in the metropolitan urban youth population is occurring on the outer frontiers of these cities (with the partial exception of Sydney, where frontier housing is too expensive for many young families). As Figures 1–3 show, these are areas with low university participation rates. This is partly because there is a low presence of the business and professional households in these suburban locations where low university participation rates prevail. It is not so much that these suburban households are poor. Rather, they tend to be modest income earners from lower white collar or blue collar backgrounds, most of whom have no tradition of university attendance.

Their children have been largely disenfranchised from university attendance because the high schools in their location generally do not have a focus on the academic curriculum required for university attendance. In

addition, these areas are typically a long distance from a university campus. This is because the location of metropolitan universities reflects their heritage – which means that they are located in what are now inner or middle suburban areas. As a result, physical access to existing universities is becoming increasingly difficult for young people living in outer suburbia.

These points are illustrated in the following maps showing university participation rates by statistical subdivision within each capital city, along with the existing university campus locations. They show the university participation rates for those aged 18 to 20. The data was drawn from the 2006 census. The home location of the young people was identified by their location five years earlier in order to eliminate any bias in the data towards metropolitan areas. This could occur where significant numbers of students originally resident in regional or even outer suburban locations had moved into urban areas near university campuses between 2001 and 2006.

The incompatibility of the suburban spread with the location of universities campuses is obvious. So are the very low university participation rates for almost all outer suburban areas with the exception of Central Northern Sydney. In Sydney, for example, there are no campuses (or only tiny outposts of inner city universities) located in the outer suburban SSDs of Outer South Western Sydney, Outer Western Sydney, Gosford–Wyong, Fairfield/Liverpool or Blacktown. With the exception of Fairfield/Liverpool, the university participation rates in these SSDs are around 20 per cent, which is well below the average for Sydney of 32.4 per cent. (See Figure 1).

The story is similar in the other major metropolitan areas. In Melbourne, the three Statistical Subdivisions (SSDs) with the lowest university participation rates were the outer suburban SSDs of South Eastern Outer Melbourne, Frankston City and Mornington Peninsula Shire. Their participation rates were 20.8, 16.9 and 17.9 per cent respectively, compared with 32.3 per cent for Melbourne as a whole. The Melbourne map (Figure 2) shows that these three SSDs are the worst affected in Melbourne as regards distance from a university campus. The only campuses located within these SSDS were the small branch campuses of Monash University located at Berwick and Frankston. By comparison, the young people living in Western Melbourne, which is a relatively low socio-economic status suburban area located near central Melbourne, recorded a much higher participation rate of 32.8 per cent than was the case for the three outer South-Eastern SSDs just described. This difference is probably related to the ease of access residents of Western Melbourne have to several university campuses, including Victoria University, which is located within the SSD and RMIT and Melbourne University, which are located in the Melbourne inner-city area.

In Perth (Figure 3), there is a heavy concentration of university campuses clustered around the central Perth area. As a result, those living in the outer suburbs face long travel times to be able to avail themselves of higher education opportunities. Partly as a consequence, participation rates are far lower than for residents of inner city SSDs. In the Central Metropolitan SSD, the participation rate was 61.3 per cent. By comparison, it was 31.1 per cent in the South West Metropolitan SSD and 26 per cent in the South East Metropolitan SSD.

As indicated, most of the growth in Australia's school leaver population will occur in outer suburban areas, since this is where most young families with children tend to locate. For example, for Melbourne, 60 per cent of the growth of households between 2001 and 2006 occurred in outer-suburban locations (Birrell and Healy, 2008). The number of 18 to 20 year-olds living in these outer-suburban locations was already high in 2006. They will go much higher in the near future with the ageing of the young families settling in these areas and the addition of new families as housing in these areas expands.

In Sydney, by 2006 there were 12,641 persons aged 18 to 20 living in Outer Western Sydney, 10,080 in Outer South Western Sydney and 10,139 in Gosford Wyong, or 32,860 in total. This 32,860 represented 25 per cent of the total number of 18 to 20 year-olds living in Sydney. In Perth, the two outer SSDs with low university participation rates mentioned above, South West Metropolitan and South East Metropolitan, account for 43.4 per cent of all 49,328 residents aged 18 to 20 whose families were living in Perth in 2001.

Similar patterns exist in other capitals. In Brisbane for example, outer suburban areas such as Logan City, Ipswich City, Pine Rivers and Caloundra are already home to large numbers of 18-20 year olds, only a small portion of whom are university students. As noted in Table 1, enrolments in Brisbane over the period 2006 to 2021 will have to increase by 25.9 per cent or 21,229 students just to keep pace with the projected population growth in the city. If the proportion of young people enrolled in university increases as speci-

fied under the 2 per cent per annum scenario, the total increase in enrolments over this period would reach 53 per cent. This implies 43,810 more students in just 15 years, a huge addition. The case for establishing new campuses in the city's growth areas under these circumstances is compelling.

Implications for higher education policy

The combination of rapid growth in the university age population in the capital cities, particularly their outer suburban zones and low university participation rates in these zones, has obvious implications for higher education policy. It is clear that the existing university infrastructure will not be able to cope. Incremental expansion on existing metropolitan campuses could only provide a small fraction of the required capacity. New campuses will have to be built in locations which best serve the populations with the least access.

The Review acknowledges that the proposed enrolment expansion it proposes will have to address the needs of outer suburban populations. However, it throws the ball back into the Government's court with recommendation 18 which is that:

> The Australian Government initiate a process with key stakeholders to determine the needs of outer metropolitan and regional areas for higher education and the best ways to respond to those needs (Review 2008, p. 114).

Subject to this 'process', the Review declares that its preference is to leave decisions about filling these needs to existing players. It states that 'campuses should grow and decline in response to demand and planned decisions by providers' (Review 2008, 114). But, as noted, it is questionable whether established universities are interested in meeting these needs. It is also unrealistic to expect that the existing university infrastructure in Australia could accommodate the growth in enrolments recommended by the Review.

So why rely on existing universities to act as the agents of change? In our view the scale of growth required should prompt the Government to take the responsibility to drive a new era of higher education expansion. This program should include the establishment of new universities located in areas close to under-serviced communities and customised to meet their educational needs. There is a strong case that these should be teaching oriented universities with an explicit mission to attract young people who in the main have no family heritage of higher education and must be convinced of the pay-off should they embark on a costly and extended post-school training regime. This would involve the provision of vocationally oriented courses in business/accounting, applied science, engineering and the health and social professions.

A nation building exercise of this nature would have the best chance of simultaneously expanding opportunity for higher education within the social strata hitherto largely disenfranchised from access and of achieving the massive expansion in enrolments required to meet Australia's labour market needs.

Bob Birrell is director of Monash University's Centre for Population and Urban Research.

Daniel Edwards is a senior research fellow with the Aus¬tralian Council for Education Research and an honorary research fellow with Monash's Centre for Population and Urban Research.

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