The Journal of Contemporary Issues in Business and Government
2011 Volume 17, Number 2, pp 45-62

Targets for Low SES Participation in Australian Higher Education: Geographical Measures and State Boundaries

Paul Koshy
Curtin University

Abstract

This paper examines the measurement of the socio-economic status of Australian higher education students in relation to the Rudd/Gillard Government's establishment of enrolment targets for higher education providers in regard to students from low socio-economic status ("low SES") backgrounds. In particular, it discusses area measures of socio-economic status – where a student's status is determined by the postcode or collection district of the student's permanent residence. In doing so, the paper outlines issues with the relevance of current area measures which use a national benchmark, particularly in the context of geographical constraints on the draw-pool of Australian higher education providers, where students attend institutions in their own state or territory. The paper introduces a new area measure which uses the individual state or territory as a reference point, as opposed to the current national reference point. This is assessed in relation to existing area measures and the recently announced funding policy by the Gillard Government.

Introduction

In 2008 the Rudd Government established a key target for the Australian higher education sector to raise participation rates such that 40 per cent of 25 to 34 year olds will have attained a bachelor's degree or higher by 2025. Attaining this goal will require a higher education participation rate of 40 per cent over time. To provide some context for this target, in 1980, only 20 per cent of all young people were enrolled in higher education by age nineteen. This proportion rose to 38 per cent by 2000 (Rothman, 2003). However, enrolment does not correspond to final attainment, with overall attainment levels for 25 to 34 year olds being around 32 per cent (Bradley, 2008). On the basis of this historical trend, and recent participation rates of around 38 per cent, the underlying participation target of 40 per cent appears to be within reach, provided completion rates can be raised.

However, one concern is that participation in higher education by students from low socio-economic status ("low SES") households – defined as the bottom 25 per cent of all households using ABS measures of socio-economic status – has lagged behind that of the overall population. For instance, in 1980, only 16 per cent of people aged 19 from low SES status households were enrolled in a higher education institution, 80 per cent of the overall enrolment rate of 20 per cent. By 2000, this rate of participation had risen considerably to 28 per cent, compared to the overall participation rate of 38 per cent (Rothman, 2003).

As part of the push for the overall 40 per cent target, the Rudd (now Gillard) Government sought to establish participation targets for the low SES population, where these targets are developed in terms of university enrolment participation levels (i.e., per cent of total enrolment). The government has embraced the target of increasing the participation rate of low SES students to 20 per cent of domestic undergraduate higher education enrolments in 2025, up from 16.1 per cent of this population in 2008.[1] This latter goal encompasses a wide range of policy responses, including additional funding for universities under the Higher Education Participation and Partnerships Program (HEPPP), whereby explicit targets for low SES enrolment will be set at the institutional level.

A critical issue in this policy debate is the measure defining low SES status, with the search for a yardstick still subject to ongoing determination in policy circles, albeit with a preliminary measure developed for the purposes of the HEPPP. The inexact and protean nature of measuring low SES status is recognised in the recently released *Guidelines for Higher Education Participation and Partnerships Program*, under which funding will be distributed to universities as part of the 'participation component' of the funding, allocated on the basis of their low SES enrolment (Commonwealth of Australian, 2010a). In this document, it is stated that funding will be determined in part by a "measure of low SES as determined by the Minister."[2]

Clearly, the choice of participation measure for low SES students ("A" above) will have an impact on the level of funding available to individual institutions. The measure preferred until recently by the Department of Education, Employment and Workforce Relations (DEEWR) is the area or so-called 'postcode measure' which uses the Australian Bureau of Statistics (ABS) SEIFA Education and Occupation Index to classify Australian postcodes (ABS, 2007) according to socio-economic status. Typically, postcodes are marked as "High SES" (top 25 per cent), "Medium SES" (middle 50 per cent) or "Low SES" (bottom 25 per cent) on the basis of the average SEIFA index measure across households in the postcode, with rankings occurring in direct relation to all relevant postcodes across Australia. The term 'postcode measure' is somewhat generic as it also encapsulates 'collection district' measures, which tend to cover no more than 300 households and are generally considered to represent a more refined geographical measure.

However, regardless of the use of postcodes or collection district measures, there has been considerable debate about the relative merits of using a geographically assigned measure of low SES status. This discussion centres on two broad themes, the first of which can be termed *variable efficacy*, that is, how can an index be constructed to

best capture the impact of a diverse range of factors, including income, occupation and educational attainment within households? The second pertains to the *level of identification* question, that is, should individual household measures be used, or does a geographical score such as the postcode measure suffice?

In this paper, another factor is discussed and evaluated for consideration in the policy process, regardless of the final version of the SEIFA index used or type of identification (whether personal or geographical) adopted. This is the chosen reference population in any such categorisation. At present, the SEIFA scores for area measures such as postcodes, are ranked in relation to the overall population across Australia. We term this the 'national postcode' measure. A corollary of this is that different states and territories have different proportions of low SES populations in their state or territory, which are then captured as the bottom 25 per cent of the national population. However, the low SES student population can also be determined with a reference point of the individual state or territory populations. In this instance, 'low SES' postcodes can be measured relative to those postcodes in the bottom 25 per cent of a *given state or territory's population* using the SEIFA index measure. We term this the 'state postcode' measure.

The above discussion applies to both postcode and collection district measures, both of which are calculated by DEEWR in its annual data collections from higher education providers. We focus on the postcode measure only because DEEWR do not release collection district data on low SES measures, other than those reported in their recent policy release. These are discussed in conjunction with our discussion of the national and state postcode measures.

Australian Geography and the Postcode Measure

The choice of a postcode ranking at the national level necessarily has implications for the distribution of low SES postcodes across the states and territories, where the SEIFA and its components are themselves distributed unevenly. From the Commonwealth's perspective, a national ranking of postcodes by SEIFA makes sense where participation levels in higher education are independent of geography, that is, where similarly disadvantaged students have access to education opportunities nationwide.

However, it is a feature of Australian higher education that the undergraduate 'draw pools' for most institutions are located in their own jurisdiction. Table 1 shows higher education enrolments by the state/territory location of permanent home address (total institutional enrolment for each state or territory in columns). This indicates that the vast majority (93 per cent or more) of all Australian undergraduate enrolments at higher education institutions are sourced from the home state of their institution.

The institutions in the mainland states have relatively modest levels of inter-state enrolment and have home state enrolment shares of 93.6 per cent or greater. Partial exceptions to this rule include Tasmania, the Australian Capital Territory (ACT) and the Northern Territory (NT), which tend to draw students from the larger states as

well. However, the University of Tasmania still sources the overwhelming majority (87.8 per cent) of its students from Tasmania, while the NT and ACT have relatively small higher education populations. The ACT also contains the Australian National University (ANU), which has the highest rate of inter-state enrolment in Australia.

Table 1: Source of Domestic Undergraduate Students in Each State and Territory, Table A Providers Only, By State or Territory of Permanent Residence, 2008

	NSW	VIC	QLD	WA	SA	TAS	NT	ACT
NSW	**93.7%**	2.1%	3.6%	0.8%	0.9%	3.7%	5.1%	25.4%
VIC	2.0%	**95.4%**	0.9%	0.6%	2.1%	5.3%	10.0%	3.1%
QLD	2.1%	0.7%	**94.2%**	0.6%	0.3%	1.7%	10.9%	1.1%
WA	0.3%	0.4%	0.3%	**97.2%**	0.2%	0.6%	7.3%	0.4%
SA	0.4%	0.5%	0.2%	0.4%	**95.6%**	0.7%	12.5%	0.3%
TAS	0.2%	0.5%	0.2%	0.1%	0.2%	**87.7%**	0.4%	0.5%
NT	0.1%	0.2%	0.3%	0.2%	0.6%	0.1%	**53.3%**	0.3%
ACT	1.2%	0.2%	0.3%	0.1%	0.1%	0.2%	0.5%	**68.9%**
Total	100%	100%	100%	100%	100%	100%	100%	100%

Note: State and Territory Shares of Institutional Enrolments in the column, for instance, 93.7% of all students attending an institution in NSW in 2008 cite their permanent residence as being in that state. Bold figures indicate own state or territory share of enrolment.

Australia has a relatively unintegrated higher education market in comparison with other OECD countries. For instance, figures from the US Department of Education (2009) indicate that enrolment patterns in the US are considerably less state-centric, but not dramatically so. Around 80 per cent of the college freshmen intake (first year students) at US institutions are comprised of students attending an institution in their 'home state'. Hoxby (2009: 2) attributes the integration of the higher education sector in the US to the falling cost of collecting information for both students and institutions and, to a lesser extent, reduced cost of long-distance travel and communication. These trends have manifested themselves in terms of an integrated market, and one which is less constrained by geography than perceptions of quality, as indicated by institutional resources and the student peer group.

A similar process to that seen in the US over the past couple of decades may begin to take shape in Australia after 2012, when institutional quotas are removed. However, at present it appears that the Australian market is more accurately delineated along geographic and regional lines. Given this paucity of inter-state enrolments in Australian higher education, institutions in states with relatively moderate levels of low SES students can be disadvantaged under the national measure if only because their opportunity to attract suitable applicants is limited by the definition of low SES. This is also, in part, attached to the broader policy question about participation by students who are regionally or remotely located (Commonwealth of Australia, 2010b). Again,

funding allocated at the Commonwealth level should reflect where students access educational opportunities.

Clearly, the use of the national comparison makes it more likely that institutions in certain states and territories will naturally enrol larger number of low SES students than others by dint of geography. Table 2 indicates that this is the case. It reproduces author calculations from Phillimore and Koshy (2010) on the percentage share of each state's population that is classified as low SES on a national basis relative to its share of low SES enrolment at the undergraduate level.

Table 2: Low SES Population and University Participation Comparisons, 2008

State/Territory	Low SES: Share of state population per cent	Low SES: Share of university enrolment per cent	Effort-opportunity ratio
New South Wales (NSW)	23.5%	16.8%	0.71
Victoria (VIC)	19.9%	13.8%	0.69
Queensland (QLD)	30.5%	19.4%	0.63
South Australia (SA)	35.7%	20.6%	0.58
Western Australia (WA)	19.8%	11.2%	0.57
Tasmania	54.1%	31.3%	0.58
Northern Territory (NT)	26.4%	15.4%	0.59
Australian Capital Territory (ACT)	0.0%	4.7%	—
Australia	**25%**	**16.3%**	**0.65**

Source: Phillimore and Koshy (2010: 7).

Using a national comparison, the distribution of low SES students across the Australian states varies markedly, ranging from zero per cent in the ACT, which has no postcodes ranked in the bottom 25 per cent in Australia using SEIFA, through to Tasmania where over half (54.1 per cent) of the state's population reside in a low SES postcode.

The order of states and territories in terms of low SES enrolment directly matches its order in terms of low SES population, whereby The University of Tasmania has low SES students equal to 31.3 per cent of its total enrolment and the ACT has 4.7 per cent, in keeping with its non-existent low SES population, at least under the national low SES measure. For this reason, the level of low SES enrolment alone may not indicate success or otherwise in encouraging participation; rather, some additional allowance needs to be made for the number of low SES applicants from which a university can draw upon. Table 2 reports one such potential adjustment.

The ratio of low SES enrolment to population share, as measured by the "effort-opportunity ratio" in the final column indicates that the smaller states and territories have broadly similar patterns of enrolment after allowing for their relative population shares, whereas New South Wales (NSW), Victoria (VIC) and Queensland (QLD) have relatively higher shares of enrolment compared to their low SES populations.

Given the relatively closed nature of Australian higher education in terms of inter-state movements, the choice of population becomes important in determining policy. Table 3 reports postcode[3] counts and population shares under the standard ("National low SES") measure of low SES and the alternative "State Low SES" measure.

Table 3: The "Low SES Postcode" Count Under National and State Measures

	National Low SES			State Low SES			Number of Postcodes
	Count	*%*	*Per cent of population*	*Count*	*%*	*Per cent of population*	*Count*
NSW	188	31.2	23.5	196	32.6	25.0	602
VIC	124	19.3	19.9	156	24.2	25.0	644
QLD	168	39.4	30.5	147	34.5	25.0	426
SA	104	31.5	35.7	66	20.0	25.0	330
WA	80	25.1	19.8	85	26.6	25.0	319
TAS	59	55.1	54.1	21	19.6	25.0	107
NT	8	30.8	26.4	7	26.9	25.0	26
ACT	0	0.0	0.0	3	12.5	25.0	24
Australia	**731**	**29.5**	**25.0**	**681**	**27.5**	**25.0**	**2,478**

Source: DEEWR (2010) confidential data request.

The national measure sees 731 or 29.5 of the 2,478 postcodes in Australia classified as low SES, containing 25 per cent of the Australian population. As discussed above, population shares in the national low SES bracket vary dramatically between states and territories. By comparison, under the state low SES measure, each state or territory's low SES population is calculated to include only 25 per cent of its population. This shift to a state-by-state analysis has the overall effect of reducing the number of postcodes which are classified as low SES, down from 731 to 681, although the overall percentage of the population which is classified as low SES remains stable across Australia at 25 per cent. However, marked variations are noticeable across individual states. For instance, the number of Tasmanian postcodes classified as low SES falls from 59 to 21, with the population covered by these halving from 54.1 to 25 per cent. Queensland also sees a marked reduction in the estimate of its low SES population, with this falling from 30.5 to 25 per cent. At the extreme end of the scale, the ACT sees its low SES population rise from zero per cent under the national measure to 25 per cent under the "State Low SES" measure.

Low SES Participation under National and State Postcode Measures

In broad policy terms, the reference point for identifying low SES postcodes affects estimates of the number of low SES students. DEEWR provides a classification under both measures. Table 4 contains a table reporting outcomes for all 38 higher education institutions classified as Table A Providers. The State Low SES measure has the immediate impact of reducing the number of enrolled students

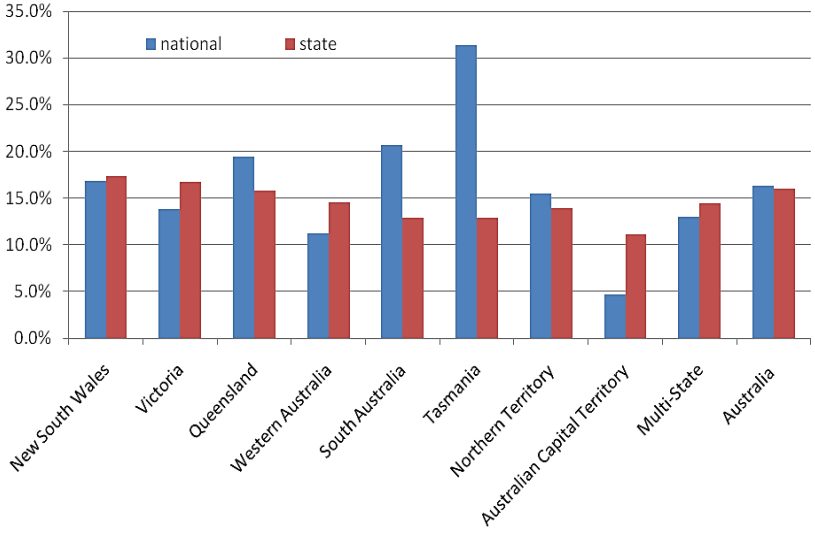
defined as coming from low SES backgrounds from 86,581 (16.3 per cent of the total) to 84,949 (16 per cent of the total), a decline of 1.9 per cent.

Table 4: Domestic Undergraduate Enrolments and Low SES Participation under the National and State Postcode Measures

Institution	All Students	National Low SES		State Low SES	
		No.	%	No.	%
Charles Sturt University	19,597	4,539	23.2	4,804	24.5
Macquarie University	13,774	818	5.9	854	6.2
Southern Cross University	9,021	2,149	23.8	2,198	24.4
The University of New England	11,001	2,877	26.2	2,973	27.0
The University of New South Wales	21,871	1,878	8.6	1,900	8.7
The University of Newcastle	17,064	4,580	26.8	4,791	28.1
The University of Sydney	25,113	1,921	7.6	1,963	7.8
University of Technology, Sydney	17,036	1,778	10.4	1,811	10.6
University of Western Sydney	24,587	5,414	22.0	5,473	22.3
University of Wollongong	10,987	2,609	23.7	2,714	24.7
Deakin University	20,922	2,873	13.7	3,267	15.6
La Trobe University	17,413	3,283	18.9	4,080	23.4
Monash University	26,259	3,241	12.3	3,739	14.2
RMIT University	16,949	2,320	13.7	2,998	17.7
Swinburne University of Technology	8,407	853	10.1	1,057	12.6
The University of Melbourne	20,813	1,528	7.3	1,925	9.2
University of Ballarat	3,890	824	21.2	969	24.9
Victoria University	11,791	2,514	21.3	3,133	26.6
Central Queensland University	7,937	3,706	46.7	2,284	28.8
Griffith University	22,152	3,301	14.9	3,054	13.8
James Cook University	9,368	1,936	20.7	1,592	17.0
Queensland University of Technology	26,283	3,622	13.8	3,047	11.6
The University of Queensland	23,294	3,489	15.0	2,947	12.7
University of Southern Queensland	11,478	3,714	32.4	3,163	27.6
University of the Sunshine Coast	4,453	599	13.5	503	11.3
Curtin University of Technology	17,561	1,972	11.2	2,612	14.9
Edith Cowan University	13,207	1,518	11.5	1,950	14.8
Murdoch University	9,474	1,633	17.2	2,113	22.3
The University of Western Australia	12,107	725	6.0	943	7.8
The Flinders University of South Australia	9,929	2,076	20.9	957	9.6
The University of Adelaide	11,358	1,603	14.1	1,044	9.2
University of South Australia	17,683	4,362	24.7	3,029	17.1
University of Tasmania	12,107	3,795	31.3	1,564	12.9
Batchelor Institute	398	175	44.0	160	40.2
Charles Darwin University	4,071	519	12.7	461	11.3
The Australian National University	7,667	334	4.4	706	9.2
University of Canberra	6,427	330	5.1	860	13.4
Australian Catholic University	9,054	1,173	13.0	1,311	14.5
Australia	**532,503**	**86,581**	**16.3**	**84,949**	**16.0**

Figure 1 below outlines estimates of low SES student numbers across the states and territories under each measure, for 2008, the latest year for which final data are available. The decline in low SES student numbers is felt particularly in Tasmania (58.8 per cent), South Australia (37.4 per cent) and Queensland (18.5 per cent), all of whom have shares of the low SES population exceeding 25 per cent under the national measure. State and territories seeing marked increases in the level of low SES enrolment under the state measure include the ACT (135 per cent), where the Australian National University and the University of Canberra benefit from a local applicant pool with 25 per cent of students classified as low SES as opposed to no low SES students under the national measure, and Western Australia and Victoria who benefit from a similar, albeit reduced, re-distribution. Australia's most populous state, News South Wales, sees only a minor change in the number of low SES enrolments.

Figure 1: Low SES Participation under the National and State Postcode Measures – Outcomes by State

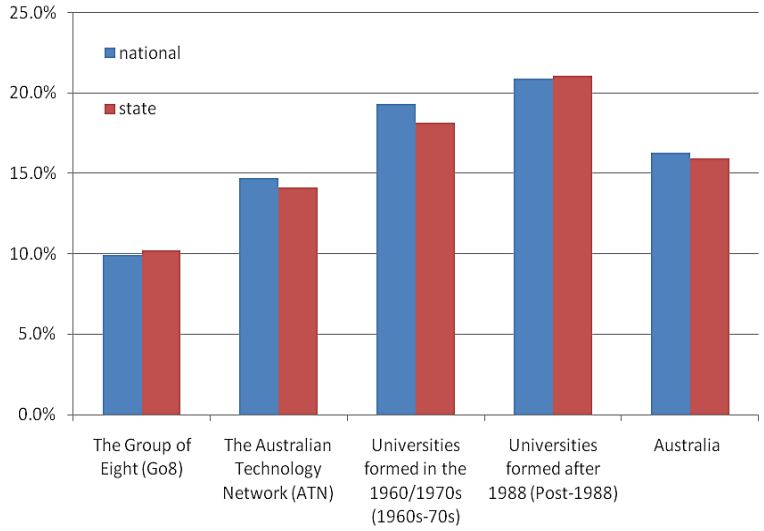


One benefit of the State Low SES measure is that the current level of 'effort', at least in terms of performance relative to the number of low SES students in a given state, is readily discernible where this is equalised to 25 per cent in each instance. On this basis, the larger states tend to have higher rates of participation by low SES students in comparison with the national average, with Queensland approaching the average under the state definition of a low SES postcode.

Figure 2 presents the outcomes under both classifications of SES status for broad institutional groupings identified in the Bradley Report (Bradley, 2008). The redistribution in low SES student numbers evident across state and territory lines also

manifests itself across these institutional groupings, although to a less pronounced effect as the groupings are national in nature. The only beneficiaries under the move to the State Low SES measure are universities in the Group of Eight (Go8) who see a three per cent increase in the number of enrolments classified as low SES, with the Australian Technology Network (ATN) (a four per cent decline) and universities formed in the 1960s-70s (a 6.1 per cent decline) both seeing lower levels of reported low SES participation under the state measure.

Figure 2: Low SES Participation under the National and State Postcode Measures – Outcomes by Institutional Grouping



Note: The 1960s-70s group also includes the University of Tasmania which was established in 1890.

Policy Implications of the National and State Postcode Measures

The choice of geographic area for comparing postcode measures has implications for policy, particularly the way in which funding under the HEPPP is determined. By way of example, Table 5 below reports a notional allocation of the Participation funding for 2010 on the basis of 'A' only, where this is defined under both the National Low SES and State Low SES measures and with notional shares of the national total calculated on the basis of findings reported in Table 4.[4] Also reported is the dollar variation seen between both measures.

Generally, the shift from nationally based to state-based measures for postcode status has implications for funding under the HEPPP. Several institutions see quite marked reversals in their allocations, with Flinders and Tasmania see reductions of

over 50 per cent, while the ANU and University of Canberra see a doubling of funding as their low SES student shares increase under the state measure.

Table 5: Low SES Participation under the National and State Postcode Measures – Implications for HEPPP Financing under a Hypothetical Example

Institution	National Low SES		State Low SES		Variation	
	Share %	2010 Funding	Share %	2010 Funding	Funding	%
Charles Sturt University	5.2	$2,217,448	5.7	$2,391,997	$174,549	7.9
Macquarie University	0.9	$399,619	1.0	$425,222	$25,602	6.4
Southern Cross University	2.5	$1,049,856	2.6	$1,094,423	$44,567	4.2
The University of New England	3.3	$1,405,507	3.5	$1,480,309	$74,802	5.3
The University of New South Wales	2.2	$917,464	2.2	$946,044	$28,580	3.1
The University of Newcastle	5.3	$2,237,478	5.6	$2,385,524	$148,046	6.6
The University of Sydney	2.2	$938,471	2.3	$977,412	$38,942	4.1
University of Technology, Sydney	2.1	$868,610	2.1	$901,729	$33,119	3.8
University of Western Sydney	6.3	$2,644,914	6.4	$2,725,104	$80,190	3.0
University of Wollongong	3.0	$1,274,581	3.2	$1,351,349	$76,768	6.0
Deakin University	3.3	$1,403,553	3.8	$1,626,697	$223,144	15.9
La Trobe University	3.8	$1,603,851	4.8	$2,031,504	$427,653	26.7
Monash University	3.7	$1,583,333	4.4	$1,861,714	$278,381	17.6
RMIT University	2.7	$1,133,395	3.5	$1,492,757	$359,362	31.7
Swinburne University of Technology	1.0	$416,718	1.2	$526,299	$109,581	26.3
The University of Melbourne	1.8	$746,477	2.3	$958,492	$212,014	28.4
University of Ballarat	1.0	$402,551	1.1	$482,482	$79,932	19.9
Victoria University	2.9	$1,228,170	3.7	$1,559,976	$331,806	27.0
Central Queensland University	4.3	$1,810,501	2.7	$1,137,244	*-$673,257*	-37.2
Griffith University	3.8	$1,612,645	3.6	$1,520,641	*-$92,004*	-5.7
James Cook University	2.2	$945,798	1.9	$792,685	*-$153,113*	-16.2
Queensland University of Technology	4.2	$1,769,464	3.6	$1,517,155	*-$252,309*	-14.3
The University of Queensland	4.0	$1,704,489	3.5	$1,467,364	*-$237,126*	-13.9
University of Southern Queensland	4.3	$1,814,409	3.7	$1,574,914	*-$239,495*	-13.2
University of the Sunshine Coast	0.7	$292,631	0.6	$250,453	*-$42,178*	-14.4
Curtin University of Technology	2.3	$963,386	3.1	$1,300,561	$337,175	35.0
Edith Cowan University	1.8	$741,592	2.3	$970,940	$229,348	30.9
Murdoch University	1.9	$797,773	2.5	$1,052,100	$254,327	31.9
The University of Western Australia	0.8	$354,186	1.1	$469,536	$115,351	32.6
The Flinders University of South Australia	2.4	$1,014,193	1.1	$476,507	*-$537,686*	-53.0
The University of Adelaide	1.9	$783,117	1.2	$519,826	*-$263,291*	-33.6
University of South Australia	5.0	$2,130,978	3.6	$1,508,193	*-$622,785*	-29.2
University of Tasmania	4.4	$1,853,980	1.8	$778,743	*-$1,075,237*	-58.0
Batchelor Institute	0.2	$85,493	0.2	$79,667	*-$5,826*	-6.8
Charles Darwin University	0.6	$253,548	0.5	$229,540	*-$24,008*	-9.5
The Australian National University	0.4	$163,170	0.8	$351,530	$188,360	115.4
University of Canberra	0.4	$161,216	1.0	$428,209	$266,994	165.6
Australian Catholic University	1.4	$573,048	1.5	$652,770	$79,722	13.9
Australia	**100.0**	**$42,297,613**	**100.0**	**$42,297,613**	**-**	**-**

These changes translate into movements in allocations between the states and territories and institutional groupings, as shown in Table 6, with Tasmania seeing a reduction of around 58 per cent in funding while the ACT sees an increase of 140.4 per cent.

Table 6: Low SES Participation under the National and State Postcode Measures – Implications for HEPPP Financing under a Hypothetical Example for the States and Territories and Institutional Groupings

	National Low SES		State Low SES		Variation	
	Share %	2010 Funding	Share %	2010 Funding	$	%
State						
New South Wales	33.0	$13,953,947	35	$14,679,113	$725,165	5.2
Victoria	20.1	$8,518,049	25	$10,539,922	$2,021,874	23.7
Queensland	23.5	$9,949,937	20	$8,260,455	*-$1,689,482*	-17.0
Western Australia	6.8	$2,856,937	9	$3,793,137	$936,200	32.8
South Australia	9.3	$3,928,288	6	$2,504,526	*-$1,423,762*	-36.2
Tasmania	4.4	$1,853,980	2	$778,743	*-$1,075,237*	-58.0
Northern Territory	0.8	$339,041	1	$309,207	-$29,834	-8.8
Australian Capital Territory	0.8	$324,385	2	$779,739	$455,354	140.4
Multi-State	1.4	$573,048	2	$652,770	$79,722	13.9
Institutional Grouping						
The Group of Eight (Go8)	17.0	$7,190,707	18	$7,551,918	$361,212	5.0
The Australian Technology Network (ATN)	16.2	$6,865,833	16	$6,720,396	*-$145,437*	-2.1
Universities formed in the 1960/1970s (1960s-70s)	34.4	$14,548,980	33	$13,921,282	*-$627,698*	-4.3
Universities formed after 1988 (Post-1988)	32.4	$13,692,094	33	$14,104,018	$411,923	3.0
Australia	**100.0**	**$42,297,613**	**100**	**$42,297,613**	**-**	**-**

The 2010 HEPPP Funding Policy

The Commonwealth's recently announced guidelines on funding for the HEPPP provides further details on the preliminary measure. Funding of $378.68 million for the Participation Component of the program is available over four years from 2010 to 2013. The total funding allocated for Participation in 2010 was $42.297 million, almost doubling to $83.6 million in 2011, before increasing further to over $126 million in each of 2012 and 2013.

The allocation of this funding will be determined by the formula: C = (2A + B)/3, where "C" is the "Indicator of undergraduates from low SES backgrounds", comprised of: "A", the total number of domestic undergraduate students enrolled at a *provider* who have a home addresses in the lowest quartile of a "measure of low SES as determined by the Minister" and "B", the number of domestic undergraduate students

who meet relevant income support payment criteria in relation to a number of payment types, including: the Dependent Youth Allowance, Austudy, the Pensioner Education Supplement and the ABSTUDY Living Allowance.

In the lead-up to the 2010 federal election, the Gillard Government announced a preliminary determination for the distribution of the first tranche of funding under the HEPPP (DEEWR, 2010). The status of this determination is uncertain at the time of writing, given the outcome of the August 2010 election. Nevertheless, the implications for policy are instructive. In this determination, the formula allocation formula ("C = (2A + B)/3") used a proxy for C of a SEIFA index measure for the ABS collection district of the student, where determination of SES status was arrived at in a national comparison, that is, low SES status was assigned to students coming from the bottom 25 per cent of collection districts across Australia.[5]

As Table 7 reports, for all Table A providers, DEEWR provides data on the percentage of total undergraduate domestic enrolment classified as low SES on the basis of their permanent residence (the "A" measure) using the collection district measure, as well as the number of students at each provider who are counted under "B" in the calculation formula –, that is, those students who receive some form of income assistance from the Commonwealth. These are combined using the above formula to produce an estimate of "C" for each institution. This is reported in the final column of Table 7 below. By way of comparison, we also include in the second and third columns of Table 7, estimates of the low SES area measure using both the national and state postcode measures. These estimates are directly comparable with the collection district measure reported by DEEWR.

The first observation that can be made about estimates of low SES participation under the DEEWR release is that definitions which track individual student data imply relatively low levels of participation – 12.7 per cent for all Table A providers – regardless of the area measure used. This implies a count for students of low SES status which is around 25 per cent below that seen using one of the postcode measures and around 20 per cent using DEEWR's preferred measure of assigning SEIFA-determined SES status by collection district, where around 15.2 per cent of all students are assessed as coming from low SES backgrounds. This confirms the intuition that more precise area measures tend to provide a truer indication of low SES status when compared with individual measures. The collection district measure is ordered on a national basis and so doesn't tend to diverge markedly from the results identified below using the national postcode measure. DEEWR has not released collection district data so a comparison between a state and national ranking is not possible, as reported for postcode data.

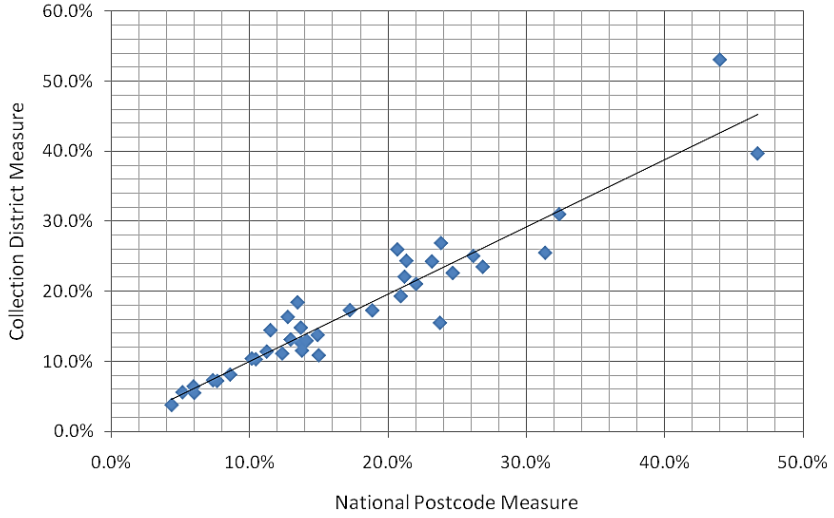
By and large, the collection district measures tend to track the national postcode measure very closely, albeit reporting low SES participation at a reduced rate (15.2 to 16.4 per cent), although this also reflects the fact that the collection district measure is based on first half 2009 data). Nevertheless, Figure 3 shows how close the 'fit' is, as it reports a plot of the 'national' postcode and collection district measures against one another for the 38 Table A providers.

Table 7: Low SES Student Enrolment: Per Cent of Domestic Enrolment, 2008-09

Institution	Area ("A") Measures		DEEWR Assessment for HEPPP 2010 Allocation		
			"A"	"B"	"C"
	National Postcode Measure (%)	State Postcode Measure (%)	Collection District Measure (%)	Students Receiving C'wealth Payment (%)	Allocation Formula: C = (2A + B)/3 (%)
Charles Sturt University	23.2	24.5	24.2	10.2	19.6
Macquarie University	5.9	6.2	6.4	9.1	7.3
Southern Cross University	23.8	24.4	26.8	19.4	24.4
The University of New England	26.2	27.0	25.0	11.6	20.6
The University of New South Wales	8.6	8.7	8.1	11.0	9.0
The University of Newcastle	26.8	28.1	23.5	14.7	20.5
The University of Sydney	7.6	7.8	7.1	11.5	8.6
University of Technology, Sydney	10.4	10.6	10.3	12.8	11.1
University of Western Sydney	22.0	22.3	21.0	15.1	19.1
University of Wollongong	23.7	24.7	15.5	11.6	14.2
Deakin University	13.7	15.6	12.6	13.4	12.9
La Trobe University	18.9	23.4	17.2	16.1	16.9
Monash University	12.3	14.2	11.1	10.8	11.0
RMIT University	13.7	17.7	14.8	18.8	16.1
Swinburne University of Technology	10.1	12.6	10.3	12.9	11.2
The University of Melbourne	7.3	9.2	7.3	11.3	8.6
University of Ballarat	21.2	24.9	22.0	19.8	21.3
Victoria University	21.3	26.6	24.3	18.8	22.5
Central Queensland University	46.7	28.8	39.6	10.1	29.8
Griffith University	14.9	13.8	13.7	14.1	13.8
James Cook University	20.7	17.0	25.9	13.5	21.8
Queensland University of Technology	13.8	11.6	11.5	10.0	11.0
The University of Queensland	15.0	12.7	10.8	9.2	10.3
University of Southern Queensland	32.4	27.6	31.0	11.2	24.4
University of the Sunshine Coast	13.5	11.3	18.4	19.5	18.7
Curtin University of Technology	11.2	14.9	11.4	10.9	11.2
Edith Cowan University	11.5	14.8	14.4	11.1	13.3
Murdoch University	17.2	22.3	17.3	11.6	15.4
The University of Western Australia	6.0	7.8	5.5	6.1	5.7
The Flinders University of South Australia	20.9	9.6	19.3	17.2	18.6
The University of Adelaide	14.1	9.2	12.9	11.8	12.5
University of South Australia	24.7	17.1	22.6	15.2	20.1
University of Tasmania	31.3	12.9	25.5	16.4	22.4
Batchelor Institute	44.0	40.2	53.0	168.2	91.6
Charles Darwin University	12.7	11.3	16.3	10.1	14.2
The Australian National University	4.4	9.2	3.7	7.3	4.9
University of Canberra	5.1	13.4	5.5	8.8	6.6
Australian Catholic University	13.0	14.5	13.1	15.1	13.8
Australia	**16.3**	**16.0**	**15.2**	**12.7**	**14.4**

Note: The collection district measure uses data from the first half of 2009. As these data were not publicly available at the time of writing, the national and state postcode data are for 2008.

Figure 3: Low SES Participation: The 'National' Postcode and Collection District Measures Compared



It follows that the divergence between the state postcode measure and the collection district measure mirrors that identified above in its comparison with the national postcode measure. For instance, the Australian National University has a low SES participation rate of 3.7 per cent under the collection district measure compared to 4.4 per cent under the national postcode measure and 9.2 per cent under the state postcode measure. Its share of students receiving a Commonwealth payment is around 7.3 per cent.

Table 8 provides a point of comparison between the assessment for "C" under the current policy using as a proxy for "A" the collection district measure, ordered at the national level, with a similar assessment using the state postcode measure reported in Table 7 for "A". In both instances, "B" is measured using the DEEWR count of students per institution who receive a Commonwealth payment. All outcomes are reported as a percentage of 2008-09 domestic enrolment.

The first noticeable outcome is that the level of low SES enrolment increases from 14.4 per cent to 14.8 per cent, an increase of 0.4 percentage points. At the state and territory level this is driven by smaller changes among the larger states of between one and two percentage points, but with larger changes occurring in the smaller states and territories, largely in Tasmania (a reduction of 8.4 percentage points), South Australia (a reduction of 4 percentage points) and the Australian Capital Territory (a 4.4 percentage point gain). At the institutional grouping level, the movement between groups is smaller, with the Group of Eight (1 percentage point) and universities formed after 1988 (1.9 percentage points).

Table 8: Low SES Student Enrolment: DEEWR Assessments under Two Area Measures of Low SES Status, Per cent of Total Domestic Enrolment (2008-9), States and Territories and Institutional Groupings

	"B"		HEPPP Allocation Assessments 2010 Allocation ("C") – Low SES Share given Two Measures of "A"	
	Students Receiving C'wealth Payment (%)	Current: "A" = National Collection District Measure (%)	Proposed: "A" = State Postcode Measure (%)	Percentage Point Difference
State				
New South Wales	12.5	14.6	15.6	-1.0
Victoria	14.3	13.8	15.9	-2.1
Queensland	11.6	15.4	14.2	1.2
Western Australia	9.9	11.0	12.8	-1.8
South Australia	14.7	17.4	13.4	4.0
Tasmania	16.4	22.4	14.1	8.4
Northern Territory	22.1	20.1	16.4	3.7
Australian Capital Territory	8.0	5.7	10.1	-4.4
Multi-State	15.1	13.8	14.7	-0.9
Institutional Grouping				
The Group of Eight (Go8)	10.3	9.2	10.2	-1.0
The Australian Technology Network (ATN)	13.2	18.3	13.8	4.5
Universities formed in the 1960/1970s (1960s-70s)	13.7	11.1	16.6	-5.5
Universities formed after 1988 (Post-1988)	14.1	18.8	18.7	0.1
Australia	**12.7**	**14.4**	**14.8**	**-0.4**

Note: The calculation for "C" is C = (2A+B)/3, the reported values for "C" are where A is either the current measure – the national collection district measure or the proposed state postcode measure.

Table 9 outlines the funding implications of Table 8. This uses the estimated share of "C" reported in Table 10 and applies it to the DEEWR estimate of the total student population as in First Semester, 2009 (not the 2008 estimate reported in Table 4) to derive an institutional share of funding available in the first year of the HEPPP under the policy prescription using collection district data and the state postcode measure developed in this paper. Table 9 reports the findings on allocations between the states and territories and institutional groupings under both measures.

The key finding from this comparison is that the state postcode measure has a similar impact on funding allocation under the HEPPP when compared with the collection district measure as it did with the national postcode measure – Tasmanian institutions lose money, while those in the Australian Capital Territory gain funding, while the Group of Eight gains funding at the expense of the other institutional groupings.

Table 9: HEPPP Financing under the Proposed Policy and an Alternative State Postcode Measure – Implications for the States and Territories and Institutional Groupings

	Collection District		State Low SES		Variation	
	Share (%)	2010 Funding	Share (%)	2010 Funding	$	%
State						
New South Wales	32.8%	$13,860,443	34.1%	$14,409,274	$548,831	4.0%
Victoria	22.8%	$ 9,646,246	25.6%	$10,815,960	$1,169,714	12.1%
Queensland	20.8%	$8,797,613	18.7%	$7,910,381	-$887,231	-10.1%
Western Australia	7.4%	$3,127,560	8.4%	$3,539,461	$411,900	13.2%
South Australia	8.9%	$3,754,095	6.7%	$2,814,551	-$939,544	-25.0%
Tasmania	3.4%	$1,447,335	2.1%	$ 882,416	-$564,919	-39.0%
Northern Territory	1.1%	$ 444,766	0.8%	$352,358	-$92,407	-20.8%
Australian Capital Territory	1.1%	$ 451,014	1.8%	$775,271	$324,257	71.9%
Multi-State	1.8%	$768,541	1.9%	$797,940	$29,399	3.8%
Institutional Grouping						
The Group of Eight (Go8)	18.3%	$7,738,809	19.7%	$8,337,896	$599,087	7.7%
The Australian Technology Network (ATN)	16.9%	$7,146,924	16.6%	$7,037,741	-$109,183	-1.5%
Universities formed in the 1960/1970s (1960s-70s)	32.4%	$13,708,780	32.4%	$13,684,528	-$24,252	-0.2%
Universities formed after 1988 (Post-1988)	32.4%	$13,703,100	31.3%	$13,237,448	-$465,651	-3.4%
Australia	100%	**$42,297,613**	100%	**$42,297,613**	-	-

Note: The funding outcome reported under the "State Low SES" estimate is note directly comparable with that in Table 8 as it includes a weighting for the individual measure of SES status.

Conclusions

Area measures of disadvantage are controversial due to concerns about their relevance for a subset of students, namely those low SES students who live in medium or high SES areas and vice versa.

Beyond this controversy, this paper highlights another disadvantage of area measures which pertains to their relevance in the context of geographical constraints on the draw-pool of Australian higher education providers. This disadvantages low SES students in relatively high-income states or territories, most obviously in the ACT where all postcodes are classified as medium or high SES. In this paper, we develop a new area measure using the individual state or territory as a reference point. This results in a relatively modest decline in the percentage of students classified as coming from low SES backgrounds, but has impacts across states and territories, particularly in Tasmania and South Australia (fewer low SES students) and the ACT (more low SES students).

The policy relevance of this argument is demonstrated in a comparison of this measure with a national postcode measure and the preferred variable used by DEEWR in its policy assessments, namely a measure based on collection district data. Typically, the postcode measures appear to assign low SES status to more students, compared to the finer collection district measure. However, the state postcode measure has a markedly different distribution from that of the national postcode and collection district measures across states and territories, and to some extent, institutional groupings. Data constraints prohibit the development of a state collection district measure, but that would no doubt reflect the pattern seen at the postcode level.

An assessment of the broader policy ramifications for area variable choice is demonstrated in a comparison of national collection district and state postcode measures in determining final definitions of DEEWR's policy variable for low SES status. While the overall outcome in terms of assignment of low SES status to students is similar under both measures, under the state postcode measure, status is determined by area SES status relative to the state or territory population, rather than the national population.

This result reflects the earlier finding on state postcodes – that they are better at determining outcomes for equity in areas where there are substantial geographical impediments to participation at inter-state institutions and therefore a local measure is more desirable.

References

Australian Bureau of Statistics (ABS) (2007) *Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2006*. Catalogue No. 2033.055.001.

Bradley, D. (2008) *Review of Higher Education: Final Report (The Bradley Review).* Department of Education, Employment and Workplace Relations, AGPS, Canberra.

Commonwealth of Australia (2010a) *Higher Education Support Act 2003,* Other Grants Guidelines (Education) 2010. Retrieved 15 May 2011: from <http://www.deewr.gov.au/HigherEducation/Programs/Equity/Documents/HEPPPGuidelines_2010.pdf>

Commonwealth of Australia (2010b) *Regional Participation: The Role of Socioeconomic Status and Access*. Retrieved: 15 May 2011 from <http://www.deewr.gov.au/HigherEducation/Programs/Equity/Pages/RegionalParticipation.aspx>

Department of Education, Employment and Workplace Relations (DEEWR) (2010) *Higher Education Participation and Partnerships Program.* Retrieved: 15 May 2011 from <http://www.deewr.gov.au/HigherEducation/Programs/Equity/Pages/HEPPProgram.aspx>

Hoxby, C. (2009) The Changing Selectivity of American Colleges. *Journal of Economic Perspectives,* 23 (4) pp 95–118.

Phillimore, J. and Koshy, P. (2010) Meeting the Rudd Government's equity targets for universities: three scenarios. *People and Place,* 18 (1) pp 1–18.

Rothman, S. (2003) *Young People From Low-SES Families And Participation In Higher Education: Evidence From Five Australian Cohorts.* Australian Council for Educational Research, Adelaide.

U.S. Department of Education (2009) *National Center for Education Statistics, 2008 Integrated Postsecondary Education Data System.* Retrieved: from

Notes

1 Preliminary data for 2009 indicate that low SES students now account for around 17 per cent of the total domestic undergraduate headcount of 'Table A Providers', the 38 universities who constitute the target group for this policy. These institutions are listed in Table 4 of this paper.

2 The funding formula is described in Section 1.60 ("Formula for distribution of Component A – Participation funds").

3 The analysis excludes non-population postcodes, such as those attached to GPO box addresses.

4 This is for instructive purposes only. DEEWR has released preliminary measures of 'B' in the allocation formula, or the number of students receiving one or multiple Commonwealth income support payments. Although only one-third of this number is included in the allocation formula, it would serve to reduce the discrepancy between allocations using different measures of the area variable.

5 The initial determination uses first semester 2009 enrolment data to calculate low SES load, as opposed to the 2008 final data reported in this paper. The 2009 data had not been released at the time of writing.