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ATTACHMENT 1

INDEPENDENT STUDY OF THE HIGHER EDUCATION REVIEW: STAGE 2 REPORT

**Volume 1 – The Current
Situation in Australian Higher
Education**

June 2003

EXECUTIVE SUMMARY

The Ministerial Statement, *Our Universities Backing Australia's Future*, was released with the Federal Budget on 13 May, 2003. This independent study has been commissioned to analyse the Commonwealth's decisions with emphasis on issues in areas of particular concern to State and Territory Governments. The Report is provided in two volumes. This Volume (Volume 1) analyses the current situation in Australian Higher Education. Volume 2 then analyses the decisions announced in *Backing Australia's Future*.

Participation in higher education

National higher education participation rates rose significantly between 1989 and 1993 as Commonwealth funded places grew relatively faster than the population. Since 1993, however, the participation rate of the population aged 15 and over has stabilized nationally, though it has declined in some States and Territories (the ACT, Victoria, Western Australia, South Australia and the Northern Territory).

The general pattern of leveling or decline in participation rates does not reflect reduced demand from students, but rather constraints on the number of places available. Despite substantial over-enrolment by universities between 1996 and 2000, the number of fully subsidised Commonwealth places actually declined over this time period (-0.6%).

Over the longer time frame of 1995 and 2001, the number of domestic students commencing higher education courses rose by 8.6% for Australia as a whole, but declined in the ACT and South Australia and increased significantly more in Queensland (27%). The differential in the trend bears some broad relationship to the patterns of demographic change in Australia, with participation rates across the larger States being reasonably consistent. Outside of the larger States, age participation rates are generally lower in Tasmania and lower still in the Northern Territory, but are much higher in the ACT.

A relatively high proportion of Australians has tertiary level qualifications compared with the average for OECD countries. This is true for both type A (higher education) qualifications and type B (VET equivalent) qualifications. While Australia ranks in the top 10 OECD countries for participation in higher education, it went backwards relative to other OECD countries over the period 1995 to 2000, reflecting the contraction in new domestic enrolments in Australian higher education.

Unmet demand for university places has continued to grow into 2003, with the realistic estimate of the number of unsuccessful eligible applicants falling between 18,700 and 25,700. Queensland, NSW/ACT and Victoria have the highest number of unsuccessful applicants. Undergraduate over-enrolment peaked at 10.2% in 2002, representing 37,998 EFTSU. Over-enrolment was above the national average in New South Wales and Queensland.

The Australian Bureau of Statistics projects that, over the next 20 years, the number of 15-19 year olds will fall nationally and in New South Wales, Victoria, South Australia, Tasmania and the ACT, but will rise significantly in Queensland and Western Australia

and to a lesser extent in the Northern Territory. Most of the reduction, however, will occur after 2011. An additional 820 growth places a year would be required over the next decade to maintain current age participation rates to 2011, after which student numbers could fall without reducing age participation rates.

The difference between States and Territories in participation and demographic outlook focus attention on the issue of the geographic distribution of higher education opportunities. This is a contentious issue with differing views about the most appropriate approach to determining the distribution of Commonwealth subsidised places. The most robust single measure of participation that has been used to inform Commonwealth decisions is the age participation rate, which measures the proportion of the population at each age that is enrolled in higher education.

An alternative measure, used by the OECD and the UK government, is the “net entry rate”. It estimates the probability of a person entering a subsidised place in an undergraduate award at some point in their lifetime. It takes into account the rate at which people of all ages enter higher education for the first time. In 2001, the net entry rate measure indicates that people in Victoria, South Australia and the ACT were substantially more likely to enter higher education over their lifetimes than the national average. People in New South Wales, Western Australia and the Northern Territory were substantially less likely to enter higher education than the national average. If New South Wales and the ACT are considered together the net entry rate is closer to the average.

A key issue raised in submissions to the *Crossroads* review concerned the perceived need for a national target for higher education and/or tertiary education participation. The Commonwealth has not identified such a target. In its submission to the *Crossroads* review, New South Wales proposed that 60% of Australians should have a tertiary education qualification by 2010. Our analysis indicates that it is unlikely that this target could be achieved by 2010 unless there is restoration of growth in higher education and a sharp increase in the completion of VET sector qualifications.

Resources for Higher Education

Between 1995 and 2001, student contributions to higher education funding increased significantly while Commonwealth funding fell by almost 10% in real terms. The share of total university revenue contributed by students through HECS and fees rose from 23.6% in 1995 to 37.2% in 2001. The share of total university revenue contributed by the Commonwealth fell from 57.2% in 1995 to 43.8% in 2001.

Share of total revenue derived from fees and charges (excluding HECS) varies considerably across States and Territories, ranging from less than 10% in the ACT to more than 20% in New South Wales and Victoria.

While Commonwealth funding per actual EFTSU (including over-enrolment) rose slightly between 1996 and 2001, total university revenue per total EFTSU declined by 6.5% in real terms between 1995 and 2001. Student load grew faster than income over this time period.

The decline in funds per student has also been exacerbated by the current indexation system for university operating grants introduced in 1995 which produced cost adjustments similar to, but slightly lower than, changes in the CPI between 1995 and

2000. The system replaced the previous arrangements under which university grants were adjusted for actual movements in salary and non-salary costs.

The new index moved by 10.9% between 1995 and 2001 compared with movement of 25.9% in average weekly earnings, thus providing a source of continuing and compounding financial pressure on the higher education sector.

The funding picture in higher education contrasts starkly with the pattern in the schools sector, especially non-Government schools. While Commonwealth funding per student fell in universities and the VET sector (in nominal terms) between 1996 and 2000, it rose significantly in non-government schools.

Along with the majority of OECD countries, Australia increased both its total expenditure and private expenditure on tertiary education between 1995 and 1999. However, only two countries (Australia and New Zealand) reduced direct public expenditure over this period. The OECD noted that this is an anomalous result, as “increasing private spending on tertiary education tends to complement, rather than replace, public investment”.

Australia’s share of tertiary education expenditure from private sources rose sharply from 27.7% to 46.5%, ranking it the fourth highest OECD country after Korea, Japan and the United States.

The resource profiles of Australian universities vary widely, with some universities depending on the Commonwealth for up to 57% of their income and HECS for up to 30% of their income. Reliance on overseas students fees ranges from 3% of total revenue to 35% of total revenue. As a group, regional universities are relatively more exposed to Commonwealth policy decisions because of their greater reliance on Commonwealth funding and HECS.

Nursing and Teaching

The nursing and teaching professions have historically experienced periodic highs and lows in workforce demand. During the 1990s there were periods of over-supply of both teachers and nurses, leading to reductions in student demand and subsequently the number of places offered by universities.

The over-supply situation has now been reversed with shortages of nurses and teachers creating real difficulties within the State health and schools systems. For nurses, shortages are particularly acute in rural and regional areas, aged care and mental health. For teachers, the areas of focused concern include rural and regional schools, secondary Mathematics, Science and Information Technology. The improvement in job prospects has led to increased student demand, but universities have not responded fully to this demand for a range of reasons. One key factor quoted by the peak bodies representing Deans of Nursing and Education is the perceived inadequate \$ per EFTSU funding rate for nurse and teacher education. They argue that the high costs associated with clinical practice and school practicums are not sufficiently recognised in the funding model.

In recognition of the current and projected imbalances in demand and supply, the Commonwealth Government has recently completed a National Review of Nurse Education and is currently conducting a Review of Teaching and Teacher Education. Both Reviews have highlighted the complexity of the supply and demand dynamic for

these professions and the evidence suggests that the drivers of both supply and demand differ considerably across States and Territories.

While the provision of additional higher education places is a key driver of supply, it only provides part of the answer. Other key issues include: the high attrition in the nursing workforce, particularly for new graduates; the structure of the nursing workforce in terms of different skill levels (which differs significantly across States and Territories) and the articulation between skill levels; and remuneration levels and working conditions for both nurses and teachers. While acknowledging the complexity of the issue, the National Review of Nurse Education also recommended, as an initial step, an additional minimum of 400 EFTSU for undergraduate nursing commencements for each of 2003 and 2004.

Research evidence suggests that Education and Health students are more financially vulnerable than students in many other fields of study such as Business, Engineering/Surveying and Law: they are more likely to defer HECS, take out loans (on top of HECS debts) and have dependent children.

A key conclusion that can be drawn from the analysis of issues and research evidence is that it is in the national interest for Commonwealth and State Governments and other key stakeholders to work collaboratively in workforce planning, regulatory frameworks and policy development. Without agreed national frameworks and long-term strategies for managing the supply of nurses and teachers, there is a growing risk of inappropriate cost-shifting across levels of government and inefficiencies in resource deployment within both Commonwealth and State jurisdictions.

Access and Equity

The key factors determining the capacity of Australians to access higher education are the overall size of the higher education sector relative to the Australian population, and the distribution of places across States and Territories (as discussed in Section 3.4).

A secondary, though significant, issue relates to the impact of Government policy on access and outcomes for disadvantaged Australians. While there has been a move from an elite to a mass system of higher education, the current evidence suggests that the share of university enrolments for disadvantaged Australians has not improved greatly over the last decade.

Despite Australian HECS fees being relatively high by international standards, Australian students in general have not been deterred from entering higher education, nor have disadvantaged groups shown a substantial decline in participation since the introduction of HECS, at least as far as we can tell given deficiencies in measurement methodologies.

Research evidence suggests, however, that financial pressures are having an increasing impact on student behaviours and study experiences. The rate of HECS deferral, for example, has climbed steadily since the introduction of increased differential HECS rates in 1997, reaching an all time high of 79% in 2001. This reversed the trend that was evident prior to 1997 and suggests that fee levels may have reached a point of considerable sensitivity in terms of students' capacity to pay up front.

More students are now working part-time to cover expenses, and the average hours worked has increased. Longer working hours are strongly linked to increased drop out rates.

Not surprisingly, disadvantaged students are more sensitive to financial pressures. They are more likely to: defer their HECS fees; resort to personal loans (on top of HECS debts); study part-time when they would prefer to study full-time if finances permitted; and have a restricted choice of course and university due to financial considerations. There is also international evidence suggesting that disadvantaged groups are more debt averse, even when loan repayments are income contingent.

There is now also some evidence in Australia to suggest that HECS debts may be influencing the willingness of graduates to take on home mortgages.

The Government did not address the issue of student income support in its Review, however, recent research has identified a number of perceived deficiencies in current schemes including the size of payments. In particular, the Government's changes to Abstudy in 2000 and the abolition of the Merit-based Equity Scholarships Scheme have been criticised by stakeholders for hindering higher education participation by Indigenous Australians.

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1 The Higher Education Review

The Commonwealth's Higher Education Review process was formally initiated in April 2002 with the release of the Ministerial Discussion Paper, *Higher Education at the Crossroads*. The Commonwealth Minister for Education, Science and Training, Dr Nelson, noted that it was "fourteen years after the last major reforms to higher education with amalgamation of Colleges of Advanced Education with universities and the introduction of the Higher Education Contribution Scheme" and that it was "time to take stock of where we are, where we want to go and how we intend to get there."¹

The *Crossroads* Review was generally welcomed by the higher education sector in which there was mounting concern about issues such as the declining share of Commonwealth funding, real reductions in Commonwealth funding for some institutions and rapidly growing student-staff ratios.

The extent of concern and spread of issues was evident in the 355 submissions in response to the initial Crossroads discussion paper and the 373 submissions in response to the subsequent six more specific issues papers. The Commonwealth Review team also held a series of forums in all capital cities, attended by a total of 687 participants.

The Commonwealth's consultation process concluded in late October 2002. The Commonwealth's decisions were announced in the Ministerial Statement, *Our Universities Backing Australia's Future*, released with the Federal Budget on 13 May, 2003.

¹ Nelson, B, Preface to *Higher Education at the Crossroads, An Overview Paper*, Canberra, April 2002

2 Background to the Independent Study

The Higher Education Review was discussed by Commonwealth and State Ministers at the 13th MCEETYA Meeting held in July 2002 in Auckland. The record of that meeting noted in part that:

MCEETYA Ministers with responsibility for Higher Education will meet in Ballarat in October 2002 to seek agreement on any changes to Australia's higher education system and provide an opportunity for the Commonwealth Minister to inform States/Territories of the outcomes of the Higher Education Review, including the results of a rural/regional impact study.

At the Ballarat meeting, State/Territory Ministers were concerned that, despite the extensive process of consultation and the advanced stage of the *Crossroads Review*, the Commonwealth Minister was not in a position to report on the Review's outcomes or to provide the results of a regional and rural impact study. The Commonwealth Minister argued that final views had not been determined and that it was therefore too early to debate specific findings or to analyse the impact of specific proposals on regional and rural areas. The Ministerial Council accordingly resolved to commission this independent study in the terms set out in Appendix A.

The study was conducted under the auspices of the Joint Committee on Higher Education (JCHE) but has been undertaken independently by Phillips Curran and KPA Consulting. The study comprised two stages. Stage 1, which was undertaken in late 2002 prior to the Commonwealth's announcement of the Review outcomes, analysed the impact of possible outcomes of the Review. A report of this Stage was provided to the JCHE in December 2002.

Stage 2 of the Independent Study is intended to analyse the Commonwealth's decisions as announced in *Our Universities: Backing Australia's Future*, with emphasis on issues in areas of particular concern to State and Territory Governments.

Specifically, this Stage 2 Report focuses on the following four areas identified in the project brief:

- The size of the higher education sector in terms of student and staff numbers and resources from different sources
- The allocation of publicly funded opportunities (both student places and resources) between States/Territories and between different types of institutions
- The supply of teachers and nurses
- The capacity of Australians to access higher education – key issues affecting access to higher education for different groups.

The Report is provided in two volumes. This Volume (Volume 1) analyses the current situation in Australian Higher Education across each of the four areas noted above. It includes analysis of recent trends and international comparisons and identifies key issues. Volume 2 then analyses the decisions announced in *Backing Australia's Future*.

3 Participation in higher education

The last comprehensive package of policy reform in higher education was set out in the 1987 Green Paper and 1988 White Paper on higher education. Those papers proceeded from a discussion about the growth required in Australia's higher education system to match comparable OECD countries and to respond to demographic, equity and economic imperatives. *Backing Australia's Future* does not start from this point, focussing rather on issues of sustainability, quality, equity and diversity. It does not seek to identify a desirable size for the higher education system, either through comparisons with other countries or through analysis of demographic trends in Australia.

There are several different dimensions to the issue of participation in higher education. The following analysis considers:

- Patterns of participation in Australian higher education
- International patterns of participation and attainment in higher education
- Student demand for higher education
- Demographic change
- Industry and economic change.

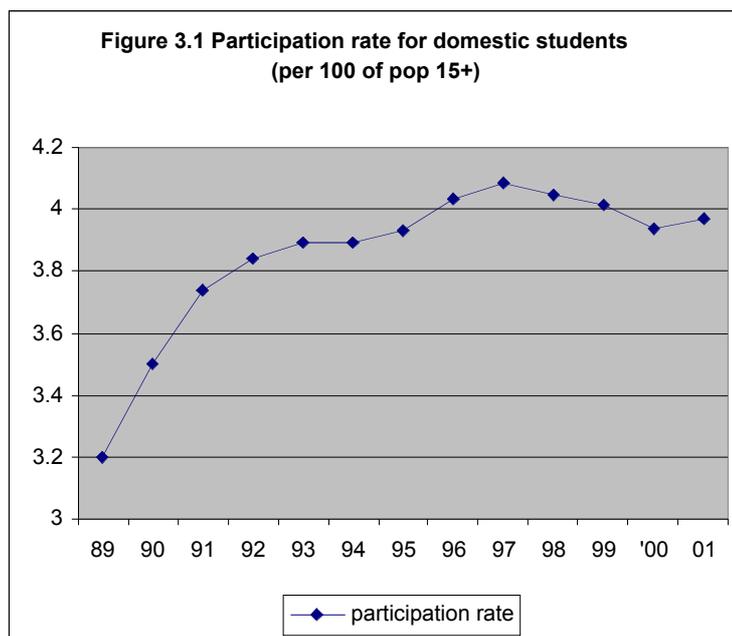
3.1 Patterns of participation in Australian higher education

The *Crossroads* Discussion Paper *Setting Firm Foundations: Financing Australian Higher Education* raised, but did not seek to answer, the question of "how big should the Australian higher education sector be?"² The question was not further addressed in *Backing Australia's Future*. The evidence suggests that recent Commonwealth Governments have held the view that our higher education system is about the right size.

National higher education participation rates rose significantly between 1989 and 1993 as Commonwealth funded places grew relatively faster than the population. Since 1993 the participation rate of the population aged 15 and over has stabilised and has remained between 3.9 and 4.1 students per 100 of the population³ (See Figure 3.1.).

² *Setting Firm Foundations*, p 23

³ We have not presented participation rates for 2002 throughout this section of the report, as comparable data for 2002 is not publicly available. In 2002, DEST changed its approach to reporting enrolments and now includes all students enrolled at any time during the year. In prior years, reported 'enrolments' were based on March 31 census date figures only.

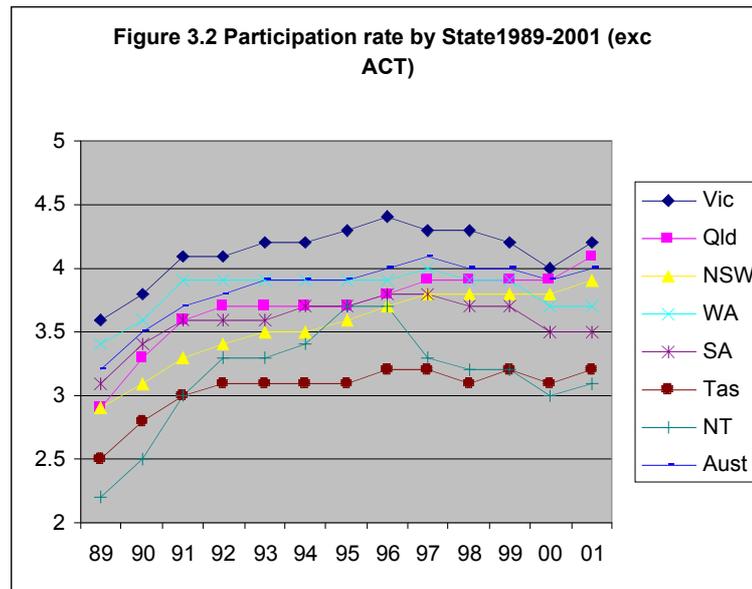


The leveling out of the national participation rate is reflected in the patterns for the States and Territories. In all States, participation rates rose sharply in the early 90s, with a slower rate of growth or a decline thereafter. In 5 of the 8 States and Territories (the ACT, Victoria, Western Australia, South Australia and the Northern Territory) higher education participation rates were lower in 2001 than in 1993. The most significant declines occurred between 1995 and 2000 (See Table 3.1 and Figure 3.2.).

Table 3.1 Participation rates for domestic students by State, 1989 - 2001

State	89	90	91	92	93	94	95	96	97	98	99	2000	2001
ACT	6.8	7.5	8.3	8.3	8.3	8	7.7	7.6	7.7	7.6	7.4	7.1	7.2
Vic	3.6	3.8	4.1	4.1	4.2	4.2	4.3	4.4	4.3	4.3	4.2	4	4.1
Qld	2.9	3.3	3.6	3.7	3.7	3.7	3.7	3.8	3.9	3.9	3.9	3.9	4.1
NSW	2.9	3.1	3.3	3.4	3.5	3.5	3.6	3.7	3.8	3.8	3.8	3.8	3.9
WA	3.4	3.6	3.9	3.9	3.9	3.9	3.9	3.9	4	3.9	3.9	3.7	3.7
SA	3.1	3.4	3.6	3.6	3.6	3.7	3.7	3.8	3.8	3.7	3.7	3.5	3.5
Tas	2.5	2.8	3	3.1	3.1	3.1	3.1	3.2	3.2	3.1	3.2	3.1	3.2
NT	2.2	2.5	3	3.3	3.3	3.4	3.7	3.7	3.3	3.2	3.2	3	3.1
Australia	3.2	3.5	3.7	3.8	3.9	3.9	3.9	4	4.1	4	4	3.9	4

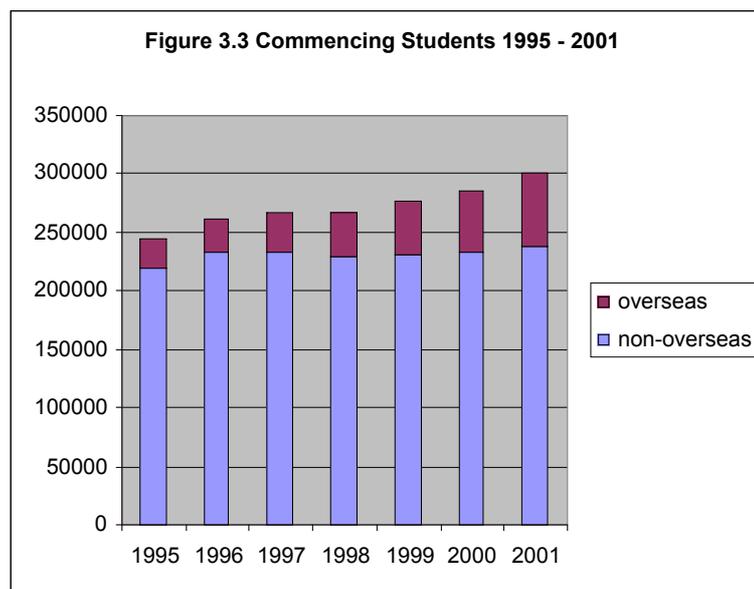
Source: Higher Education at the Crossroads: An Overview Paper (for 1989- 2000), DEST Student Statistics and ABS 3201.0



The general pattern of leveling or decline in participation rates does not reflect reduced demand from students, but rather constraints on the number of places available. In particular the number of ‘fully funded’ places was reduced between 1996 and 2000. Despite substantial over-enrolment by universities in this period, the number of domestic (non-overseas) students commencing higher education actually declined between 1996 and 2000 (-0.6%). That is, fewer Australian students started university in 2000 than in 1996. There was modest growth in total commencing student numbers over this period (9.3%), but that growth was entirely explained by the continuing rapid growth in overseas students (91.9%).

Commencing domestic student numbers fell in six of the eight States and Territories between 1996 and 2000. The largest proportional falls were in the ACT, the Northern Territory and South Australia where numbers fell by more than 10%. Only New South Wales and Queensland experienced gains in the number of domestic students commencing higher education over this period.

Over the slightly longer time frame of 1995 to 2001, non-overseas commencing numbers nationally rose by 8.6% while overseas student numbers rose by 146% (See Figure 3.3).



Within this national picture there was substantial variation between States. From 1995 to 2001 the numbers of domestic students commencing higher education fell by 10% in the ACT and 5% in South Australia, but rose by 8% in Western Australia, 9% in New South Wales and 27% in Queensland (See Table 3.2).

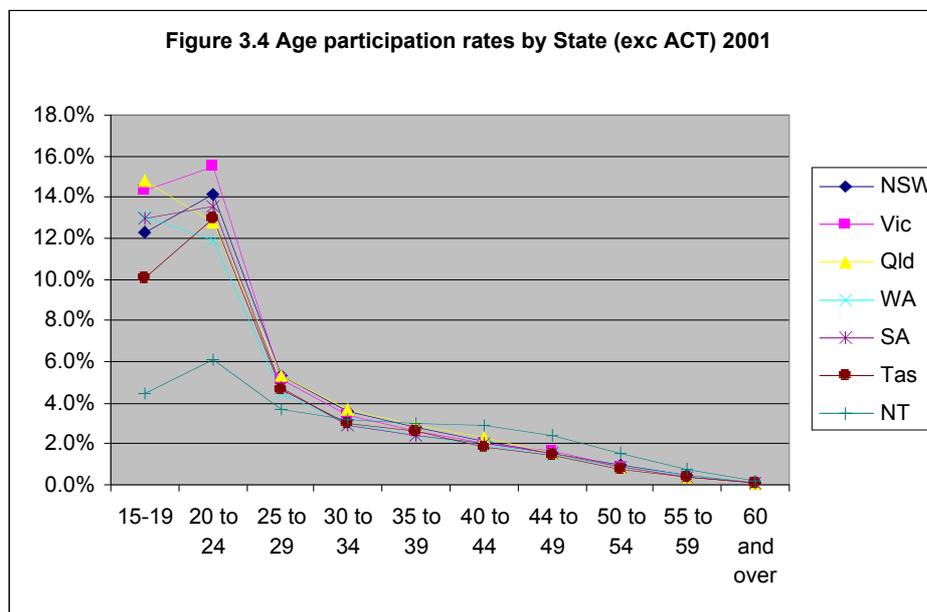
Table 3.2 Non-overseas commencing students 1995 and 2001

State	1995	2001	Change	
			No	%
New South Wales	71611	77884	6274	8.8
Victoria	58830	61192	2363	4
Queensland	37689	47703	10014	26.6
Western Australia	19381	21009	1628	8.4
South Australia	17065	16247	-818	-4.8
Tasmania	4623	4748	125	2.7
Northern Territory	2386	2427	41	1.7
Australian Capital Territory	7484	6749	-735	-9.8
Australia	219068	237960	18892	8.6

These differential rates of growth bear some broad relationship to the patterns of demographic change within Australia, as have previous allocations of funded places by the Commonwealth. As a consequence, in 2001 there was a measure of consistency in the higher education participation rates for each age group in the larger States. That is, in the larger States, people of the same age have roughly similar chances of being in higher education. Outside of the larger States, age participation rates are generally lower in Tasmania and lower still in the Northern Territory, but are much higher in the ACT (See Table 3.3 and Figure 3.4).

Age Group	State/Territory of Institution - ACU distributed									
	New South Wales	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory	Australian Capital Territory	Total	
15-19	12.3	14.3	14.8	13.0	13.0	10.1	4.4	20.0	13.4	
20 to 24	14.1	15.4	12.8	11.9	13.6	13.0	6.1	22.9	14.0	
25 to 29	5.3	5.2	5.4	4.4	4.8	4.6	3.6	8.6	5.2	
30 to 34	3.6	3.4	3.7	3.0	2.9	3.0	3.2	5.7	3.5	
35 to 39	2.8	2.6	2.9	2.4	2.5	2.6	3.0	4.5	2.7	
40 to 44	2.1	2.1	2.3	2.0	2.0	1.8	2.9	3.4	2.1	
44 to 49	1.6	1.6	1.6	1.5	1.6	1.4	2.5	2.4	1.6	
50 to 54	1.0	0.9	0.9	0.9	0.9	0.8	1.5	1.5	0.9	
55 to 59	0.5	0.4	0.4	0.5	0.4	0.4	0.8	0.9	0.4	
60 and over	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	
Total	3.9	4.1	4.1	3.7	3.5	3.2	3.1	7.2	4.0	

Source: DEST unpublished and ABS 3201.0



It should be noted that while there is broad consistency in age participation rates across the larger States, there are still significant differences. There are also significant differences in the demographic projections for each State and Territory. These issues are explored further in Section 3.4.

3.2 International patterns of higher education participation and attainment

A relatively high proportion of the Australian population has tertiary level qualifications compared with the average for all OECD countries. This is true for both of the categories of tertiary education programs defined by the OECD: type A, which are largely theory-based and designed to provide sufficient qualifications for entry to advanced research programs and professions with high skill requirements; and type B, which are typically shorter than type A and focus principally on practical, technical or

occupational skills for direct entry into the labour market. In Australian terms, type A programs are generally classified as higher education and type B programs as vocational education and training (VET).

In 2001 19% of the Australian population aged 25-64 held type A and advanced research qualifications and a further 10% held type B qualifications, compared with OECD means of 15% and 8% respectively. Australia ranked equal fifth in the OECD for type A qualifications after the United States, Norway, the Netherlands and Canada. Australia ranked equal tenth for type B qualifications and equal seventh for all tertiary qualifications (See Table 3.4).

Country	Tertiary type A and advanced research programs	Tertiary type B	All Tertiary
United States	28	9	37
Norway	26	3	29
Netherlands (2000)	21	3	24
Canada	20	21	41
Australia	19	10	29
Iceland	19	6	25
Japan	19	15	34
United Kingdom	18	8	26
Korea	17	7	24
Spain	17	7	24
Sweden	17	15	32
Switzerland	16	10	26
Finland	15	17	32
Hungary	14	neg	14
Ireland	14	22	36
New Zealand	14	15	29
Germany	13	10	23
Mexico	13	2	15
Belgium	12	15	27
France	12	11	23
Greece	12	5	17
Poland	12	inc in A	12
Czech Republic	11	inc in A	11
Luxembourg	11	7	18
Italy	10	inc in A	10
Slovak Republic	10	1	11
Turkey	9	inc in A	9
Denmark	8	19	27
Austria	7	7	14
Portugal	7	2	9
Country mean	15	8	23

Source: OECD Education at a Glance 2002

Relative to the OECD country mean, Australia produces a higher proportion of graduates from type A programs in health and welfare and a lower proportion in engineering, manufacturing and construction. The relatively high proportion in health and welfare is partly explained by the fact that nurse education is substantially conducted in universities in Australia.

The OECD calculates that net entry rates to tertiary type A programs are high in Australia, and the expected number of years that students will be enrolled is relatively high. That is, relative to most other OECD countries, more people in Australia enter higher education and they stay for longer.

The OECD reports that in 2000 almost 6 in 10 young people in Australia were likely to attend higher education at some time during their lifetimes, compared with the OECD mean of 45%⁴. In 2000 a 17 year old student in Australia could expect to receive 2.2 years of higher education during their lifetime compared with the OECD mean of 2.0 years (taking into account both participation rates and duration of studies). Tables 3.5 and 3.6 show that Australia has the 7th highest net entry rate to higher education and the 9th highest expected duration of higher education.

⁴ Note: These figures are all drawn from the OECD publication *Education at a Glance 2002*. We have calculated net entry rates for Australia based solely on non-overseas students commencing an undergraduate award course who are new to higher education. On this basis the net entry rate to higher education was 36% in 2001, compared to the figure of 59% reported by the OECD. We have not been able to reconcile the difference fully.

Country (excluding those for which data are not available)	Net entry rates to tertiary type A programs
Finland	71
New Zealand	70
Sweden	67
Iceland	66
Hungary	65
Poland	62
Australia	59
Norway	59
Netherlands (2000)	51
Spain	48
United Kingdom	46
Korea	45
Italy	43
United States	43
Japan	39
France	37
Slovak Republic	37
Belgium	36
Austria	33
Ireland	31
Germany	30
Denmark	29
Switzerland	29
Mexico	26
Czech Republic	25
Turkey	21
Country mean	45

Source: OECD Education at a Glance 2002

Table 3.6 Expected years in higher education - OECD (2000)	
Country (excluding those for which data are not available)	Expected years in tertiary type A programs
Finland	3.6
Norway	2.9
Sweden	2.8
Poland	2.6
Spain	2.6
United States	2.6
Netherlands (2000)	2.4
New Zealand	2.3
Australia	2.2
Italy	2.2
Korea	2.2
Iceland	2.1
Austria	2
Canada	2
Greece	1.9
Hungary	1.9
France	1.8
Germany	1.7
Portugal	1.7
United Kingdom	1.7
Denmark	1.4
Belgium	1.3
Slovak Republic	1.3
Czech Republic	1.2
Switzerland	1.2
Mexico	1
Turkey	0.6
Country mean	2

Source: OECD Education at a Glance 2002

While Australia ranks in the top ten OECD countries for participation in higher education, it went backward relative to other OECD countries over the period 1995 to 2000. The total enrolment in tertiary education in Australia rose over that period, but the proportional growth was one of the smallest in the OECD, reflecting the contraction in new domestic enrolments in higher education noted in Section 3.1. On the latest OECD figures, total tertiary enrolments rose by only 8% in this country from 1995 to 2000 compared with the OECD country mean of 24%. If changes in the size of the relevant age cohort are taken into account, the growth attributable to change in enrolment rates was only 6%, the second lowest in the OECD and less than a quarter of the average growth of 27% (See Table 3.7).

Country (excluding those for which data are not available)	Change in enrolment (1995=100)		
	Total tertiary education	Attributable to	
		population	enrolment
Poland	208	119	173
Hungary	180	110	164
Korea	148	87	161
Greece	143	96	151
Czech Republic	150	102	147
Austria	109	69	144
Iceland	133	101	131
Spain	120	93	129
Sweden	122	95	129
Portugal	124	98	127
Denmark	115	95	121
Mexico	128	106	121
Belgium	111	94	117
Finland	116	100	116
Ireland	125	109	116
United Kingdom	112	97	115
Norway	105	94	112
France	98	91	107
Germany	95	89	107
Australia	108	102	106
Turkey	86	110	79
Country mean	124	98	127

Source: OECD Education at a Glance 2002

The latest OECD indicators show that only two countries in the OECD, Australia and New Zealand, reduced direct public expenditure for tertiary educational institutions between 1995 and 1999. Patterns in international investment in higher education are discussed in Section 4.3.

3.3 Current student demand

3.3.1 Unmet demand

Student demand consistently exceeds the supply of higher education places, although the extent of unmet demand varies from year to year.

The AVCC Survey of Applicants for Undergraduate Higher Education Courses reports on State admission centre applicants who, as a minimum, specified a university undergraduate course as their first or second preference⁵. It should be noted that the

⁵ For the purposes of this survey, the Australian Capital Territory and New South Wales are considered as a single data region. The “eligibility” of Year 12 applicants is defined as those Year 12 applicants obtaining a

“unmet demand” measures offered by this survey exclude higher education courses not processed by the State Admissions Centres.

Table 3.8 is reproduced from the AVCC’s report of the survey for 2003.

State	Total eligible applicants				Eligible applicants not receiving offers			
	2002 (No.)	2003 (No.)	Change (No.)	Change (%)	2002 (No.)	2003 (No.)	Change (No.)	Change (%)
New South Wales/ACT	69336	71467	2131	3.1	15156	17670	2514	16.6
Victoria	59785	61649	1864	3.1	21632	23531	1899	8.8
Queensland	54645	55350	705	1.3	11956	14762	2806	23.5
South Australia	15359	15577	218	1.4	1930	2818	888	46.0
Western Australia	17139	18746	1607	9.4	2436	3366	930	38.2
Tasmania	6464	6638	174	2.7	815	971	156	19.1
Total	222728	229427	6699	3.0	53925	63118	9193	17.0

In 2003, there were 229,427 eligible applicants for Australian university entry, up by 3.0% from the prior year. Without applying discount factors to adjust the numbers to the estimated genuine level of applicants who were unable to secure a place, there were 63,118 unsuccessful eligible applicants recorded in 2003, 17% more than 2002. Over twenty-seven per cent of Australian eligible applicants were unsuccessful in 2003. The largest group of total eligible applicants not receiving an offer was reported in Victoria (37% of the Australian total). This was followed by NSW/ACT (28%), Queensland (23%), Western Australia (5%), South Australia (4%) and Tasmania (2%).

In ratio terms, for every 100 eligible applicants nationally, over 27 did not receive an offer in 2003, compared with 24 in 2002. The 2003 ratio ranged from 14.6 in Tasmania to 38.2 in Victoria (See Table 3.9).

sufficiently high score in the final year examination/assessment to qualify for admission to any university in their Home State. All non-Year 12 applicants are considered “eligible”.

Table 3.9 Unmet demand per 100 eligible applicants, 2002 and 2003 (Based on gross numbers)		
State	2002	2003
New South Wales/ACT	21.9	24.7
Victoria	36.2	38.2
Queensland	21.9	26.7
South Australia	12.6	18.1
Western Australia	14.2	18.0
Tasmania	12.6	14.6
Total	24.2	27.5

Source: AVCC Survey of Applicants for Undergraduate Higher Education Courses, 2003

The analysis of the numbers presented above reflects the actual number of applications processed by each State Admissions Centre. It is widely accepted across the higher education sector, however, that these figures represent an inflated view of the genuine level of unmet demand. In determining realistic estimates of eligible applicants not able to obtain an undergraduate place, the AVCC discounts the total gross applicant figures, taking into account the following factors:

- Less qualified applicants
- Double counting of interstate eligible applicants
- The number of preferences expressed by applicants
- The rejection rate of offers by successful applicants.

With respect to the last factor, the survey methodology applies differential State specific rejection rates, as advised by State Admissions Centres. The discounted figures offer the only realistic measure of unmet demand.

Using the State specific rejection rates, the realistic number of unsuccessful applicants in Australia is estimated to be in the range of 18,700 to 25,700 in 2003, compared to 14,000 to 20,000 in 2002. Queensland, NSW/ACT and Victoria have the highest number of unsuccessful applicants.

The State specific discounted survey data is shown in Table 3.10.

State	Rejection Rate of Offers %			Unsuccessful Applicants Range (after discounting)		
New South Wales/ACT	19	-	31	5900	-	7900
Victoria	7	-	43	3300	-	7300
Queensland	15	-	10	6800	-	7100
South Australia	9	-	8	1300	-	1400
Western Australia	20	-	25	1300	-	1600
Tasmania	15	-	25	200	-	300
Total	14	-	24	18700	-	25700

It is important to note that the unmet demand figures take no account of relative entry standards applying in each State or differences in the tertiary entrance procedures in each State. Therefore the unmet demand figures, on their own, do not provide an indication of the “fairness” of the distribution of higher education opportunities between States.

3.3.2 Over-enrolment

Unmet demand would have been substantially higher if universities had enrolled only the target numbers of students for which they receive full Commonwealth subsidies.

In 2002, universities were 8.3% or 32,732 EFTSU over-enrolled above the number of non-research places for which they were ‘fully funded’ by the Commonwealth (their target load). They were 10.2% over-enrolled against Commonwealth funding targets for undergraduate students, representing an additional 37,998 undergraduate EFTSU across the system as a whole⁶. This is the highest rate of over-enrolment in the past five years, with the average for the prior four years being 7.1%.

⁶ These numbers for undergraduates exclude the Australian Maritime College and Batchelor Institute of Indigenous Tertiary Education.

State	Fully subsidised EFTSU	Actual EFTSU	Difference	
			EFTSU	%
New South Wales	111,625	128,391	16,766	15.0
Victoria	92,450	99,022	6,572	7.1
Queensland	74,400	82,286	7,886	10.6
Western Australia	37,050	40,249	3,199	8.6
South Australia	28,770	30,766	1,996	6.9
Tasmania	8,265	8,603	338	4.1
Northern Territory	2,275	2,466	191	8.4
Australian Capital Territory	10,890	11,228	338	3.1
Multi-State	5,775	6,487	712	12.3
Australia	371,500	409,498	37,998	10.2

Excludes AMC and Bachelor

Source: Higher Education Funding Report for the 2003 – 2005 Triennium

3.4 Demographic change

3.4.1 Population growth and ageing

The Australian population is projected to grow from 19.4 million in 2001 to 22.9 million in 2021⁷. Within this overall growth there will be an ageing of the population. Notably, the 15-19 year old age cohort will fall by between 18,000 and 24,000 and will reduce from 7% to 5.8% of the total population.

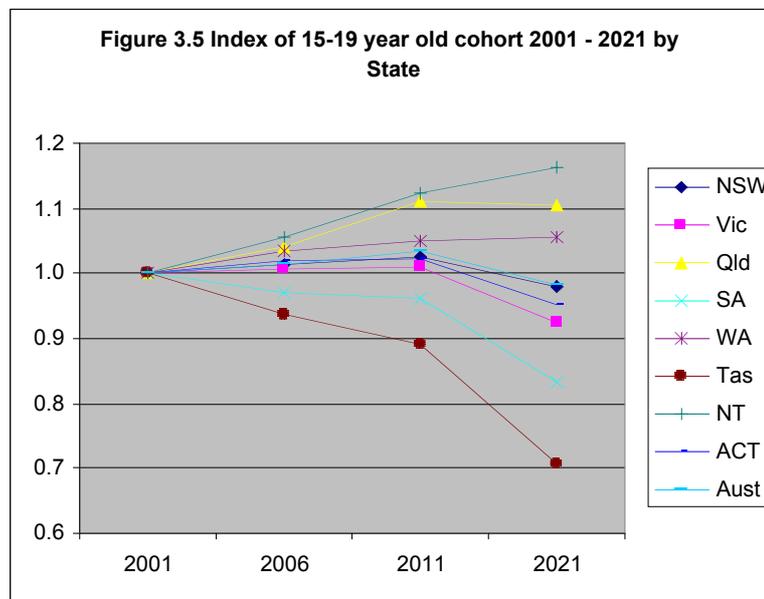
As pointed out in the *Crossroads Overview Paper*, the projected demographic patterns differ from State to State. For example, between 2001 and 2021 the number of 15-19 year olds will fall nationally and in New South Wales, Victoria, South Australia, Tasmania and the ACT, but will rise significantly in Queensland and Western Australia and to a lesser extent in the Northern Territory (See Table 3.12 and Figure 3.5).

⁷ Source: ABS Cat No 3222.0, series 2

Table 3.12 15-19 year old cohort 2001 - 2021 ('000)

State	2001	2006	2011	2021	change 2001 - 2021	change 2001 - 2021 (%)
NSW	448.1	453.7	459.1	438.9	-9.2	-2.1
Vic	330.4	332.5	333.7	305.6	-24.8	-7.5
Qld	265.6	276.3	295.1	293.9	28.3	10.6
SA	103.1	100.1	99.0	85.8	-17.3	-16.8
WA	140.9	145.7	147.8	148.7	7.8	5.6
Tas	34.5	32.3	30.7	24.4	-10.1	-29.2
NT	14.9	15.8	16.8	17.4	2.5	16.4
ACT	24.3	24.7	24.8	23.1	-1.2	-4.8
Aust	1361.8	1381.1	1407.0	1337.8	-24.0	-1.8

Source: (2001) ABS 3201.0, (2006-2021) ABS 3222.0



Note that the timescale is different before and after 2011 in this figure

Significantly for higher education planning purposes, the main reductions in the 15-19 year old cohort are projected to occur after 2011. Furthermore, changes in the 20-34 year old cohorts are less significant and more delayed than those for the younger group. As a consequence, the impact on higher education of the ageing of the population nationally is not strongly felt until after 2011.

These effects can be analysed by calculating the current higher education participation rates for each age cohort and applying those rates to the projected cohorts in future years⁸. This approach allows us to answer the question: “how many extra (or fewer) higher education places would be needed to maintain levels of participation for each age group?”

Table 3.13 summarises the answers to this question for 2006, 2011 and 2021. In 2006, there would need to be almost 16,000 more higher education students than in 2001 (between 11,000 and 12,000 additional places (EFTSU)) to maintain the age participation rates applying in 2001. A further 13,000 students would be needed by 2011. This would require around 820 growth places each year over the decade⁹. Between 2011 and 2021 student numbers could fall without reducing age participation rates, because of the reductions in the younger age groups. All figures relate to domestic (non-overseas) students only.

	2001 - 2006	2006 - 2011	2011 - 2021	total 2001 - 2021
additional students required to maintain current age participation rates	15791	13034	-1193	27631
additional places required to maintain current age participation rates	11674	10148	-929	20893

These projections provide an estimate of the change in student places required to maintain the status quo nationally in terms of opportunities to participate in higher education. They do not provide for any improvement in age participation rates either nationally or in individual States.

3.4.2 Distribution of places between States/Territories

Previous sections have identified differences between States and Territories in:

- Total and age participation rates (Section 3.1)
- Unmet demand and over-enrolment (Section 3.3)
- Projected growth in the 15-19 year age group (Section 3.4.1).

Table 3.14 summarises some of the key parameters of participation and demographic change by State.

⁸ For the purposes of this report we have calculated age participation rates for 7 age groups: 15-19, 20-24, 25-29, 30-39, 40-49, 50-59, 60 and over.

⁹ Note that this figure is consistent with the estimate of 780 growth places per year until 2010 given in *Higher Education at the Crossroads, An Overview Paper*, p13.

Table 3.14 Key parameters of participation and demographic change by State

State	Participation 2001 (per 100)			Growth in domestic commencing students 1995-2001 %	Undergraduate overenrolment 2002		2003 Unmet demand (discounted) % of eligible applicants	Change in 15-19 pop 2001 - 2021	
	15-19	20-24	15+		No	%		000s	%
NSW	12.3	14.1	3.9	8.8	16766	15.0		-9.2	-2.1
Vic	14.3	15.5	4.1	4.0	6572	7.1	5.4 - 11.8	-24.8	-7.5
Qld	14.8	12.8	4.1	26.6	7886	10.6	12.3 - 12.8	28.3	10.6
WA	13	11.9	3.7	8.4	3199	8.6	6.9 - 8.5	7.8	5.6
SA	13	13.6	3.5	-4.8	1996	6.9	8.3 - 9.0	-17.3	-16.8
Tas	10.1	13	3.2	2.7	338	4.1	3.0 - 4.5	-10.1	-29.2
NT	4.4	6.1	3.1	1.7	191	8.4		2.5	16.4
ACT	20	22.9	7.2	-9.8	338	3.1		-1.2	-4.8
<i>NSW and ACT</i>							8.3 - 11.1		
Australia	13.4	14	4	8.6	37998	10.2		-24	-1.8

In overview:

- Participation rates are highest in the eastern States
- There has been substantial growth in commencing student numbers in New South Wales and Western Australia and major growth in Queensland, but very minor growth or reduction in commencing students in other States and Territories
- Over-enrolment and unmet demand are highest in the States with the highest participation rates
- The long-term outlook is for significant growth in the 15 – 19 age group in the Northern Territory, Queensland and Western Australia, with declines in every other State, especially South Australia and Tasmania.

The differences between States in participation and demographic outlook focus attention on the issue of the geographic distribution of higher education opportunities.

It is clear that people living in different parts of Australia have different levels of opportunity to attend a higher education institution. Importantly, there are options other than physical attendance, through distance education and on-line learning, that are more independent of geography, but the issue of the distribution of funded places between States and institutions remains a contentious one.

Minister Nelson tabled a motion at the Ministerial Council meeting in October 2002 suggesting that MCEETYA seek advice from AESOC on “a proposed model for the future distribution of university places between States and Territories taking into account demographic changes and differential rates of school completion”¹⁰.

The issue was last examined publicly by the Commonwealth in 1994. A Working Party of representatives from Higher Education Council and the Department of Employment, Education and Training noted the complex range of factors that could potentially be considered, including:

- Demographic shifts
- Retention to year 12
- Participation in TAFE
- Unmet demand

¹⁰ Commonwealth proposed resolution to NCEETYA, 17 October, 2002

- Occupational and industry structure
- Student mobility
- Regional economic development
- Best use of national resources.

The Working Party concluded:

... that the primary considerations in the allocation or redistribution of resources should relate to changes in demography and issues of equity of access. In the Working Party's view, therefore, the main criteria for allocation of resources for student places should be related to growth in the population in the feeder groups for higher education and participation rates relative to the national norm¹¹.

The Working Party went on to note that:

There are important factors which vary markedly between States and Territories such as retention to Year 12 which must be considered in the allocation of Commonwealth resources for higher education. The Working Party, therefore, does not believe that it would be appropriate to seek to achieve complete equalisation of access to higher education on a population share basis, at least in the short term, either between States or Territories or between regions within States.

The variations between States and Territories in Year 12 retention rates still exist. In 2001 the apparent Year 12 retention rates for males varied between 44.1% in the Northern Territory and 87.5% in the ACT. The range for females was between 57.9% in the Northern Territory and 91.2% in the ACT.

State	Males	Females
NSW	63.0	73.7
Vic	72.2	86.7
Qld	74.9	83.2
WA	60.4	72.5
SA	67.0	77.3
Tas	63.6	73.9
NT	44.1	57.9
ACT	87.5	91.2
Australia	68.1	79.1

Source ABS Australian Social Trends 2002

These differences mean, for example, that it would not be rational to attempt to bring the Northern Territory's higher education participation rate instantly to the national average, simply because there would not be sufficient qualified applicants.

¹¹ Report of the Joint DEET/HEC Working Party, *Resource Allocation in Higher Education*, August 1994, p29

For this type of reason the DEET/HEC Working Party formed the view that:

The resource allocation process will necessarily involve a large element of judgement and that the appropriate role for quantitative indicators is one of informing rather than substituting for judgement.

The approach set out by the Working Party in 1994 has generally been adopted by the Commonwealth since that time. That is, the Commonwealth has given primary consideration to demographic and participation indicators in its allocation of student places, but has not relied solely on these parameters.

This approach is inevitably contentious, partly because it involves judgements about unquantifiable factors and partly because there will be different views about the weightings that should be given to different quantitative indicators of participation and demographic change. There are also more technical, but nonetheless important, factors that complicate comparisons between States. For example States differ in the average age for completion of school, in the participation of students in the VET sector in the immediate post-compulsory years, and in the structure of their tertiary entrance procedures. Each one of these factors complicates the cross-State comparison of some key indicators of higher education participation.

The most robust single measure of participation that has been used to inform Commonwealth decisions is the age participation rate, which measures the proportion of the population at each age that is enrolled in higher education. The age participation rates in each State and Territory can be compared with the national averages. The impact of future demographic changes can be analysed by comparing the projected changes in the age composition of each State relative to the number of places available. Current age participation rates for each State and Territory were shown in Table 3.3 in Section 3.1.

One of the weaknesses of this measure for informing decisions about the allocation of places is that it compares and implicitly seeks to equalise participation rates at each year of age without regard for the fact that there are differences in the age profile of higher education students in each State. Students in Queensland and Western Australia on average finish school younger than in other States and so enter higher education at younger ages. A much higher proportion of students in the Northern Territory start university over the age of 25 than in other States. Age participation rates also count all students in higher education, not just those entering for the first time, so they capture students undertaking second and higher degrees and are affected by the average duration of enrolment.

A possible alternative measure is the “net entry rate” which is used by the OECD and is the basis for the current participation targets in the UK. It would estimate the chance that a person in each State and Territory would enter a funded place in an undergraduate award course at some point in their lifetime¹². It would take into account the rate at which people of all ages enter higher education for the first time in each State.

It would be necessary to accept that some substantial differences would exist for some time in net entry rates, at least between the Northern Territory and other States. There is

¹² A more detailed definition of “net entry rate” for this purpose is provided in Appendix B.

also a case for accepting a degree of variance between the other States, which could take into account indicators of demand or other factors considered relevant.

Table 3.16 shows an example of a net entry rate calculation for 2001, based on non-overseas students commencing an undergraduate award course for the first time¹³.

Table 3.16 Example of net entry rate analysis, 2001

	State									Total
	New South Wales	Victoria	Qld	Western Australia	South Australia	Tasmania	Northern Territory	Australian Capital Territory	NSW and ACT	
Net entry rate	34.12	39.91	36.80	33.55	38.67	34.69	22.12	39.45	34.42	36.46

Source: Phillips Curran

Table 3.16 shows that in 2001, people in Victoria, South Australia and the ACT were substantially more likely to enter higher education over their lifetimes than the national average. People in New South Wales, Western Australia and the Northern Territory were substantially less likely to enter higher education than the national average. If New South Wales and the ACT are considered together the net entry rate is closer to the average.

3.5 Industry and economic change

An important factor in determining the desired level of national participation and investment in higher education is the level of “return” that may flow from that investment.

Internationally, views on this issue have been strongly influenced by the emergence of the global knowledge-based economy. In Australia, the recent Innovation Summit noted:

We are in the midst of a revolution from which a new order is emerging. The solutions of past decades will not suffice in the new knowledge age. Intangible assets – our human and intellectual capacity – are outstripping traditional assets – land, labour and capital – as the drivers of growth. If we are to take the high road, a road of high growth based on the value of our intellectual capital, we need to stimulate, nurture and reward creativity and entrepreneurship.¹⁴

This analysis of industry and economic change, which has been strongly promoted by the OECD, emphasises that intangible capital, especially human capital, is rising in importance relative to other factors as a determinant of national competitiveness.

Investment in human capital is at the heart of strategies in OECD countries to promote economic prosperity, fuller employment, and social cohesion.

¹³ Note: This calculation includes domestic fee-paying undergraduates who should be excluded if the focus is solely on the distribution of funded places.

¹⁴ Innovation Summit Communique, quoted in *Backing Australia’s Ability*, Commonwealth of Australia, 2001

*Individuals, organisations and nations increasingly recognise that high levels of knowledge, skills and competence are essential to their future security and success.*¹⁵

In its most recent analysis, the OECD observes that improvement in human capital “seems to be a common factor behind growth in recent decades in all OECD countries”, including those that were already leaders in educational provision¹⁶.

This analysis implies not only that there are positive returns to investment in human capital, but also that countries that stand aside from the trend will find themselves decreasingly competitive in a global knowledge-based economy.

There are numerous examples of the recognition of these points in other countries. Of particular note are several recent public comments from the US Federal Reserve Chairman, Alan Greenspan, who argues that if:

*...we are to remain preeminent in transforming knowledge into economic value, the US system of higher education must remain the world's leader in generating scientific and technological breakthroughs and in preparing workers to meet the evolving demands for skilled labor.*¹⁷

Significantly, Greenspan goes on to argue that this imperative applies across education and training, not just in relation to formal degree programs. The argument applies equally to vocational education and training as to higher education and provides a case for increasing investment and participation levels across the tertiary education sector.

In this context, Australia's relative decline compared with other OECD countries in tertiary enrolments between 1995 and 2000 appears particularly stark, as does the decision to reduce public investment in tertiary education over this period.

The OECD has developed a measure of national investment in “knowledge”, defined essentially as the sum of expenditure on education, spending on software and expenditure on R&D¹⁸. On this combined measure Australian investment in knowledge as a per cent of GDP was 8.0% in 1995, 11th out of 13 countries for which the measure was calculated, and significantly below the average of 9.2%. While it could perhaps be argued that this reflects our resource-based industry structure, that argument provides no support for the trend decline in Australia's relative position on this type of measure that is evident from 1993 to at least 1998¹⁹.

A decline in public investment in tertiary education could perhaps be justified if there was evidence of reducing social rates of return, but this is not the case in Australia or in any other country. Tertiary graduates, including higher education graduates, remain in demand in the labour market, and despite concerns about possible credentialism, graduates still enjoy substantially higher rates of earnings than the general population (approximately 50% higher in 1999²⁰). Overall, the OECD reports that both the private

¹⁵ OECD, *Human Capital Investment: An International Comparison*, 1998, p7

¹⁶ OECD, *Education at a Glance 2002*, p136

¹⁷ Alan Greenspan, quoted in *Skills in the Knowledge Economy*, The Allen Consulting Group, 2001, p8

¹⁸ OECD, *Science, Technology and Industry Scoreboard 1999: Benchmarking Knowledge-based Economies*.

¹⁹ See for example Considine, M et al, *The Comparative Performance of Australia as a Knowledge Nation*, Report to the Chifley Research Centre, April 2001, p 9

²⁰ Source: *OECD, Education at a Glance 2002*, Table A13.1

and social internal rates of return to tertiary education are “generally well above the risk-free real interest rate”, that is, tertiary education represents a good investment for both individuals and society as a whole.

While these considerations do not lead to a specific “desired size” for Australia’s higher education system, they do support the views that substantial and sustained growth in participation and investment levels in tertiary education would be sound economic and social policy for the nation.

3.6 A national target for higher education and/or tertiary education participation?

Backing Australia’s Future does not propose any form of national target for participation in higher education or tertiary education. The *Crossroads* discussion papers did note that some submissions had suggested that such a target should be set. Specifically, *Setting Firm Foundations* notes that the AVCC has proposed that “by 2020 over 60 percent of Australians should be completing higher education over their lifetime”²¹. In its submission to the Review, New South Wales proposed a goal “that by 2010, 60 percent of Australians will have acquired a tertiary education qualification”²². New South Wales also noted the target announced by British Prime Minister Tony Blair in 1999 that at least 50% of young people should take part in higher education. More precisely, the UK target is for an “initial entry rate”²³ of 50% for the age group 18 to 30 by 2010.

The possible targets proposed by the AVCC and New South Wales are quite different from each other.

The AVCC does not define its proposed target in detail but has expressed it in terms of completion, rather than entry, participation or attainment, of higher education, rather than tertiary education. Presently, about 60 to 70 percent of students who commence higher education complete a program. If that survival rate continues to apply, the AVCC’s target of 60% of Australians completing higher education would require between 85 and 100 percent of Australians to commence a higher education program at some point during their lifetime.

The New South Wales goal relates to all tertiary education, not just higher education. The New South Wales submission proposes that 60% of Australians should have a tertiary education qualification by 2010 “compared with 49.5% currently”. In 2001 the ABS classified 47.2% of Australians aged 15 to 64 as having acquired non-school qualifications²⁴. This figure had increased from 40.8% in 1991. Over that decade, 1991

²¹ AVCC, *Forward from the Crossroads: pathways to effective and diverse Australian universities*, September 2002, p1

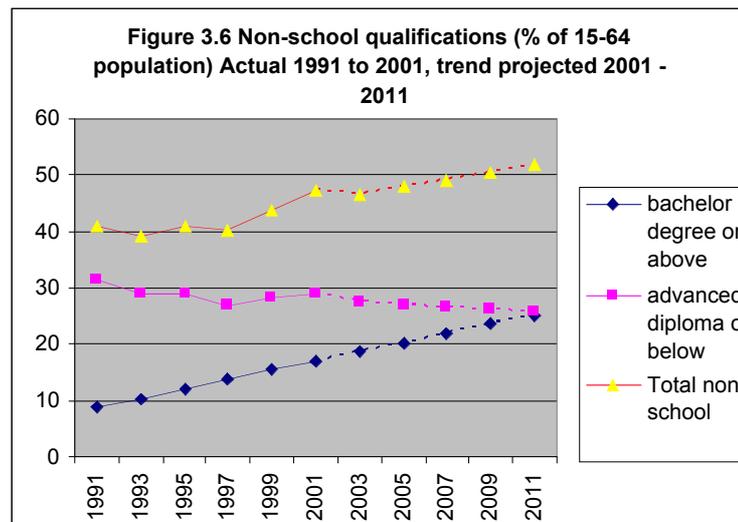
²² NSW Submission to the Higher Education Review, p5

²³ The initial entry rate measures the percentages of students entering higher education for the first time at each age between 18 and 30, expressed as a proportion of the total population for each of those ages. The percentages are then summed to give the total rate for the age group. This approach is analogous to the net entry rate concept used by the OECD.

²⁴ ABS Cat No 6227.0 May 2001

to 2001, the proportion of the 15-64 year old population with VET level qualifications (advanced diploma and below) actually declined from 31.3% to 29.1%. The increase in post-school qualifications is therefore explained by the growth at bachelor degree and above – from 9% of the age group in 1991 to 17% in 2001.

If these trends were to continue unchanged, the proportion of the 15-64 population with non-school qualifications would rise to around 52% by 2010, compared with the suggested target of 60%. The proportion of this population with higher education qualifications would rise to 25%, almost equal to the share with VET sector qualifications (26%) (See figure 3.6).



Source: ABS Cat No 6227.0 May 2001 (Our projections)

The projected growth shown in Figure 3.6 would mean that 34% of 25-34 year olds and 27% of those aged 35-44 would have attained higher education qualifications in 2011. This compares with the 2001 levels of 24% and 19% respectively. The corresponding figures for the United States in 2001 (highest in the OECD) are 30% and 28%.

However it is unlikely that that the trends will continue quite as projected in Figure 3.6. The reduction in higher education places between 1995 and 2000 is now flowing through into marginally reduced higher education completions. The number of non-overseas students completing a higher education award fell by 322 (0.2%) between 1998 and 2000²⁵. This will slow the rate of growth in the proportion of the population holding higher education qualifications.

This factor makes it more unlikely that a target of 60% with tertiary qualifications could be achieved by 2010 unless there is restoration of growth in higher education and a sharp increase in the completion of VET sector qualifications, from the current level of 29% of the 15-64 population to somewhere around 40%.

²⁵ Source: DEST *Higher Education Student Statistics*, 2001

4 Resources: What level of resources is there for higher education and who pays?

In this Section we examine a number of factors relating to the level of financial and human resources available for higher education:

- Patterns of resourcing in Australian higher education
- Patterns of resourcing across the three main education and training sectors
- International patterns of resourcing for higher education
- Differences in the resource profiles of regional and non-regional universities.

As part of this analysis we consider the relative contributions to the cost of higher education from different sources, including individuals and State and Commonwealth Governments.

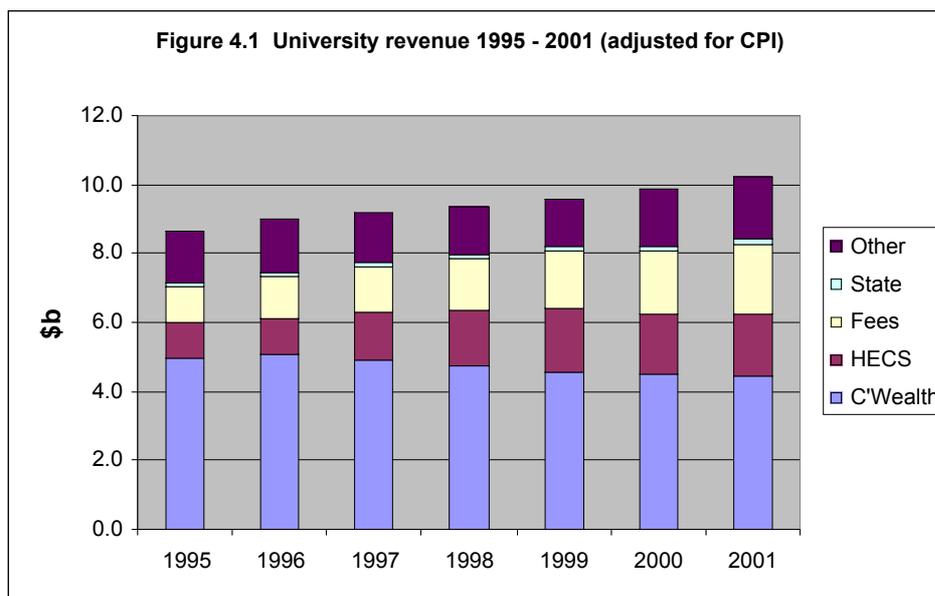
4.1 Patterns of resourcing in Australian higher education

4.1.1 Overall university revenue

Total funding available to Australian universities from all sources has risen in real terms, even in the period after 1995 when operating grants were reduced. Between 1995 and 2001 (the latest finance data available), total university revenue rose by 17.6% in real terms. However over this same period, Commonwealth funding to universities fell by almost 10% in real terms. The growth in total funding was almost entirely explained by increases in revenue from HECS and fees of 70% and 99% respectively. In other words, there was a substitution of funding from the student for funding from the taxpayer over this period. (See Table 4.1 and Figure 4.1).

Table 4.1 University revenue by source 1995 - 2001 (\$b) (adjusted by CPI to 2001 terms)

	1995	1996	1997	1998	1999	2000	2001	% change
C>Wealth	5.0	5.1	4.9	4.7	4.6	4.5	4.5	-9.9
HECS	1.0	1.0	1.3	1.6	1.8	1.8	1.8	70.5
Fees	1.0	1.2	1.4	1.5	1.7	1.8	2.0	99.3
State	0.1	0.1	0.1	0.1	0.1	0.2	0.2	49.0
Other	1.5	1.5	1.4	1.4	1.4	1.7	1.8	14.1
Total	8.7	9.0	9.2	9.4	9.6	9.9	10.2	17.6



Source: DEST Selected Higher Education Finance Statistics

The share of university revenues contributed by students has been rising since the mid 1980s with the introduction of fee-paying overseas students, followed by fee-paying domestic postgraduate students, the introduction of HECS in 1988 and fee-paying domestic undergraduates in 1996. The share of total university revenue contributed by students through HECS and fees rose from 23.6% in 1995 to 37.2% in 2001. Correspondingly the share contributed by the Commonwealth has been falling, although the first fall in real terms started in 1996. The share of total university revenue contributed by the Commonwealth fell from 57.2% in 1995 to 43.8% in 2001.

It is also worth noting that there is not a real equivalence between, for example, an additional dollar added to the Commonwealth funding per student place, and an additional dollar generated through overseas student fees. The former can contribute directly to net revenue and quality improvements, the latter requires extra marketing, recruiting and teaching effort and may add only marginally to net revenue.

The pattern of university revenues varies from State to State, although the main overall trends are apparent in each jurisdiction. Appendix C provides a breakdown of university revenues by source and State for 1995 and 2001.

One notable area of difference between States is the share of university revenue derived from fees and charges, which ranges from less than 10% in the ACT to more than 20% in New South Wales and Victoria. This difference is contributing to a growing revenue gap, with income from fees more than doubling between 1995 and 2001 in the five largest States, but growing by only 65% in the Northern Territory and by only 31% in the ACT.

From a State's perspective it is important to note that any analysis of university funding based on the DEST Higher Education Finance Statistics is likely to understate the real funding contributions made by the States and Territories.

The DEST statistics, compiled from universities' annual financial reports, principally capture operating revenue and expenses. As a consequence funding for capital

purposes, to which States make a substantial contribution, is often excluded or treated inconsistently from university to university. The statistics also do not capture resources in kind, such as donated land or State funded facilities like hospitals that are used extensively by universities. There is also likely to be a substantial State-sourced component in revenue reported for consultancy and contract research and in the general category of “other operating revenue”. The Discussion Paper, *Setting Firm Foundations*, provides a range of examples of State funding for higher education purposes at page 9.

For these reasons it is not possible to draw valid comparisons, as the Commonwealth Minister has sought to do, between the university revenue attributed to States in the DEST statistics and the revenue generated by the States through payroll taxes on universities.

4.1.2 Funding per student

Between 1995 and 2001, while total university funds increased by 17.6% in real terms, total student load increased by 25.8%. As a consequence funding per EFTSU fell by 6.5% in real terms. This calculation simply divides total university revenue from all sources by the total student load, including fee-paying and overseas students.

It is possible to strip away all the special purpose funding and funding from non-Commonwealth sources to focus on the core funding to universities through the base operating grant. This funding may then be related specifically to Australian students in funded places. The AVCC publishes a time series of this data for planned and actual EFTSU (including over-enrolment). The most recent figures, published in 2002, are shown in Table 4.2.

Table 4.2 Base Operating Grant per planned and actual EFTSU, 1996-2004 (Constant 2002 prices)		
Year	\$ per planned EFTSU	\$ per actual EFTSU
1996	11,884	11,298
1998	12,172	11,106
1999	12,117	10,943
2000	11,988	11,446
2001	12,432	11,722
2002	12,307	
2003	12,384	
2004	12,380	

Source: AVCC (price levels in this table are adjusted using the DEST cost adjustment factor)

This time series shows that base operating grants per actual funded EFTSU (including over-enrolment) have remained quite stable and have actually risen slightly in constant price terms between 1996 and 2001. (This funding includes the growing share of funds that the Commonwealth will recoup from students through HECS repayments.) This indicates that the real terms fall in dollars per student is attributable to factors other than changes in Commonwealth base operating grant for Australian students. These factors include the following:

- income from sources other than the Commonwealth and student fees has not increased as rapidly as student load
- average revenue from overseas student fees per student is lower than average Commonwealth funding per Australian student (so the increasing proportion of overseas students tends to lower the overall funding level per total EFTSU)
- average revenue from overseas student fees per student fell between 1995 and 2001.

It is important to note that, while base operating grant per student remained relatively stable, this has been made up of a declining Commonwealth contribution and an increasing student contribution through HECS. Between 1995 and 2000 base operating grant net of HECS receipts per funded place (including over-enrolment) fell by 8.2%²⁶.

Total university income from all sources per EFTSU fell in real terms between 1995 and 2001 in all States except for Tasmania and the ACT. By far the largest fall was in New South Wales (16%), with all other States recording reductions of 7% or less²⁷.

	1995	2001	% change
NSW	19256	16188	-15.9
Vic	17429	17250	-1.0
Qld	17058	16388	-3.9
WA	18268	18254	-0.1
SA	17831	17430	-2.2
Tas	17980	18085	0.6
NT	22898	21298	-7.0
ACT	32983	34849	5.7
Multi-State	11672	12376	6.0
Total	18551	17344	-6.5

Source: DEST Selected Higher Education Finance Statistics

²⁶ Source: AVCC

²⁷ The larger decline in NSW is linked to a number of factors, the major being the higher rate of over-enrolment in New South Wales in 2001. In that year, New South Wales was 11% over-enrolled compared with only 6% in the next most over-enrolled State (Queensland). Other factors include a fall in real terms in revenue from 'other' sources of income.

4.1.3 Financial pressures

The real terms decline in funds available per student has introduced substantial financial pressures into the higher education sector, compounding the pressures arising from the escalating costs of information technology requirements and teaching and research resources. The financial pressures were further exacerbated by the introduction of a new indexation system for university operating grants in 1995. This system replaced the previous arrangements under which university grants were adjusted for actual movements in salary and non-salary costs. The new system produced cost adjustments similar to, but slightly lower than, changes in the CPI between 1995 and 2000. However this rate of adjustment fell well below actual cost movements in the sector.

In particular the new indexation arrangements have held movements in operating grants behind the level of wage movements in the sector and the wider community. (Salary and related costs account for 60% of university expenditure.) The new index moved by 10.9% between 1995 and 2001 compared with movement of 25.9% in average weekly earnings (full-time adult persons ordinary time earnings). Burke and Phillips have estimated that operating grants would have been more than \$500 million higher in 2001 had the new index incorporated changes in average weekly earnings²⁸.

The starkest evidence of the impact of these pressures is the change in student staff ratios. Over the last decade, there has been a steady increase in student staff ratios at the national level, with the overall ratio increasing by 28.5% from 15.1 in 1991 to 19.4 in 2001. The majority of the increase has occurred since 1996 (See Table 4.4).

Table 4.4 Student Staff Ratios by Academic Organisational Unit (AOU) Group, 1991 to 2001				
AOU Group	Australia			% change
	1991	1996	2001	91-01
Humanities	14.9	16.5	19.8	32.9
Social Studies	17.5	18.1	19.6	12.0
Education	16.5	16.4	20.5	24.2
Sciences	11.0	12.9	13.6	23.6
Mathematics, Computing	17.1	17.6	24.1	40.9
Visual/Performing Arts	14.3	11.9	14.5	1.4
Engineering, Processing	12.1	13.1	16.9	39.7
Health Sciences	11.2	12.1	13.1	17.0
Administration, Business, Economics, Law	21.7	23.6	27.7	27.6
Built Environment	13.6	15.8	20.9	53.7
Agriculture, Renewable Resources	8.0	10.6	14.1	76.3
TOTAL	15.1	16.2	19.4	28.5

²⁸ Burke, G and Phillips D., *Implications of Changed Indexation Arrangements for the Australian Higher Education System*. Available at the Phillips Curran website www.phillipscurran.com.au

4.2 Patterns of resourcing across the three main education and training sectors

The funding picture in higher education contrasts starkly with the pattern in the schools sector, especially non-Government schools. While total funds per higher education student remained roughly unchanged between 1996 and 2000, they rose by 31.3% in non-Government schools and 29.0% in Government primary schools and 21.4% in Government secondary schools. While Commonwealth funds per student fell by 19.2% in universities over that period (nominal terms), they rose by 40.7% in non-Government schools.

	1996	2000	% change
<u>Non Govt Schools</u>			
C'wealth	2057	2894	40.7
State	968	1175	21.4
Other	446	1110	148.9
Total	5467	7179	31.3
	1995/96	1999/2000	% change
<u>Govt Primary Schools</u>			
C'wealth	na	450	
State	na	5237	
Total	4410	5687	29.0
<u>Govt Secondary Schools</u>			
C'wealth	na	664	
State	na	6752	
Total	6110	7416	21.4

In the VET sector total operating revenues per adjusted annual hour of curriculum (AAHC) fell by 9% between 1997 and 2000 (data prior to 1997 are not readily comparable). Commonwealth funding fell by 20.8% and State funding fell by 6.9%. Other funding rose by 1.4%.

The comparison between the sectors is summarised in Table 4.6²⁹.

²⁹ Total revenue per total EFTSU for higher education, per student expenditure for schools, Operating revenues per AAHC for VET.

Table 4.6 Change in Commonwealth funding per capita (%)					
	Higher Ed	Non-govt schools	Govt Primary schools	Govt Secondary schools	VET
	1996 - 2000	1996 – 2000	95/96-99/00	95/96-99/00	1997 - 2000
C'wealth	-19.2	40.7	na	na	-20.8
State	13.8	21.4	na	na	-6.9
Total	1.4	31.3	29.0	21.4	-9.1

4.3 International patterns of resourcing for higher education

In 1999 Australia spent 1.5% of GDP on tertiary education institutions, including 1.3% on tertiary-type A (higher) education. This compares with the OECD averages of 1.3% and 1.1% respectively. Australia's expenditure on all tertiary education ranked 7th on this measure, alongside Austria and Norway. Three countries, the United States, Korea and Canada commit over 2% of GDP.

Total expenditure on tertiary education increased between 1995 and 1999 in 20 out of 21 OECD countries for which data are available, including Australia. While there was a shift toward increasing private expenditure for tertiary education between 1995 and 1999 in 12 out of 19 countries, only two countries, Australia and New Zealand, reduced direct public expenditure over this period. The OECD observes that this is an anomalous result:

It is important to note that rises in private educational expenditure have not generally been accompanied by falls in public expenditure on education, either in primary, secondary and post-secondary non-tertiary education or at the tertiary level. On the contrary,...public investment has increased in most of the OECD countries for which 1995 to 1999 data are available, regardless of changes in private spending....This indicates that increasing private spending on tertiary education tends to complement, rather than replace, public investment.³⁰

As a consequence of the decline in public expenditure and increase in private expenditure, Australia's share of tertiary education expenditure from private sources rose sharply from 27.7% to 46.5%. This was the fourth highest rate of private contribution in the OECD after Korea (78%), Japan (55.5%) and the United States (53.1%).

³⁰ OECD, *Education at a Glance 2002*, p 187

These figures for private contributions cover all tertiary education and include all private sources of income, not just student payments. Therefore they cannot be used as a direct proxy measure for the share of higher education costs met by students, although they are indicative of relative student contributions between countries given that student fees make up the majority of private funding.

Despite the data limitations there is no doubt that Australian students are now contributing a high proportion of the costs of higher education by international standards. For example, in *Setting Firm Foundations*, the Commonwealth notes the indicators for the US, Canada and New Zealand shown in Table 4.7. We have added the comparative figures for Australia.

Country	Indicator	Level in country	Level in Australia³¹
United States	% of revenue per student from tuition fees 1998	24%	20% (28% if overseas student fees included)
Canada	Tuition fees as a share of total university revenue 1999/2000	16%	22% (31% if overseas student fees included)
New Zealand	Share of university operating revenue from tuition fees 1998	21%	20% (28% if overseas student fees included)

Further detail on the level of student fees in Australia and other countries is provided in Section 6.6.

The total funding available to Australian higher education institutions (from both public and private sources) was US\$12,588 per student in 1999 (converted to US\$ using purchasing price parity). The corresponding figure for all Australian tertiary education was US\$11,725 per student. This was eighth out of 27 countries for which data were available.

These figures for expenditure per student include funding for all purposes, including research. In Australia, funding for research represents a relatively high proportion of university revenue. For some countries it is possible to extract the component of expenditure on R&D to derive a figure for expenditure per student on teaching and general operating purposes. Australia ranks seventh on this measure (See Table 4.8).

³¹ Tuition fees only included in this calculation

Country	All tertiary	Tertiary type A		All tertiary excluding R&D
		where separately identified	Expend on R&D where identified	
Switzerland	17997	18584		17997
United States	19220		2105	17115
Canada	15211	15740	2622	12589
Norway	12096			12096
Austria	12070			12070
Japan	10278	10749		10278
Australia	11725	12588	3338	8387
Ireland	9673		1585	8088
Denmark	10657		2904	7753
Italy	7552	7557		7552
Netherlands	12285	12354	4825	7460
Sweden	14222		6828	7394
France	7867	7709	1231	6636
Germany	10393	11209	3955	6438
Belgium	9724		3565	6159
United Kingdom	9554		3434	6120
Korea	5356	6612		5356
Finland	8114	8474	2888	5226
Hungary	5861		736	5125
Slovak Republic	5325	5323	468	4857
Portugal	4802			4802
Czech Republic	5688	6679	958	4730
Spain	5707	5760	1376	4331
Turkey	4328		100	4228
Mexico	4789		771	4018
Poland	3912	3912	618	3294
Greece	4260	4606	968	3292

Source: OECD Education at a Glance 2002

Because the structure of higher education varies from country to country, there is a substantial variation in the average duration as a student. Consequently, the same annual expenditure per student can produce quite different cumulative expenditures over the average duration of a course of study. The OECD data enables comparison of the cumulative expenditure per student in tertiary type A programs across ten countries. Of these ten, Australia has the fourth lowest cumulative expenditure per student (See Table 4.9).

Table 4.9 Cumulative expenditure per student over the average duration of studies (1999) (\$US converted using ppp)

Country	Tertiary type A and advanced research programs
Switzerland	101334
Germany	67367
Finland	50760
Italy	42092
France	40901
Greece	33669
Australia	32226
Korea	27904
Spain	27113
Poland	14395

Source: OECD Education at a Glance 2002

The international comparisons also serve to highlight the observations made in Section 4.2 about the apparent shift in funding priorities in Australia away from higher education toward the schools sector (especially private schools).

Between 1995 and 1999 Australia was in the top six OECD countries in terms of the increase in expenditure per student across all sectors of education. But it was one of only six countries to reduce its expenditure per tertiary student by 5% or more.

4.4 Differences in the resource profiles of regional and non-regional universities.

For the purposes of this analysis we have defined “regional” institutions to be those where rural and isolated students represent greater than 25% of enrolment. Fourteen institutions satisfy this definition. Details are provided in Appendix D.

The resource profiles of the group of regional institutions differ from those of the “non-regional” group. Specifically, the regional institutions:

- Have a smaller operating revenue on average (\$106.6 million cf \$311.1 million in 2001)
- Derive a higher proportion of their revenue from:
 - Operating grants (excluding HECS)
 - The Commonwealth Government
 - Domestic students through HECS

- Derive a lower proportion of their revenue from:
 - Student fees, mainly overseas student fees
 - Research
 - Investments.

The differences are shown in Table 4.10.

Source of revenue	% of total operating revenue	
	Regional institutions	Non-regional institutions
Operating grants (exc HECS)	38	35
Commonwealth Govt	45	44
HECS	21	17
Fees and Charges	19	20
Overseas student fees	11	12
Research	6	10
Investment	1	3
Average operating revenue	\$106.6 million	\$311.1 million
\$ total revenue per EFTSU	\$14,320	\$18,012

It is notable that the regional institutions are relatively more exposed to Commonwealth policy decisions because of their greater reliance on Commonwealth funding and HECS.

In broad terms the expenditure profiles of the two groups of institutions are very similar. By far the largest category of expenditure for both regional and non-regional institutions is employee benefits, accounting for 56% of expenditure for the regional group and 59% for the others in 2001.

There are greater differences in resource profiles for institutions within the two categories than there are between the categories.

Across all institutions there are very wide variations in resource profiles. In terms of total operating revenue the range across the publicly funded universities in 2001 was from \$31.7 million at the University of the Sunshine Coast (USC) to \$739.9 million at The University of Sydney. In terms of the composition of revenue, the publicly funded universities vary between 28% and 57% in their reliance on the Commonwealth, between 11% and 30% in the proportion of their income derived from HECS, and between 3% and 35% in the share of their revenue from overseas students. The extent of the variance is illustrated in Table 4.11.

Table 4.11 Differences in composition of operating revenue, 2001 Extremes of range (publicly funded universities excluding ANU)		
Source of revenue	% of total operating revenue	
	Highest	Lowest
Operating grants (exc HECS)	46.9 (NTU)	24.8 (CQU)
Commonwealth Govt	57.0 (U Tas)	28.0 (CQU)
HECS	29.8 (UWS)	11.1 (UNSW)
Fees and Charges	42.2 (CQU)	10.0 (USC)
Overseas student fees	35.0 (CQU)	2.8 (ACU)
Research	22.0 (UQ)	0.6 (CQU)
Investment	8.3 (UWA)	0.4 (RMIT)
Total operating revenue	\$739.9 million (U Syd)	\$31.7 million (USC)

5 The supply of nurses and teachers

The supply of nurses and teachers has been an issue for State and Territory Governments for a very long time. These professions have historically experienced periodic highs and lows in workforce demand, and it has proven difficult to achieve a long-term sustainable equilibrium in supply and demand.

Both nationally and internationally, employers are experiencing difficulties in recruiting nurses and teachers, particularly in some specialisations. States and Territories, as the major employers of teachers and nurses, are interested in ensuring that the Government's reforms act to protect the interests of teacher education and nursing students and to facilitate an enhanced capacity for institutions to offer high quality programs in these fields of study.

5.1 Issues in nurse supply and demand

5.1.1 Background to nursing workforce issues

There is currently a national shortage of general registered and enrolled nurses, and national shortages across most specialisations, particularly aged care, mental health and midwifery.

The major supply and demand issues identified by the recent National Review of Nursing Education include:

- High attrition from the nursing workforce, particularly for new graduates
- The ageing nursing workforce
- The workforce balance between different skill levels and articulation between skill levels (e.g. registered nurses and enrolled nurses)
- The need for increased supply, particularly of Registered and Enrolled Nurses.

The recent National Review also highlighted that the shortage of nurses is being disproportionately felt in rural and remote areas. Given the shortage of medical doctors in rural and remote Australia, nurses often become the principal – and in some remote settings the only – providers of many kinds of healthcare. This means that there is a demand for nurses to be able to practice at a high level of expertise across a range of clinical areas which, in metropolitan Australia, are served by nurses with highly focused specialised clinical expertise. It was also reported that only a small proportion of nursing graduates take positions in rural areas.

We have not been able to locate estimates of the comparative nursing shortages for urban and rural Australia. Recent workforce data published by the Australian Institute of Health and Welfare³² (Table 5.1 below), however, suggests that:

- The proportion of nurses who are Registered Nurses falls with increasing rurality
- Compared with capital cities and other metropolitan centres, the full-time equivalence of Registered nurses per 100,000 population is considerably lower in rural and remote areas, with the exception of large rural centres, where it is considerably higher. This may reflect the need for many rural and remote Australians to travel to large rural centres for health care purposes
- Between 1993 and 1999, the representation of nurses per 100,000 population increased in remote areas but decreased in other locations.

Table 5.1 Employed registered and enrolled nurses: FTE per 100,000 population by geographic location, 1999

	Capital city	Other metrop. Centre	Large rural centre	Small rural centre	Other rural area	Remote centre	Other remote area	Australia
Enrolled nurses	162	216	307	297	249	243	242	197
Registered nurses	852	865	1,247	815	482	791	706	822
Total nurses	1,014	1,081	1,553	1,112	731	1,034	949	1,019
Per cent change 1993-99								
Enrolled nurses	-4.2	-10.4	-11.2	-6.2	-7.8	-9.6	-11.4	-6.7
Registered nurses	-3.8	-9.0	-10.2	-3.9	-7.4	11.8	9.3	-4.6
Total nurses	-3.9	-9.2	-10.4	-4.5	-7.6	5.9	3.2	-5.0

5.1.2 Nursing enrolment trends

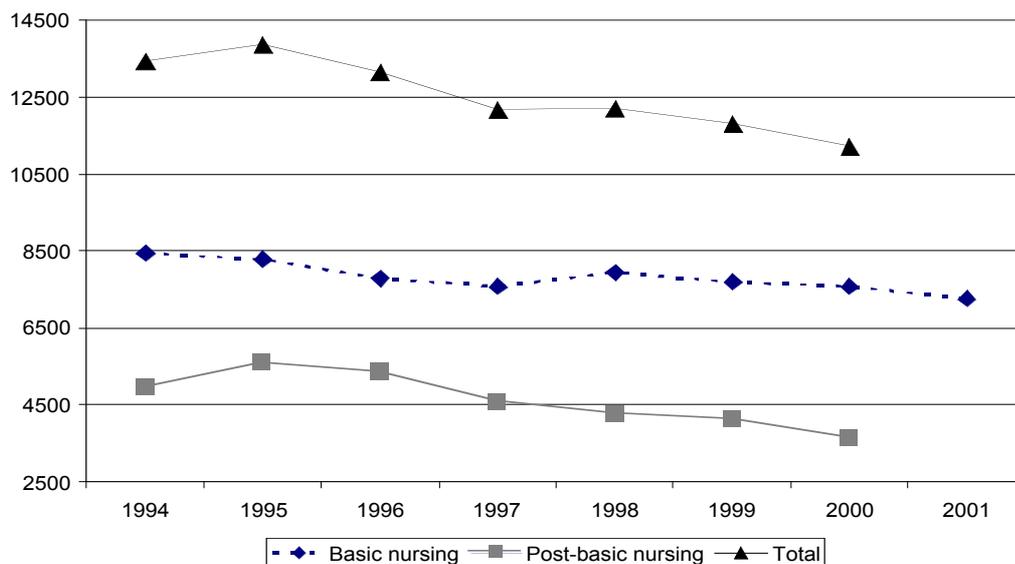
Higher education enrolment and completion trends

The transfer of nurse education from the States to the Commonwealth was completed in 1994. The 1994 review of the transition of nursing education into higher education concluded that the overall supply of Registered Nurses was exceeding the workforce requirement at that time.

³² Australian Institute of Health and Welfare, *Nursing labour force 2001*.

Between 1994 and 2000, commencing non-overseas nursing student enrolments declined by 16% nationally. The majority of the decline, however, was associated with post-basic nursing courses, reflecting the reduction in the number of nurses upgrading from hospital training to a degree (refer Figure 5.1). There was a 10% decline in basic nursing commencements between 1994 and 2000 and a 14% decline between 1994 and 2001³³.

Figure 5.1 Nursing course commencements, 1994-2001



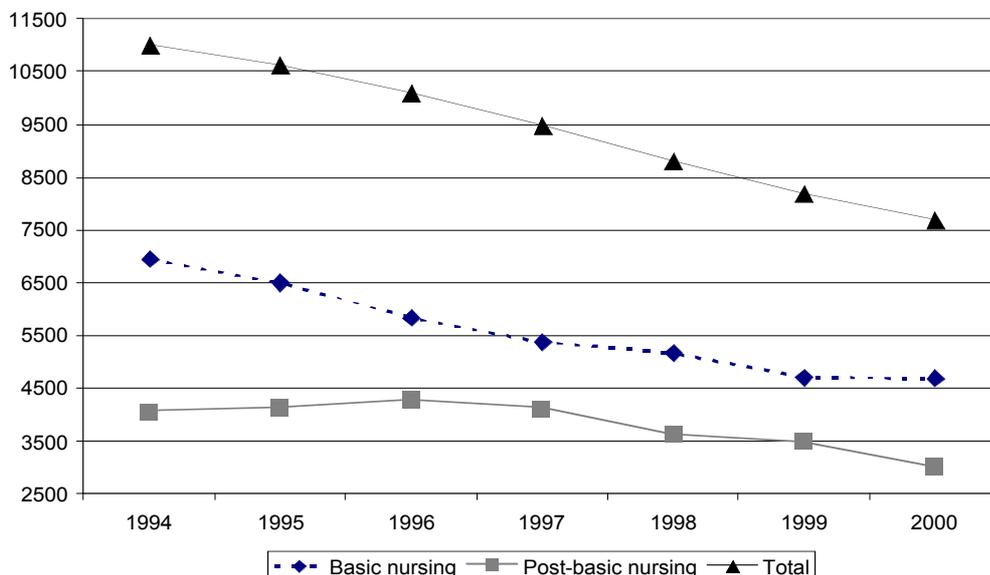
While basic nursing course commencements declined by 14% between 1994 and 2001, basic nursing course completions fell by over 32% between 1994 and 2000³⁴. This would suggest that attrition rates within nursing courses have increased, though reliable trend data on this is not currently available.

³³ Source: *Students 2001: Selected Higher Education Statistics*, Tables 88 and 90. Note that ‘basic nursing’ figures for 1994 to 2000 are based on enrolments in courses with a field of study classification of ‘Nursing-Basic’, while figures for 2001 are based on enrolments in courses for initial registration. DEST changed its classification system in 2001.

Comparable figures for 2002 are not available as the Commonwealth also changed its general approach to reporting enrolments from 2002. Prior to 2002, enrolment figures represented the number of students enrolled at March 31. From 2002, enrolment figures represent the number of students enrolled at any time over a 12 month period.

³⁴ *Students 2001: Selected Higher Education Statistics*, Table 94.

Figure 5.2 Nursing course completions, 1994-2000



Nurse employment and replacement issues by State and Territory

The relative demand and need for nursing graduates across States and Territories will be determined by a number of factors including, among other things, the size of the nursing workforce, the relative reliance on registered and enrolled nurses to resource the health system and population trends. States and Territories display varying trends for all of these factors.

Table 5.2 presents figures on employed nurse FTE per 100,000 of population by State and Territory in 1999³⁵. These are the most recently available figures published by the Australian Institute of Health and Welfare. It should be noted that the figures are based on hours worked rather than headcounts.

³⁵ FTE is calculated on the basis that hours worked are divided by 35 for all nurses, i.e. a nurse working 70 hours per week equals 2 FTE, one working 21 hours equals 0.6 FTE. Figures for the Northern Territory are considered less reliable than for other jurisdictions.

	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Australia
Enrolled nurses	172	252	153	210	225	138	191	174	196
Registered nurses	808	832	791	846	819	841	808	1,234	823
Total nurses	980	1,086	944	1,054	1,047	980	1,002	1,408	1,018
Per cent change 1993-99									
Enrolled nurses	1.7	-10.7	-25.5	-11.4	-19.4	-24.6	30.1	n.p.	-9.2
Registered nurses	-1.3	-3.1	-4.7	1.0	-15.9	-8.4	-2.5	32.7	-3.4
Total nurses	-0.8	-4.8	-8.9	-2.0	-16.3	-10.9	2.8	n.p.	-4.7

In 1999, Queensland had the lowest number of registered nurses per 100,000 of population (791) and the Northern Territory had the highest number (1,234). Registered nurses accounted for 77% of the nursing workforce in Victoria, while they accounted for 88% of the nursing workforce in the Northern Territory.

While the number of registered nurses per 100,000 of population declined by 3.4% for Australia as a whole between 1993 and 1999, some States and Territories had declines of up to 16% (South Australia), while the Northern Territory had a substantial increase (33%).

States and Territories also currently vary in the extent to which commencing student numbers reflect the overall size of the Registered Nurse workforce. Table 5.3 reports the Registered Nurse employment figures in 2001³⁶, and the number of commencing enrolments for non-overseas students in courses for initial nurse registration in that year. We have calculated a percentage index that reflects the ratio of commencing enrolment numbers to the numbers in the workforce.

State/Territory	Employment 2001 ('000)	Commencing Non-Overseas Students Enrolled in Courses for Initial Registration	Commencing Non-Overseas Students:Employment Index (%)
New South Wales	54.2	2,195	4.05
Victoria	47.6	1,881	3.95
Queensland	27.6	1307	4.74
Western Australia	14.3	651	4.55
South Australia	11.5	701	6.10
Tasmania	4.7	234	4.98
Northern Territory	1.3	207	15.92
ACT	2.5	97	3.88
Australia	163.5	7,273	4.45

³⁶ Shah, C. and Burke, G. *Job Growth and Replacement Needs in Nursing Occupations*, DEST, 2001. Table 5.

The Northern Territory has the highest percentage index (15.9%) by a considerable margin, though it also has the smallest workforce. South Australia also has a comparatively high index of 6.1%. The other States above the national average index are Queensland, Western Australia and Tasmania. The States and Territories below the national average index are New South Wales, Victoria and the ACT.

Gender

Male students are under-represented in the Health field of study: in 2002, only 26% of commencing Health students were male³⁷. It is probable that the figure would be considerably lower for Nursing.

Unmet demand

According to AVCC figures³⁸, demand for nursing courses has grown substantially over the last two years, as measured by the number of eligible applicants. The number increased from 9,425 in 2001 to 13,313 in 2003, representing growth of 41%. The number of offers made by universities, however, only increased by 4%. The number of applicants not receiving an offer increased to 4,861 in 2003, representing 37% of eligible applicants. It should be noted that the real level of unmet demand will be somewhat less than this, as the rejection of offers by some could result in offers to other applicants.

³⁷ *Higher Education Students Time Series Tables 2000 and Students 2002: Selected Higher Education Statistics.*

³⁸ *AVCC Survey of Applicants for Undergraduate Higher Education Courses, 2002 and 2003.*

The distribution of unmet demand (not discounted) by State is provided in Table 5.4.

Table 5.4 Unmet demand for nursing places in 2003	
State	Eligible applicants not receiving an offer
NSW/ACT	492
VIC	2,608
QLD	1,191
SA	204
WA	226
TAS	140
Total	4,861

The relative lack of response by universities to the increased demand in recent years may reflect a number of inhibiting factors: systemic rigidities within institutions making it difficult to re-distribute Government subsidised places across fields of study, capacity to recruit qualified staff on short notice and concerns about the capacity of the institution to find clinical placements and to provide high quality clinical placements within current funding levels.

Course retention

Data on course retention and completion for specific fields such as Nursing is not readily available. A 1999 DETYA study, however, found that the drop-out rate of the 1992 nursing university cohort was well within the expected range when compared with other university courses and great deal better than for many fields of study³⁹. As indicated earlier, however, there is some evidence to suggest that attrition rates may have increased since that time.

Increasing supply through education and training

The recommendations put forward by the National Review of Nursing Education included:

- An additional minimum of 400 EFTSU for undergraduate nursing commencements for each of 2003 and 2004, representing an increase of 5-6 per cent per year, to be distributed to institutions on an application basis with evidence of a commitment to increase intakes and provide quality clinical placements
- Growth places to be targeted at students who are eligible for advanced standing
- A further review of the number of funded places after better systems for workforce monitoring and planning are developed
- The maintenance of existing institutional intake levels at least until 2004.

³⁹ *National Review of Nursing Education: Discussion Paper*. DEST, 2001. p. 89

In July 2002, MCEETYA considered and endorsed a proposal to create a National Allocation Priority Pool of 2,500 new student places in areas of workforce shortage, including Nursing, though the Commonwealth Government did not vote for the proposal.

5.1.3 Funding arrangements

Commonwealth operating grant funding

The transition of nurse education from the State-based apprenticeship model of registered nurse training to an academic model of nursing education funded by the Commonwealth Government was completed by the end of 1994. The Commonwealth took over full funding responsibility for a total of 18,980 basic nurse education places at that time⁴⁰.

The State and Territory Governments contributed funding to the Commonwealth education portfolio in that year, and transferred 75% of the average funding rate for a nursing place through offsets to State and Territory grants.

The funding level initially differed between institutions as it was based on an agreed transfer cost between the States and Territories and the Commonwealth. Under the current funding arrangements, however, funding for nursing education is rolled up in the general operating grant model that funds institutions on the basis of EFTSU. The Relative Funding Model (RFM), that was used by the Government to re-calibrate institutional funding levels in the early 1990s, places Nursing in the third (out of 5) cost clusters.

Both the National Review of Nursing Education and the Australian and New Zealand Council of Deans of Nursing have argued that the current funding level fails to compensate institutions for the high costs associated with clinical practice. A preferred option recommended by the National Review was for the Commonwealth to provide new quarantined funding over five years via a Clinical Education Partnership Program, in addition to the operating grant for undergraduate nursing courses. The Program would promote State- and Territory-based cooperative arrangements between those sectors preparing nurses for initial registration and those employing them. A suggested figure of \$20 million a year for five years was put forward, with an additional \$10 million to establish and evaluate the program and to provide support to disadvantaged students.

⁴⁰ *Supplementary Higher Education Funding Report for the 1994-96 Triennium*, DEET, 1994.

HECS and fees

Nursing is currently in the least expensive HECS Band (i.e. Band 1 - \$3,680 in 2003). The National Review, however, noted that nursing students undertake load in units that are classified to higher HECS bands. To acknowledge the contribution that nurses make in the service of the community and in recognition that nurses are among the lowest paid professionals, the Review recommended that all units undertaken in courses for initial registration be classified in HECS Band 1.

Under current arrangements, universities are prohibited from charging full fees for postgraduate courses that lead to initial nurse registration.

Scholarships

Various Commonwealth and State agencies and universities offer a diverse range of undergraduate and postgraduate nursing scholarships.

The National Review of Nursing Education recommended that an audit be undertaken of the current postgraduate coursework scholarships for re-entry programs and nurse specialisations, including those offered by the States and Territories. It formed the view that the current fragmented approach was not in the national interest.

5.1.4 National coordination and Commonwealth/State responsibilities

Nursing falls in a complex policy space, at the intersection of two major public policy arenas (health and education) and covering multiple jurisdictions (Commonwealth, State and private sector). The final report of the National Review of Nursing Education concluded that it was in the national interest to promote arrangements that bring together Commonwealth, State and Territory health and education agencies, nursing bodies and Government and non-Government service providers. It recommended the formation of:

- a National Nursing Council of Australia charged with providing national leadership in relation to nursing policies, education, training and practice and to promote and facilitate consistency in quality standards across Australia
- State and Territory nursing education and workforce forums.

5.2 Issues in teacher supply and demand

5.2.1 Background to teaching workforce issues

Following a period of general over-supply of teachers during the 1990s, the teacher labour market has been broadly in balance across Australia over the last few years. Significant recruitment difficulties, however, are being experienced in secondary Mathematics, Science, Information Technology and to a lesser degree Modern Foreign Languages and Industrial Arts/Technology. There are also considerable shortages in rural and remote areas.

It is predicted that overall shortages in teacher supply will peak in 2005-2007, and will affect most States and Territories. Schools in disadvantaged areas will most likely be disproportionately affected in an environment of short-supply. There is considerable diversity across States and Territories with respect to the major drivers of demand and supply:

- Trends in the school age population (the population is projected to increase in the Northern Territory, Queensland and Western Australia, and decrease in all other States to 2011 and 2021⁴¹)
- Student-staff ratios in schools⁴²
- School retention rates⁴³
- Age of the teaching workforce⁴⁴
- Rate of teacher separations and the extent of reliance on new graduates in replacing teachers exiting from the system⁴⁵.

5.2.2 Teacher education enrolment trends

Commencing enrolments

Unpublished DEST data presented in a MCEETYA teacher supply and demand study⁴⁶ shows that over the last decade, commencements in teaching courses peaked in 1991, dropped dramatically in 1992 and then continued to decline until 1995 when the trend was reversed⁴⁷. Enrolments then continued to grow up to 1999, by which time the enrolment levels were back to those experienced in 1989. We do not have comparable data for the years since 1999, however, DEST commencing enrolment figures for the Education field of study would suggest that enrolments continued to increase modestly in 2000, 2001 and 2002.

The drop in commencing enrolments in the early 1990s has been attributed to a recession-led decline in teacher resignations, graduate employment and student demand.

⁴¹ Australian Bureau of Statistics. *Population Projections 1999 to 2101*. Catalogue Number 3222.0 (Series II)

⁴² *National Report on Schooling in Australia, 2000*. MCEETYA, 2002.

⁴³ Australian Bureau of Statistics, *Australian Social Trends, 2002*.

⁴⁴ DETYA Survey of State and Territory education authorities as published in *Demand and Supply of Primary and Secondary School Teachers in Australia*, MCEETYA, 2001.

⁴⁵ *Demand and Supply of Primary and Secondary School Teachers in Australia*. MCEETYA, 2001.

⁴⁶ *Demand and Supply of Primary and Secondary School Teachers in Australia*. MCEETYA, 2001.

⁴⁷ It is assumed that these figures include overseas students.

Figure 5.3 Commencements of Postgraduate and Undergraduate Teaching Courses, 1989-1999

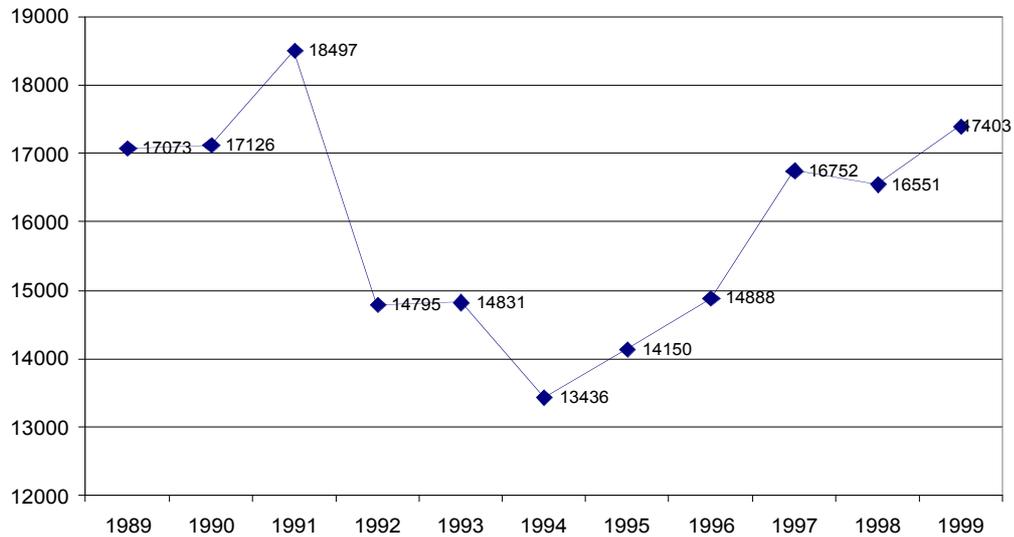


Table 5.5 provides a breakdown of the commencing enrolment trends for selected years by State and Territory⁴⁸.

State/Territory	1989	1994	1999	% change 1989-1999
New South Wales	4918	4679	5656	15.0
Victoria	5196	3045	3667	-29.4
Queensland	3133	2614	4147	32.4
South Australia	1762	1480	1910	8.4
Western Australia	1207	821	950	-21.3
Tasmania	311	283	431	38.6
Northern Territory	173	119	182	5.2
Australian Capital Territory	373	393	461	23.6
Australia	17073	13436	17403	1.9

The overall Australian picture shows enrolments being restored to 1989 levels by 1999, but the pattern across States and Territories was quite variable. Victoria recorded a 29% decline over the decade, followed by Western Australia with a 21% decline. In contrast, Queensland enrolments increased by 32%, while New South Wales enrolments increased by 15%. Some of the smaller States also experienced substantial percentage growth, though from smaller bases.

⁴⁸ Figures for the Australian Catholic University have been allocated to relevant States and the ACT on an estimate basis.

Gender

Male commencing university enrolments in the Education field of study have declined steadily over the last two decades: in 1983, 34% of commencing Education students were male compared with only 24% in 2000⁴⁹. However, the figure increased to 28% in 2002.

Unmet demand

Unmet demand for teacher training has been above the national average for all fields of education for the last three years, and has been on the increase. In 2001, 5,770 eligible applicants did not receive an offer of a place, representing 29% of all eligible applicants. By 2003, this increased to 41% with 9,610 eligible applicants not receiving an offer⁵⁰. These figures have not been discounted to factor in the flow-on impact of rejected offers.

Table 5.6 provides 2003 unmet demand figures by State.

Table 5.6 Unmet demand for education places in 2003	
State	Eligible applicants not receiving an offer
NSW/ACT	2,943
VIC	3,529
QLD	2,510
SA	288
WA	249
TAS	91
Total	9,610

In response to this demand, universities only increased the number of offers made to eligible applicants by 1.6% between 2001 and 2003. As noted earlier with regard to nurse education, there are a number of factors that may contribute to the relative lack of response by universities to the increased demand, including the cost of the practicum (discussed below).

Course retention

A DEST study of course completion rates found that the completion rate for Education students was substantially higher than the Australian average for all fields of study (71.4% compared with 64.3%)⁵¹.

⁴⁹ *Higher Education Students Time Series Tables 2000 and Students 2002: Selected Higher Education Statistics.*

⁵⁰ *AVCC Survey of Applicants for Undergraduate Higher Education Courses, 2002 and 2003.*

⁵¹ Martin, Y., Maclachlan, M., Karmel, T. *Undergraduate Completion Rates: An update.* DEST, 2001

Increasing supply through education and training

Initiatives announced prior to the commencement of the Higher Education Review may lead indirectly to increases in the number of higher education places available for teacher education.

The Government's *Backing Australia's Ability: An Innovation Action Plan for the Future*, announced in January 2000, included 2000 additional undergraduate higher education student places each year from 2002, pipelining to a total of 5480 places. The places were targeted to priority areas of Information and Communications Technology, Mathematics and Science, and some institutions that won places through the bidding process allocated places to science and mathematics teaching courses. The scheme will also presumably widen the pool of graduates available to enter postgraduate teaching programs in areas of shortage.

The 2001-2002 Budget provided funding for a further 670 new undergraduate higher education places from 2002, pipelining to 1830 places, targeted at rural and regional Australia. Once again, the scheme does not directly target teacher education, though there will be flow-on benefits to students studying teacher education at regional universities and campuses.

States and Territories have also taken action to respond to shortages in specialist areas by providing programs to re-train teachers to teach those specialist areas in demand and also providing some support for teachers in these areas to upgrade their level of qualification⁵².

⁵² Review of Teaching and Teacher Education. *Discussion Paper: Strategies to Attract and Retain Teachers of Science, Technology and Mathematics*. DEST, 2002.

5.2.3 Funding arrangements

Commonwealth operating grant funding

As with Nursing, the major criticism directed at current Commonwealth funding schemes in the Education field is that they do not adequately reflect the high cost of the practicum component. The Australian Council of Deans of Education has called for the Education Relative Funding Model weighting of 1.3 to be revised upwards in recognition of the cost of the practicum, and other high costs involved in teacher education especially in areas such as technology education, science education and music education.

The Council argues that the national award regarding the payment of teachers for supervising practicum students translates into a 10-15% tax on teacher education, even before the academic unit's own involvement in the practicum is factored in. An analysis undertaken by the Council has estimated that field experience costs amount to 25% of total expenditure for Education academic units, while only about 12% of income is generated for this purpose.

The high costs of field experience, together with the decline in Commonwealth operating grant funding in real terms, has been limiting the capacity of universities to offer student places. If anything, this issue is growing in importance, as the significance of high quality professional experience for teacher education students comes increasingly into focus⁵³.

HECS and fees

Teacher education is currently in the least expensive HECS band (i.e. Band 1 - \$3,680 in 2003).

As with nursing, universities are currently prohibited from offering fee paying places in postgraduate courses that lead to initial registration as a teacher.

Scholarships and other schemes

The States and Territories offer a range of financial incentives to encourage people to take up teaching in targeted areas of need. These include scholarships for Indigenous people, students from rural and remote areas, science graduates wishing to teach in schools and high quality young graduates, sponsorships for skilled workers to undertake accelerated teacher training programs and teacher re-training programs.

⁵³ The Report of the Review of Teacher Education in NSW undertaken by Gregor Ramsey, for example, recommended that the level of professional experience be increased.

5.2.4 National coordination and Commonwealth/State responsibilities

As with Nursing, there are clearly tensions relating to the roles and responsibilities of different levels of Government for funding teacher education.

Some States are taking very active steps to respond to the shortfall in teachers in specialist areas. The New South Wales Government, for example, has established a Joint Committee on Quality Teacher Provision to provide strategic advice on the future supply of quality teachers, and has committed \$88.5 million over four years to fund a range of teacher supply and teacher quality initiatives. The State argued in its *Crossroads* submission, however, that these initiatives involve the diversion of State resources to fund teacher education which should remain a Commonwealth responsibility.

The States and Territories also argue that in providing scholarships they are taking on funding responsibilities that should rest with the Commonwealth. On the other hand, the Commonwealth has suggested that more could be done by education authorities to improve the working conditions of teachers and to encourage and reward teachers for initiating their own further professional development⁵⁴.

As the drivers of demand and supply differ considerably across States and Territories, the most efficient allocation of resources will occur when a national and state coordinated approach is taken to determining priorities and needs. While MCEETYA has played a role in coordinating educational policy and planning, the Council of Deans of Education noted in its *Crossroads* submission that Australia lacks a “centralised means of planning strategically to match higher education places with the service needs of systems”. The view of the Deans is that MCEETYA has explored this issue but has yet to find a way forward.

The MCEETYA agreement to a methodology for projecting teacher supply and demand is a major step forward, but also serves to demonstrate that considerable work remains to be done if an integrated approach to planning and resourcing is to be achieved.

⁵⁴ Review of Teaching and Teacher Education. *Discussion Paper: Strategies to Attract and Retain Teachers of Science, Technology and Mathematics*. DEST, 2002.

5.3 Student finances

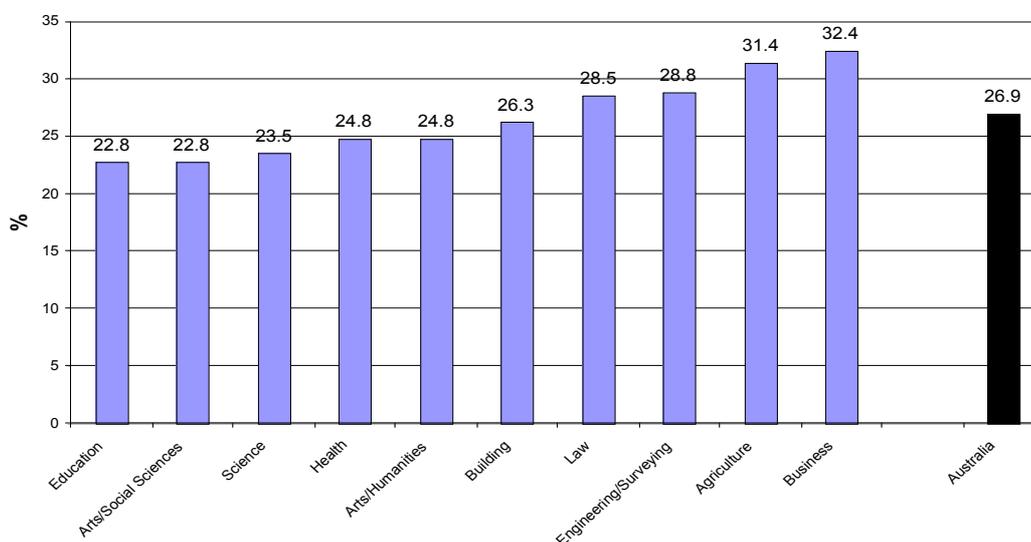
A recent AVCC-commissioned study of student finances undertaken by Long and Hayden⁵⁵, which is discussed further in Chapter 6, provides evidence that Government subsidised health and teacher education students experience a greater financial burden than students in many other fields of study.

The research study found three factors that consistently correlated with student financial difficulty:

- a low likelihood of paying HECS up-front
- a greater likelihood of having to borrow money to continue studies
- a greater likelihood of having a budget deficit.

The study reported trends by field of education for the first two factors. Both Education and Health students were less likely than students from most other fields of study to pay HECS up-front. (Unfortunately, the study did not report Nursing students separately from other Health students.) Figure 5.4 provides the percentage of students paying up-front for all fields of study and Australia in total.

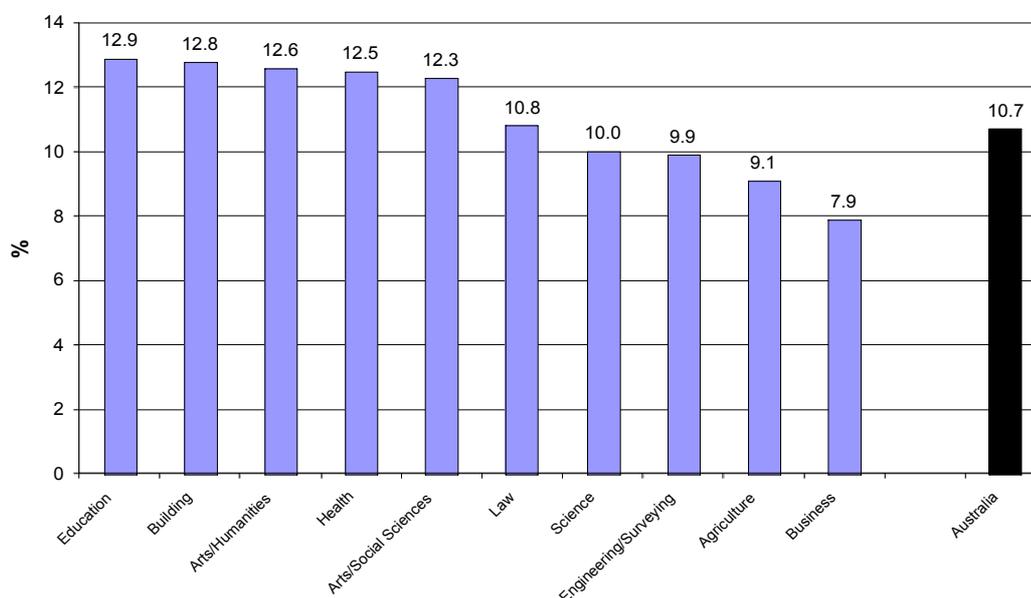
Figure 5.4 % Up-front payment or part payment of HECS by field of study



Education students were also more likely than students in any other field of study to take out a loan in order to continue their studies. Health students also exceeded the average for all fields of study. Figure 5.5 provides more detail.

⁵⁵ Long, M. and Hayden, M. *Paying their way: A survey of Australian undergraduate university student finances, 2000*. AVCC, 2001.

Figure 5.5 Incidence of repayable loans (%) by field of study



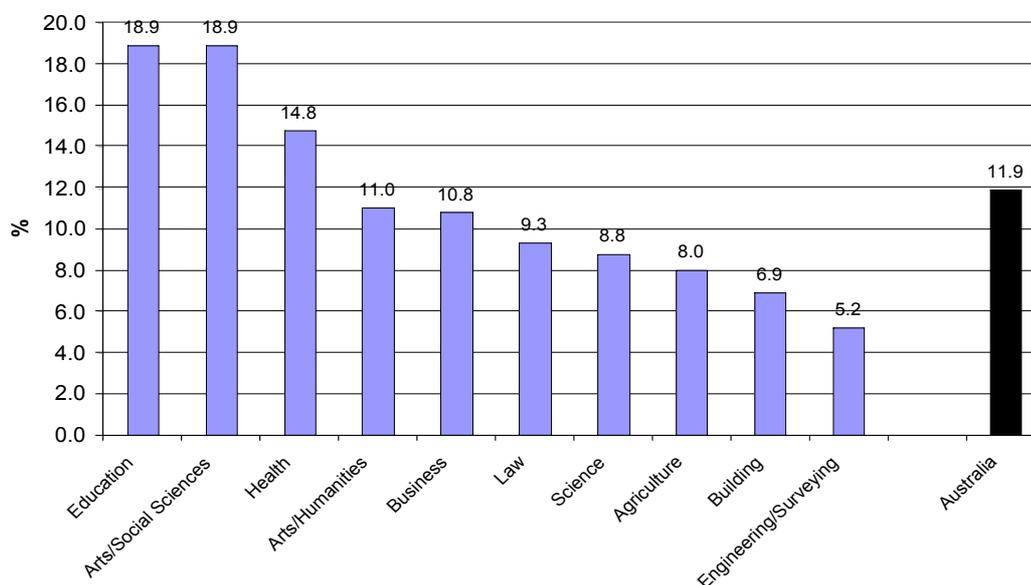
Part of the explanation for these trends may rest with age and gender differences. Roughly 43% of commencing Bachelor degree Nursing students in 2000 were aged 25 or over, and 10% were aged 40 or over⁵⁶. In comparison, only 23% of Australian commencing students were aged 25 or over, and only 5% were aged 40 or over⁵⁷. Older students are more likely to carry financial responsibilities, household debt and parenting responsibilities, and to have incomes exceeding the HECS repayment threshold, thereby facing immediate debt repayment requirements.

Education and Health students are also more likely than others to have dependent children (refer Figure 5.6). Almost 19% of Education and 15% of Health students were in this category.

⁵⁶ *National Review of Nursing Education: Discussion Paper*. DEST, 2001.

⁵⁷ *Students 2000: Selected Higher Education Statistics*. DETYA, 2001.

Figure 5.6 Students with dependent children (%)



The figures for female Education and Health students are even higher. Over 20% of female Education students and almost 17% of female Health students have dependent children.

The Long and Hayden study also found that female students living only with their children and female students who were sole care givers have a uniquely high rate of borrowing in order to continue their studies (34% and 29% respectively). This is significant given the female bias in nursing and education courses.

It is also notable that, in 2000, 21% of commencing non-overseas Bachelor degree nursing students were from low SES backgrounds, compared with only 15% of commencing students overall⁵⁸.

The age, gender, SES and applicant pool issues discussed above are significant factors that need to be considered in the development of policy and strategy for ensuring the adequate supply of teachers and nurses. These issues may become even more significant in the future as education and health authorities increasingly encourage skilled and mature workers to enter the teaching and nursing professions.

The evidence suggests that prospective teacher education and nursing students are likely to be more sensitive to fee levels than students studying in many other fields of education.

This is particularly likely to be the case for prospective students from rural and regional Australia. State and Territory education authorities are battling teacher shortages in particular rural areas, and projections of an overall under-supply of teachers will act to exaggerate these pressures. In Chapter 6, we discuss research evidence demonstrating

⁵⁸ *Characteristics and Performance Indicators of Australian Higher Education Institutions*, 2000. DEST, 2001. *Higher Education Statistics for Nursing Students*. DEST, 2001.

that rural and regional Australians are generally less affluent and less inclined to see higher education has a viable life choice than their urban counterparts.

Rural and regional students in nursing and teacher education also carry the additional burden of often having to travel considerable distances to undertake clinical practice sessions or practicums, thus adding to the expense of their courses. In the case of nurses, for example, student subsidised accommodation is only offered by a small minority of hospitals or medical facilities⁵⁹.

The impact of increased student contributions is therefore likely to be felt more sharply in regional Australia, and may act to hinder any other measures designed to address the problem of regional nurse and teacher shortages.

⁵⁹ *National Review of Nursing Education: Discussion Paper*. DEST, 2001.

6 Access and equity

In this Chapter, we present historical trends and research evidence in relation to the higher education access and equity issues, specifically:

- Trends in access and outcomes for disadvantaged groups
- Affordability
- Income support and scholarships
- Institutional funding support
- The higher education and vocational education and training (VET) interface
- The impact of current HECS and fee arrangements.

At the outset it is important to emphasise that each of these issues must be interpreted against the background of the overall size of the higher education sector relative to the Australian population, and the distribution of student places across States and regions. These factors – the number and distribution of higher education places – are in many ways the most significant determinants of access to higher education.

6.1 Trends in access and outcomes for disadvantaged student groups

In acknowledging the contributions made by higher education to economic and social development, most State and Territory Governments have emphasised the importance of equity of access to higher education in achieving State and Territory goals, and have argued that equity should be a core principle driving Commonwealth Government higher education policy. The New South Wales Government's *Crossroads* submission, for example, states:

A key principle of higher education must be equity of access, with recognition of the important contributions to be made by disadvantaged groups and regions. The removal of barriers to higher education, and participation from the full cross-section of the population is vital to a socially inclusive society. Similarly, a well educated citizenry is essential to a thriving national economy and civil society. (p 14)

There is general consensus among the States and Territories that any new policy and funding framework emerging from the Higher Education Review must be structured to achieve an increase in access and outcomes for disadvantaged groups.

While there has been a move from an elite to a mass system of higher education, the current evidence suggests that the share of university enrolments for disadvantaged Australians has not improved in the 12 years' since the release of *A Fair Chance for All*, the Commonwealth Government's initial higher education equity strategy. However, the monitoring of trends in the participation of some equity groups,

especially students with low socio-economic backgrounds and rural and isolated students, has been inhibited by acknowledged limitations in measurement methodologies.

The research relating to participation of disadvantaged students points to four key issues that need to be considered when developing policy and strategies for enhancing higher education participation:

- The extent of overlap between different categories of disadvantaged students, building to extreme levels of relative disadvantage for some Australians
- The importance of parental education levels and student perceptions of the relevance and attainability of higher education in determining university participation
- The relative lack of readiness for higher education study on the part of disadvantaged students, due to their lower Year 12 retention rates
- The preference of disadvantaged students to enrol in TAFE studies rather than university studies.

6.2 Affordability

Despite Australian HECS fees being relatively high by international standards, Australian students in general have not been deterred from entering higher education, nor have disadvantaged groups shown a substantial decline in participation since the introduction of HECS, at least as far as we can tell given deficiencies in measurement methodologies.

In assessing the likely impact of higher fees, however, a key question needs to be asked; “Is there a tipping point, beyond which some members of the community will judge the price of higher education to be in excess of its private benefit?” There is some evidence emerging, particularly for disadvantaged groups, to suggest that financial and other pressures are already accumulating and having an impact on student behaviours and study experiences.

Two recent studies⁶⁰ have identified the changing work and financing arrangements of students. Findings included:

- Annual student expenditure exceeds income by an estimated 21%
- Seven in ten students are in paid employment, an increase of about 50% since 1984
- They work an average of 14.5 to 15.0 hours per week, a three fold increase since 1984
- 40% of students agree that paid work gets in the way of their studies and 34% agree that worrying about money makes it difficult for them to concentrate on their studies
- The current HECS repayment threshold creates financial pressures for some students who have to make repayments while still studying
- One in 10 students have to take out a loan to continue their studies.

⁶⁰ Long, M. and Hayden, M. *Paying their way: A survey of Australian undergraduate university student finances, 2000.* AVCC, 2001.

McInnis, C. and Hartley, R. *Managing Study and Work: The impact of full-time study and paid work on the undergraduate experience in Australian universities.* DEST, 2002.

Longitudinal research undertaken by the Australian Council for Educational Research (ACER)⁶¹ indicates that up to 14% of full-time students in some fields of study work for more than 20 hours per week. The research also reveals that, while small to moderate amounts of part-time work do not seem to affect student drop-out rates, longer hours of work (20 hours or more) have a strong positive relationship with student attrition. Students who work 20 to 29 hours per week, have a 160% higher chance of dropping out. For those working over 30 hours per week, this figure is between 200% and 204%.

Pressures of this kind are also emerging in other countries. A recent UK survey of higher education students found that only 12% of students were keeping up with their living costs without any difficulties. Almost half of the students undertook work during semester, though this varied considerably across universities (from 27% to 69%), with the key reasons for working being to pay for essential costs and/or reduce the level of debt. The survey found that while the majority of students take a pragmatic view of debt and agree that borrowing money for a university education is a good investment, almost 75% of final year students have serious concerns about accumulating debt and the burden of repayment⁶². The level of concern is greatest for mature students and those with children.

In the UK, means-tested student grants to cover student living costs have been gradually replaced, since 1989/90, with non means-tested loans. This policy change, together with the introduction of student fees, has resulted in a significant increase in both the proportion of students taking out loans and the level of student debt⁶³.

In the United States, where the costs of study have been increasing faster than inflation, there is a growing recognition of a marked decline in the affordability of higher education for many Americans. The share of family income that is needed to pay for tuition and other expenses has increased, and the most widespread response involves debt – more students across all income groups are borrowing more money than ever before. Other responses include working more hours, reducing study load and attending less expensive colleges and universities⁶⁴.

6.2.1 Disadvantaged groups

The introduction of the HECS scheme has increased higher education participation for the broader community, and in doing so, has enabled a larger number of disadvantaged students to access a university education. The fact remains, however, that on a **per**

⁶¹ Vickers, M., Lamb, S. and Hinkley, J. *Student Workers in High School and Beyond: The Effects of Part-Time Employment on Participation in Education, Training and Work*. Australian Council for Educational Research Longitudinal Surveys of Australian Youth Research Report Number 30, 2003.

⁶² Van Dyke, R. and Little, B. *Survey of Current Students: Main Findings on Students' Attitudes to Debt and Term-Time Working*. Student Debt Project, Universities UK, 2002.

⁶³ Callender, C. and Kemp, M. *Changing Student Finances: Income, Expenditure and the Take-up of Student Loans Among Full- and Part-time Higher Education Students in 1998/9*. Department for Education and Employment, 2000.

⁶⁴ *Losing Ground: A National Status Report on the Affordability of American Higher Education*. The National Center for Public Policy and Higher Education, 2002.

capita basis, significantly fewer people from lower socio-economic backgrounds gain entry to university than those from medium or higher socio-economic backgrounds, and this has remained relatively unchanged for many years.

Recent research has highlighted that the relative disadvantage experienced by students from low socio-economic backgrounds is increasingly systematised as the result of the growing emphasis on private school education. Research by the ACER demonstrates that only 31% of students from Government schools enter university direct from school, compared with 48% of those from Catholic non-Government schools and 59% of those from other non-Government schools⁶⁵. Students from Independent schools, in particular, score far higher tertiary entrance scores than their public school counterparts, in part because of the greater educational resources Independent schools offer their students⁶⁶.

Not surprisingly, socio-economically disadvantaged students who do enter university have been found to be more sensitive than others to financial factors. They are more likely to: defer their HECS fees; study part-time when they would prefer to study full-time if finances permitted; and have a restricted choice of course and university due to financial considerations⁶⁷. They are also more likely to resort to personal loans (on top of HECS debts) to cover living and ancillary study costs. While the average loan take-up rate is 11%, the figure is higher for Indigenous students (21%), sole care givers (20%), students receiving Youth Allowance, Austudy or Abstudy (18%), students who moved to attend university (17%), mature students in the 25 to 34 age group (15%) and students from lower socio-economic backgrounds (13%).

A recent study⁶⁸ concluded that:

The perceived cost of higher education appears to be a major deterrent for Australian students of lower socioeconomic background. They are more likely than other students to believe the cost of university fees may stop them attending university (39 per cent, compared with 23 per cent of higher socioeconomic background students). Forty-one per cent of lower socioeconomic background students believed their families probably could not afford the costs of supporting them at university. Well over one-third of lower socioeconomic background students indicated they would have to support themselves financially if they went to university. p x.

An earlier study⁶⁹ based on the same survey data concluded:

⁶⁵ *Entering Higher Education in Australia*. Longitudinal Surveys of Australian Youth Briefing Number 6, Australian Council for Educational Research, 2003.

⁶⁶ Birrell, B., Dobson, I. R., Rapson, V. and Smith, T. F., Higher Education at the Crossroads submission, Centre for Population and Urban Research, Monash University.

⁶⁷ Long, M. and Hayden, M. *Paying their way: A survey of Australian undergraduate university student finances, 2000*. AVCC, 2001. McInnis, C. and Hartley, R. *Managing Study and Work: The impact of full-time study and paid work on the undergraduate experience in Australian universities*. DEST, 2002.

⁶⁸ James, R. *Socioeconomic Background and Higher Education Participation: An analysis of school students' aspirations and expectations*. DEST, 2002.

⁶⁹ James, R., Wyn, J., Baldwin, G., Hepworth, G., McInnis, C. and Stephanou, A. *Rural and Isolated Students and their Higher Education Choices: A re-examination of student location, socioeconomic background, and educational advantage and disadvantage*. Higher Education Council, 1999.

The costs of higher education, including fees and the living expenses associated with leaving home, are serious inhibitors or barriers for rural school students. Many rural students and their families face an extremely difficult decision in assessing the costs versus the benefits of higher education. For many financially disadvantaged rural families, the costs are well beyond their income capacity – the prospect of their children entering higher education is simply out of the question. p. xvi

The authors also suggested that the opportunity cost of attending university – that is, the money foregone for potentially employable family members – may be an important factor in the lower participation rates of low SES families.

Overseas research has also found that students from disadvantaged backgrounds can be deterred by the price they have to pay. In the UK, a recent survey⁷⁰ of school and further education students' attitudes to debt found that:

- Debt aversion was strongest for disadvantaged groups, including lower socio-economic students and those with family responsibilities, especially lone parents
- Debt averse respondents were more likely to decide not to enter higher education.

Those prospective students most likely to decide not to go to university were from lower SES groups and the majority had decided against higher education because they wanted or needed a job (72%), did not want to build up debt (63%), or believed that the costs of studying were higher than the benefits (51%). Low-income higher education entrants, unlike high-income entrants, restrict their choice of university and course in order to contain cost and debt.

The study concluded that debt aversion, together with the UK Government's current student financing support arrangements, act to deter rather than encourage the disadvantaged groups the Government most wants to attract into higher education. It should be noted that in the UK, loan repayments are income contingent, as in Australia.

In the United States, the lowest income families have lost the most ground in terms of the affordability of higher education and the gap in participation rates between high and low income Americans has widened accordingly⁷¹.

⁷⁰ Callender, C. *Survey of School and Further Education Students Attitudes to Debt and their Impact on Participation in Higher Education*. Student Debt Project, Universities UK, 2002.

⁷¹ *Losing Ground: A National Status Report on the Affordability of American Higher Education*. The National Center for Public Policy and Higher Education, 2002.

The Australian Government argues that current HECS repayment arrangements do not place an unmanageable burden on graduates, as the income-contingent nature of the loan and the lack of real interest rate mitigate against seriously adverse impacts of debt. There are suggestions from international research, however, that pure economic reasoning may not be the solution to understanding price responsiveness of students, particularly those from low socio-economic backgrounds who are typically more debt averse.

For example, American research shows that students from low income families do not enter expensive institutions even if the difference with cheaper institutions is completely offset with a scholarship⁷². It is also plausible that students from low income families perceive a greater relative financial burden from the payment of fees or income foregone than students from high income families.

6.2.2 Household finance and debt in Australia

The affordability of higher education will be influenced by a number of economic factors, the most dominant ones being:

- Family income
- Household debt
- Availability of part-time work.

Family income

There has been considerable interest in recent years in assessing whether the gap between the rich and the poor is growing in Australia. The measurement of relative inequality over time is beset by numerous definitional and data comparability obstacles, and the approaches adopted by different researchers vary. A recent ABS article reported a widening inequality in income distribution in the 1990s⁷³. A paper by the National Centre for Social and Economic Modelling⁷⁴ also reported that between 1991 and 1996 the proportion of households with low income and the proportion of households with high income increased in all regions of Australia, evidence of the “hollowing out” of middle Australia.

⁷² Vossensteyn, H. *Cost Sharing and Understanding Student Choice: Developments in Western Europe and Australia*. Centre for Comparative and Global Studies in Education, State University of New York.

⁷³ Year Book Australia 2001. *Centenary Article – Household Income and its Distribution*.

⁷⁴ Lloyd, R., Harding, A. and Hellwig, O. *Regional Divide? A Study of Incomes in Regional Australia*. National Centre for Social and Economic Modelling, University of Canberra. Paper presented at the 29th Conference of Economists, July 2000.

The measurement of poverty also presents challenges to the research community, and there are different views about what constitutes an appropriate methodology. A recent study commissioned by The Smith Family⁷⁵ used 12 possible poverty measures to assess trends in Australian poverty levels during the 1990s. Eleven of the measures showed an increase in poverty over the decade, and one showed no change. According to the researchers:

- Sole parents remain the group at most risk of poverty
- The poverty rate among those relying on Government benefits has increased, as has the rate among the unemployed
- Part-time workers make up a growing share of the poor
- Almost one-fifth of adults aged 25 to 44 years were in poverty on an after-housing cost basis
- While graduates have remained relatively immune from rising poverty in the 1990s, those with no post-secondary school qualifications have seen their poverty risk increase from 12.1% to 14.7%.

The Australian Bureau of Statistics has also recently reported on the household income, living standards and financial stress (as measured by a range of indicators)⁷⁶. Households principally dependent on unemployment, education and sickness allowances were the most likely to indicate high financial stress (45%), followed by households principally dependent on “other” Government pensions and allowances (40%). Lone parents with dependent children were also shown to be extremely vulnerable to financial stress.

Within each income grouping, little difference was observed in the incidence of financial stress between households in capital cities, other urban and rural areas. However, 56% of rural households fell into the two lower income quintiles, compared with only 36% of capital city households and 45% of other urban households.

Household debt

Household debt in Australia increased from about 50% of annual household disposable income at the start of the 1990s, to 90% in 1998⁷⁷. This represents a doubling of household debt in the 1990s, in real terms. In the early part of the decade, the growth was driven by housing lending, but growth in other personal borrowings picked up sharply in the second half of the decade. The debt servicing burden of households, however, declined over the last decade mainly due to the fall in interest rates.

⁷⁵ Harding, A., Lloyd, R. and Greenwell, H. *Financial Disadvantage in Australia 1990 to 2000: The persistence of poverty in a decade of growth*. The Smith Family, 2001.

⁷⁶ Year Book Australia 2002. *Special Article – Household income, living standards and financial stress*.

⁷⁷ *Consumer Credit and Household Finances*. Reserve Bank of Australia Bulletin, June 1999.

A number of financial institutions have expressed concerns that low interest rates in recent years have fuelled an unsustainable national debt blow-out. The build-up in financial liabilities makes households more exposed than previously to adverse economic conditions, such as the slowing of the economy or an increase in interest rates. This issue interacts with the growing indebtedness of university graduates, as discussed later in Section 6.6.

Availability of part-time work

Recent research on study and work has demonstrated the growing importance of part-time work in sustaining the affordability of higher education. Consistent with international trends, the Australian labour market has experienced a substantial increase in the proportion of part-time jobs over the 1990s. Part-time employment now represents 28% of total employment⁷⁸. The proportion of employed young people who work part-time (44% in 2001) is considerably higher than the average across all age groups (28%), and has increased steadily over the last decade (from 30% in 1991), reflecting in part the greater take-up of part-time work by a growing body of students.

The demand for part-time labour is concentrated in a small number of industries, principally retail trade, health and community services and property and business services. These industries are predicted to grow substantially in coming years. All other things being equal, accessibility of part-time work for students should therefore remain strong.

6.3 Student income support and scholarships

6.3.1 Youth Allowance and Austudy

Student income support is central to the issue of the affordability of higher education, especially for disadvantaged Australians, though the Government has been almost silent on the issue in its *Crossroads* discussion papers and the *Backing Australia's Future* package of reforms.

Since coming to office in 1996, the Commonwealth Government has tightened access to student financial assistance by:

- Increasing the age at which a student is eligible to receive payment as an Independent⁷⁹ (that is, they are means-tested according to their own income, and not that of their family-of-origin) from 22 to 25 (implemented January 1997)
- Introducing an assets test on students' family-of-origin, while at the same time maintaining a family income test that excludes all but very low income families from access to student financial support (for families with one child, the payment reduces when the parent's income exceeds the threshold of \$27,400)

⁷⁸ Year Book Australia, 2001. *Special Article – Full-time and part-time employment.*

⁷⁹ To be classified as an Independent, a student must demonstrate some independence from their parents over the previous 18-24 months. This independence is measured by various indicators of earnings and/or workforce participation during this time.

- Discontinuing, after 2003, the Student Financial Supplement Scheme – this Scheme gives students the option of borrowing money to help cover study expenses, with one dollar of Youth Allowance, Austudy or Abstudy being traded in for two dollars Financial Supplement.

Research undertaken by the Centre for Population and Urban Research⁸⁰ suggests that these policy changes are resulting in many students delaying entry to university or only studying part-time until they can achieve Independent status and be free of the eligibility tests that apply to their family income and assets. The research shows that the percentage of younger students (aged 19 or less) receiving Youth Allowance declined significantly from 33% in 1998 to 21% in 2001, while the percentage of students aged 20 to 23 in receipt of the Allowance grew significantly in the same time period.

The Long and Hayden study⁸¹ referenced earlier reported that 38.7% of the students it surveyed received Government support of some kind, with the most common forms being the Youth Allowance (23.3% of all students) and Austudy (10.3% of all students). As would be expected, students from lower socio-economic backgrounds are more likely to receive Government income support, though 48.3% of these students received no income support at all.

The study confirmed that the availability of Youth Allowance and Austudy encourages many students to enrol and stay at university, and that students with no Government income support are likely to work longer hours than students with some Government income support. The research, however, highlighted a number of perceived deficiencies in current income support provisions. In particular, criticisms of the schemes include:

- Payments are inadequate to cover living and educational expenses
- The structure of the schemes creates a strong financial disincentive to work more than a day a week on average throughout the year – for every dollar earned after this threshold, payments are reduced by 50 cents, and then 70 cents
- The lack of access to rent assistance for Austudy beneficiaries
- The nature of income and asset tests for eligibility for income support may disadvantage families that are asset rich but cash poor, in particular primary producers in rural Australia.

⁸⁰ Birrell, B., Dobson, I. R., Rapson, V. and Smith, T. F., Higher Education at the Crossroads submission, Centre for Population and Urban Research, Monash University.

⁸¹ Long, M. and Hayden, M. *Paying their way: A survey of Australian undergraduate university student finances, 2000*. AVCC, 2001.

The Australian Council of Social Service (ACOSS) has argued that students are living on payments that are between 20% and 39% below the Henderson poverty line⁸². Students on Austudy receive the lowest rate of payments (39% below the poverty line). ACOSS also highlighted that Austudy payments are substantially less than unemployment benefits, creating a disincentive for unemployed adults to upgrade their qualifications.

Despite the availability of income support programs for some students, the Long and Hayden study found that 1 in every 10 undergraduate students takes out a loan in order to continue their studies, with the average amount borrowed being nearly \$4000. Full-time students who are more likely to obtain a loan are those who:

- Are female and have dependent children or are sole care givers
- Are female and Indigenous
- Are from a lower socio-economic background
- Had to move in order to attend university
- Have a disability.

6.3.2 Abstudy

There have been numerous claims that the Government's changes to Abstudy introduced at the beginning of 2000 have had a significant deleterious effect on Indigenous student participation in higher education⁸³.

The changes to Abstudy also coincided with the discontinuation of the Government's Merit-based Equity Scholarship Scheme⁸⁴. There is some evidence to suggest that the Scheme was effective in enhancing participation of indigenous students. Enrolment levels increased when the Scholarship Scheme was introduced in 1997, and continued to increase for the following years. However, there was a substantial decline in enrolments in 2000 when the Scheme was discontinued (refer Figure 6.1⁸⁵).

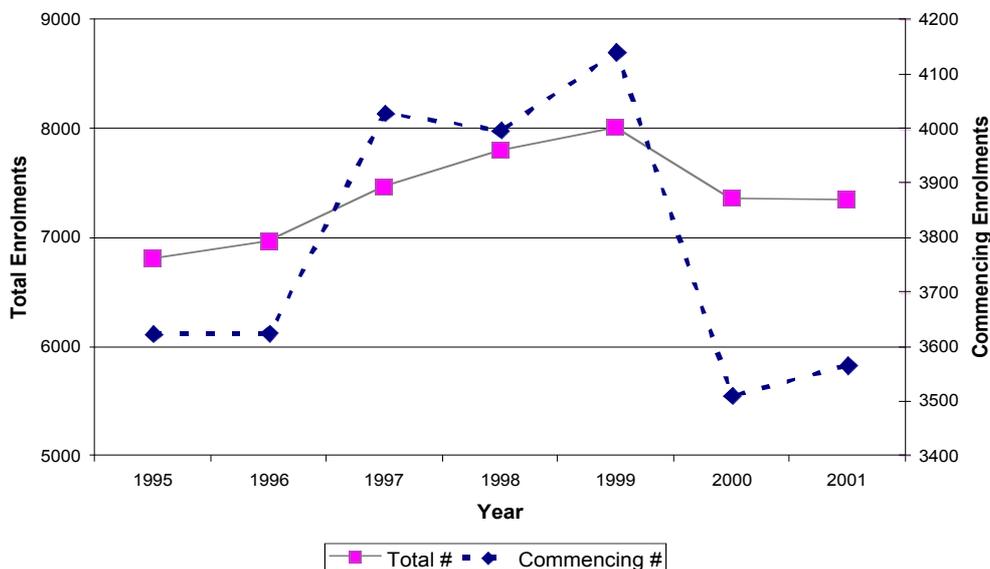
⁸² ACOSS Media Release Tuesday 23 July 2002

⁸³ Refer, for example, to the *Crossroads* submissions of the AVCC Advisory Group on Indigenous Higher Education, the National Indigenous Higher Education Network Committee and the Aboriginal and Torres Strait Islander Commission.

⁸⁴ The Merit-based Equity Scholarships granted full HECS exemption to recipients, with scholarships being granted for an average of 4 years. The Government had planned to build the total number of scholarships to the equivalent of 4000 EFTSU by 2000.

⁸⁵ Comparable figures for 2002 are not available as the Commonwealth changed its method of reporting from 2002. Prior to 2001, enrolment figures represented the number of students enrolled at March 31. From 2002, enrolment figures represent the number of students enrolled at any time over a 12 month period.

Figure 6.1 Indigenous student enrolments, 1995-2001



6.4 Institutional funding in support of equitable access

Since 1990, five equity groups in addition to Indigenous Australians have been recognised as disadvantaged in their access to higher education. These are:

- People from a non-English speaking background
- People with disabilities
- People from rural and isolated areas
- Women in non-traditional areas of study
- People from socio-economically disadvantaged backgrounds.

Universities currently receive special funding in support of equity and access through the Indigenous Support Funding Programme (\$24.3 million in 2003) and Higher Education Equity Programme (HEEP) (\$6.0 million in 2003), both of which are allocated on the basis of equity group student enrolments and performance measures. In addition, institutions may apply for partial reimbursement of the costs incurred in providing educational support and equipment to disabled students. A total of \$1.8 million was distributed in 2002.

A recent United Kingdom pilot study on the costs of widening participation found that students from non-traditional backgrounds are significantly more expensive to recruit, retain and progress through higher education than “traditional” students. The cost premium of supporting these students was estimated to be around 35%⁸⁶.

In the United Kingdom, institutional funding to support equitable access is provided through two schemes:

⁸⁶ *Determining the Costs of Widening Participation*. Universities UK and Higher Education Funding Council of England, 2002.

-
- Widening participation from under-represented regions (£28 million in 2001-02 and £31 million in 2002-03)
 - Raising aspirations among state school students to attend university (£4 million in 2001-02).

The “widening participation” allocations are distributed pro-rata against the number of funded students at each institution drawn from postcode areas with relatively low participation rates in higher education. Postcodes are classified into seven categories of which five are classified as having below average participation. Students from the lowest participation areas attract a weighting of 3, those from the second lowest a weighting of 2, and those in groups 3, 4 and 5 a weighting of 1. Thus the annual allocation is distributed on the basis of a weighted loading related to the level of higher education participation of the student’s home postcode area.

The “raising aspiration” funding is allocated to higher education institutions with fewer than 80% of their enrolments from state schools to enable them to implement programs to encourage applications from such students.

6.5 The higher education and VET interface

The *Crossroads* review devoted considerable attention to the issue of enhancing the interface between the vocational education and training (VET) and higher education sectors in order to maximise access to higher education opportunities. The Government dedicated an entire discussion paper, *Varieties of Learning*, to this and related topics.

The higher education and VET interface is particularly important for disadvantaged students. The student population in the VET sector is far more representative of the diversity of the Australian population than is the case with the higher education sector. According to figures published in the *Varieties of Learning* discussion paper, for example:

- 26% of VET students were from low SES backgrounds, compared with only 15% in higher education
- 34% of VET students were rural/remote students, compared with only 19% in higher education
- 3.3% of VET students were Indigenous, compared with only 1.2% in higher education.

For many disadvantaged students, a pathway from TAFE to university may offer the best chance of accessing higher education.

The *Varieties of Learning* discussion paper noted that:

- There is no national system of credit transfer between VET and higher education, though progress is being made through AVCC/ANTA collaborations and focused efforts in some States
- There is increasing movement across the two sectors, and increasing rates of credit transfer
- Significant barriers remain including fundamental differences in assessment frameworks.

The paper also noted that anomalies exist between sectors in relation to the level and nature of student contributions to the cost of their study:

A student who undertakes a TAFE diploma-level qualification and pays TAFE course fees and then articulates into a degree course would pay significantly less for their qualification than a student who studies solely at university and pays HECS for the duration of the course. However, the student, whilst at TAFE, has no access to an income-contingent loan to pay fees. (p. x)

While the Commonwealth Minister announced that the Government had no intentions of introducing HECS fees to TAFE courses, the *Crossroads* discussion paper also raised the question as to whether higher education courses delivered through TAFE or private providers should be subject to similar arrangements to those in universities. In particular, the paper asked whether students should be offered loans to undertake accredited higher education courses in VET institutions.

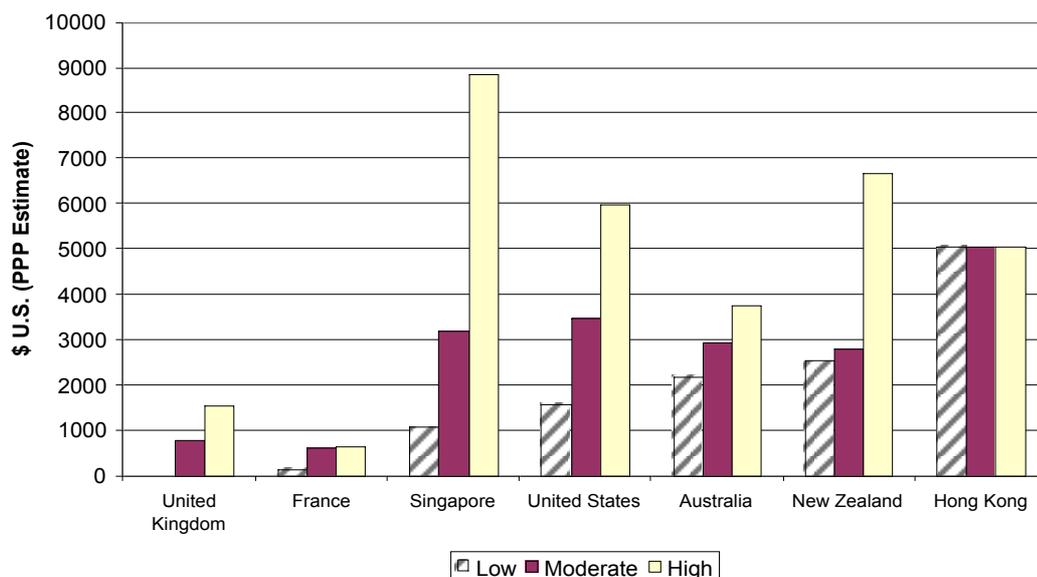
6.6 The impact of current HECS and fee arrangements

6.6.1 The relative cost of tuition via HECS

As discussed in Chapter 2, there is an international trend to shift higher education costs from governments to students and their parents. A key point of debate in educational financing arrangements around the world is “how much should students themselves pay?”. A number of the State Government *Crossroads* submissions argued that students in Australia are already making a high contribution to the cost of their education when compared with other countries, a point supported by the analysis provided in Section 4.3.

The International Comparative Higher Education Finance and Accessibility Project⁸⁷ in the United States has created a comparative international database on the costs of higher education borne by students and parents. Figure 6.2 charts the low, moderate and high range tuition and other fees for public universities in a selection of countries, based on the 2000/01 or the 1999/00 academic year⁸⁸. The fees have been adjusted for purchasing price parity.

Figure 6.2 Comparative tuition and other fees in public universities by country



The differences between the low, medium and high tuition fee levels reflect different Government policies. In Australia, the low fee reflects HECS Band 1, while the high fee reflects HECS Band 3. In New Zealand, the low fee reflects the cost of tuition for Humanities and Social Science students and the high fee reflects the cost of tuition for Medicine and Dentistry students. In the UK, means-based tuition fees apply, with students from low income families paying nothing and high income families paying the full amount. The possibility of universities being able to charge top-up fees above the existing flat-rate tuition fee is currently being debated. In Singapore, the cost variation reflects the differential fees paid at polytechnics and universities, and the high cost of medicine and dentistry courses.

The data indicate that Australian students paying HECS Band 1 fees pay substantially more than students accessing the low cost study options in the United Kingdom, France, Singapore and the United States. Only New Zealand and Hong Kong students pay more.

⁸⁷ International Comparative Higher Education Finance and Accessibility Project. Center for Comparative and Global Studies in Education, Graduate School of Education, University of Buffalo, State University of New York.

⁸⁸ Excludes “One-Time” or “Up Front” Fees such as application fees.

At the medium tuition fee level, Australian students pay substantially more than students in the United Kingdom and France and marginally more than those in New Zealand. Australian fees are not much lower than those charged in Singapore and the United States.

At the upper tuition fee end, Australian students once again pay more than students in the United Kingdom and France, but considerably less than students in Singapore, the United States, New Zealand and Hong Kong. It is important to note, however, that in Singapore and New Zealand the high end tuition fees reflect a policy decision to charge significantly higher fees to Medicine and Dentistry students. In New Zealand, these students pay more than 2.5 times the amount paid in the next most expensive disciplines, while in Singapore they pay almost 3 times the amount paid by other university students. In Australia, Medicine and Dentistry students pay the same as both Law and Veterinary Science students (HECS Band 3), with the amount being only 17% higher than HECS Band 2 fees.

In summary, it appears that the minimum cost of entry to the public higher education system in Australia is high by international standards. With the exception of Hong Kong, medium range fees in Australia are roughly on a par with or higher than those in other countries. However, at the high fee end, Australian fees are relatively modest compared to other countries, especially with regard to Medicine and Dentistry.

6.6.2 Have tuition fees deterred participation?

Since the introduction of HECS in 1989, several studies have investigated the impact of HECS on student participation in general, and on disadvantaged groups in particular. In the main, the research evidence to date indicates that HECS has not had a substantial impact on the willingness or capacity of most Australian students to participate in higher education, nor has it had a deterrent effect on the participation rates of low SES Australians⁸⁹. In fact, a recent discussion paper from the Centre for Economic Policy Research emphasises the role that HECS has played in financing an expansion of the higher education sector and increasing aggregate participation rates⁹⁰.

⁸⁹ Andrews, L. *Does HECS Deter? Factors affecting university participation by low SES groups*, DETYA, August 1999. Andrews, L. *The Effect of HECS on Interest in Undertaking Higher Education*, Department of Employment, Education, Training and Youth Affairs, August 1997.

⁹⁰ Chapman, B. and Ryan, C. *Income-Contingent Financing of Student Charges for Higher Education: Assessing the Australian Innovation*. Centre for Economic Policy Research, ANU, May 2002.

The introduction in 1997 of substantial increases in HECS and differentiation of fee levels according to discipline was also found to have had no discernible impact on university applications⁹¹. International empirical research has also supported the view that net price – that is, the combined effect of tuition discounted by financial aid – has little effect on the participation of middle and upper middle income students⁹².

As discussed earlier, however, there is growing evidence both in Australia and overseas that as costs rise, student behaviours and enrolment patterns are increasingly being influenced by the expense of undertaking university study, especially among disadvantaged groups.

6.6.3 The method of payment

Students currently pay their HECS debts in a number of ways:

- Up-front in full with a 25% discount (to be reduced to 20% under the *Backing Australia's Future* policy)
- Up-front in full without a discount (New Zealand citizens and some Australian permanent residents)
- On a deferred income-contingent basis through the taxation system
- Voluntary payments (15% bonus) (to be reduced to 10% under the new policy).

A 1998 study⁹³ found that the up-front payment behaviour of HECS liable students is:

- Very sensitive to changes to the up front discount rate
- Very sensitive to any suggestion of the imposition of a real rate of interest on HECS debt
- Sensitive to changes in the annual level of HECS – the higher the fee, the less willing they would be to pay up-front
- Slightly sensitive to the changes in the voluntary discount rate
- Insensitive to changes in threshold levels for compulsory payments of HECS debts.

The typical profile of an up-front payer was a part-time student, aged over 25, in paid full-time employment and earning over \$20 000 per annum. In contrast, the typical profile of a deferred payer was a full-time student, aged between 16 and 24 years old, being unemployed or employed part-time and earning below \$20 701 per annum.

⁹¹ Andrews, L. *The Effect of HECS on Interest in Undertaking Higher Education*. DETYA, 1997.

⁹² Johnstone, B.D., and Shroff-Mehta, P. *Higher Education Finance and Accessibility: An International Comparative Examination of Tuition and Financial Assistance Policies*. Centre for Comparative and Global Studies in Education, State University of New York, 2000.

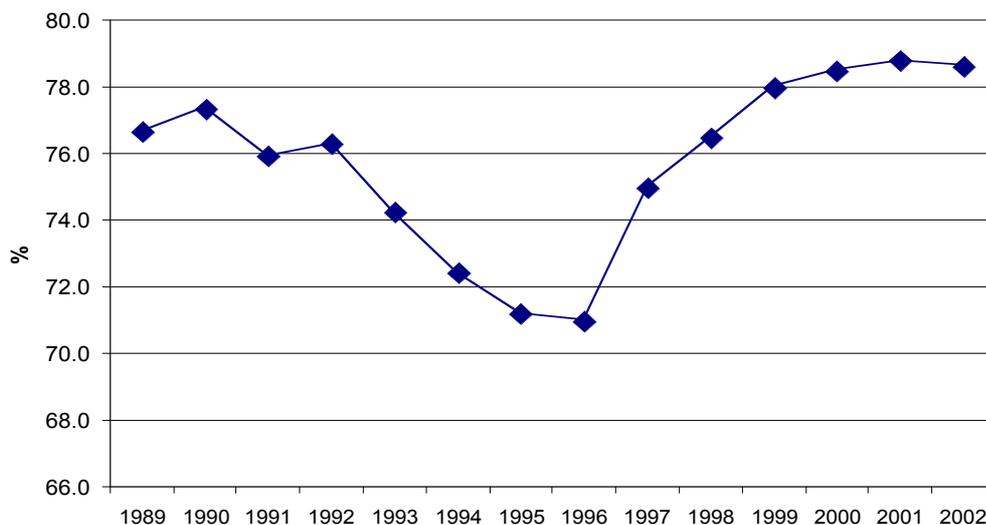
⁹³ Smith, S., Ramm, C. and Archbold, R. *Investigation of the Source of Funds for Up Front Higher Education Contribution Scheme (HECS) Contributions and Postgraduate Fees Paid by Australian Students*. DETYA, 1998.

Figure 6.3 provides a timeline trend of the percentage of students who deferred their HECS payment between 1989 and 2002. Figures for 1989 to 1996 are based on student enrolments, while figures for 1997 onwards are based on student load. In our estimation, the percentages for 1989 to 1996 would have been roughly 2 percentage points higher if they had been based on EFTSU instead of enrolments (as full-time students are more likely to defer payment), and this should be borne in mind in interpreting the chart.

After some initial instability in deferral rates following the introduction of HECS, the rate of deferral declined steadily up to 1996, perhaps reflecting the increase of the up-front discount rate from the initial 15% to 25%. Since 1996, however, the trend has reversed with deferral rates increasing steadily up to 1999 and then continuing to increase, but at a slower rate, to 2001 and 2002. Given research findings that students are less willing to pay up-front with an increase in fees, it seems reasonable to suppose that the introduction of increased fees and differential HECS in 1997 led to more commencing students choosing to defer payment. The significant increase in rates of deferral up to 1999 would be consistent with the flow through of such a change in commencing student behaviour. More detailed research would be needed to test this assertion.

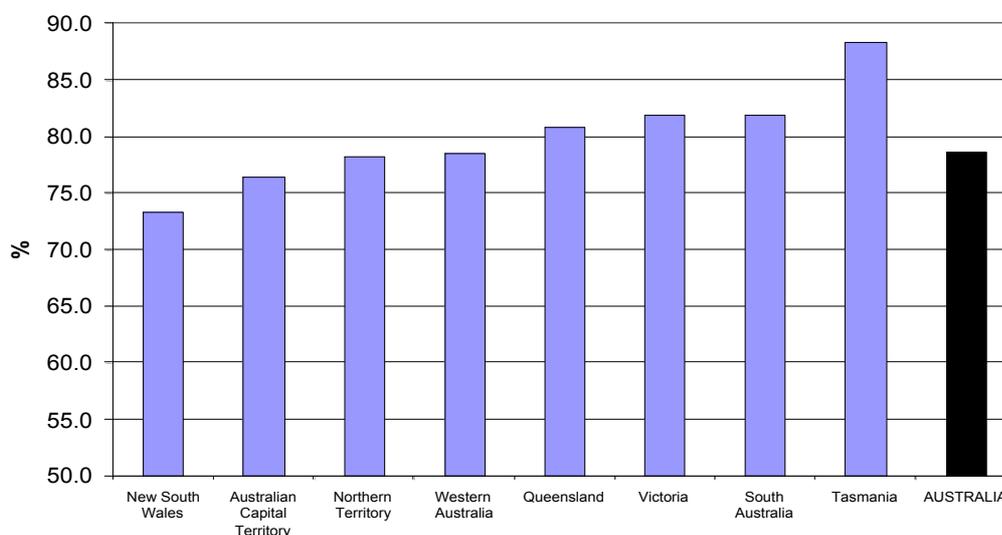
The overall trend suggests that fee levels may have reached a point of considerable sensitivity in terms of students' capacity to find the necessary funds to pay up-front.

Figure 6.3 Percentage of students deferring HECS payment, 1989-2002



The rate at which students defer payment of HECS fees differs across States, as displayed in Figure 6.4.

Figure 6.4 Percentage of student load for which HECS payment is deferred, 2002



The rate of deferral ranges from 73% in New South Wales to 88% in Tasmania. The pattern of differentiation between States could suggest a link to the socio-economic profile of State populations. For example, in 1996 Tasmania recorded the lowest average household income of all the States⁹⁴, and that State has a high percentage of the population classified as socio-economically disadvantaged. However, the pattern is not entirely consistent.

6.6.4 The shift to postgraduate fee paying courses

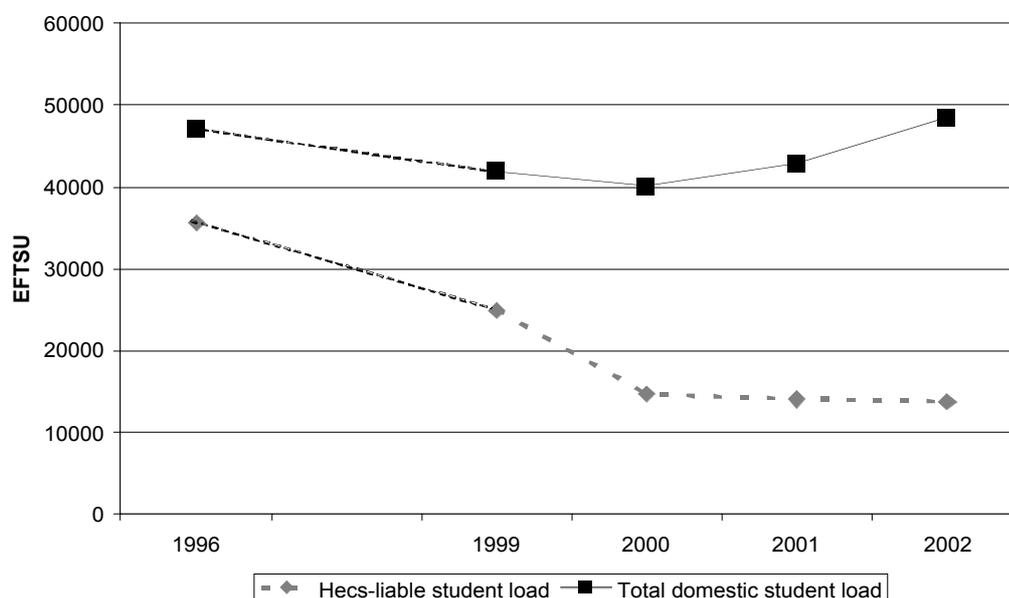
In 1996, 76% of domestic postgraduate coursework students undertook their studies on a HECS-liable basis. By 2002, this had declined to 29%, with 71% of students paying full fees. These trends are the result of deliberate Commonwealth policy to limit the total number of government subsidised places while protecting access for undergraduate students.

Figure 6.5 shows HECS-liable and total postgraduate coursework student load for 1996 to 2002⁹⁵.

⁹⁴ Lloyd, R., Harding, A. and Hellwig, O. *Regional Divide? A Study of Incomes in Regional Australia*. National Centre for Social and Economic Modelling, University of Canberra. Paper presented at the 29th Conference of Economists, July 2000.

⁹⁵ Source: *Selected Higher Education Student Statistics*, 1996, 1999, 2000, 2001 and 2002. 1996 enrolment figures have been converted to EFTSU on the basis of the 1996 EFTSU to enrolment ratio for all postgraduate coursework students. Comparable figures for 1997 and 1998 were not published and have not been included in the Figure. We have extrapolated the trendline over this period.

Figure 6.5 Trends in postgraduate coursework student load



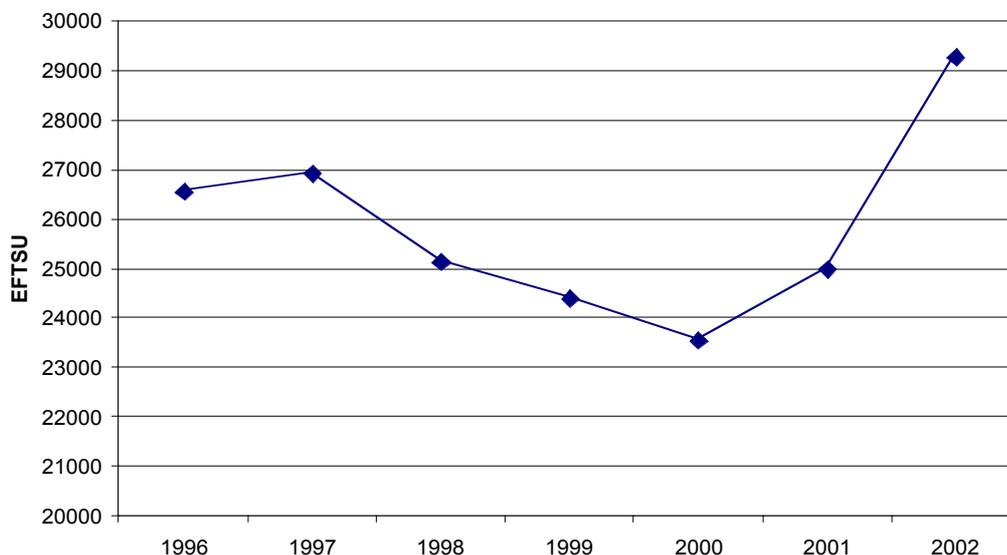
The quantum of HECS-liable load for domestic postgraduate coursework students declined by over 75% between 1996 and 2002. This represented about 13,800 EFTSU in 2002. The implied postgraduate coursework student load funded by the Commonwealth in 2002 was 21,455 EFTSU⁹⁶. The difference is due to most universities being over-enrolled at the undergraduate level and consequently allocating less of their funded places to postgraduate courses.

Total commencing domestic postgraduate coursework student load declined by 11% between 1996 and 2000, and then increased by 24% between 2000 and 2002, with most of this increase occurring into 2002 (refer Figure 6.6⁹⁷). In January 2001, the Commonwealth announced the Postgraduate Education Loans (PELS) scheme as part of its *Backing Australia's Ability* package. PELS provides an interest-free loan with deferred repayment arrangements similar to those for the HECS scheme.

⁹⁶ Higher Education Report for the 2003-2005 Triennium

⁹⁷ Students 2001: Selected Higher Education Statistics, Table 35 and Students 2002: Selected Higher Education Statistics, Table 39.

Figure 6.6 Student load (EFTSU) for commencing domestic postgraduate coursework students



The trend suggests that as HECS-liable places became less available, commencing enrolments declined in the face of student resistance to paying up-front fees. The introduction of the interest-free income contingent loan scheme, however, coincided with a dramatic increase in domestic enrolments.

6.6.5 The impact of HECS debts on graduates

There has been growing community disquiet about the long term social impacts of HECS debts, including for example, their influence on the national birth rate and home ownership.

The Australian newspaper recently commissioned the National Centre for Social and Economic Modelling (NATSEM) to investigate household income, home ownership and wealth measures for ‘Generation HECS’ compared with ‘Free education baby boomers’⁹⁸. The study looked at the measures for 25-34 year olds in 1986 and again in 1998. Table 6.1 summarises the findings, as reported by *The Australian*.

⁹⁸ *Home truths on Generation HECS* by George Megalogenis, *The Australian*, May 19, 2003, p. 6.

Table 6.1 Comparative measures for HECS graduates and ‘free education baby boomers’*

Measure	‘Generation HECS’ (25 to 34 year olds in 1998)		‘Free Education Baby Boomers’ (25 to 34 year olds in 1986)	
	<i>Graduates</i>	<i>Non-Graduates</i>	<i>Graduates</i>	<i>Non-Graduates</i>
Household income*	\$71,200	\$46,305	\$62,487	\$45,438
Home ownership rate	38.8%	33.6%	53.7%	44.5%
Wealth*	\$172,887	\$152,234	\$197,165	\$152,282

* Expressed in 1998 dollars

The figures indicate that while ‘Generation HECS’ graduates earn 14% more on average than their baby boomer counterparts, there has been a 14.9 percentage point fall in home ownership for graduates between 1986 and 1998. Two possible explanations were offered for this trend: graduate resistance to taking on a mortgage in addition to their HECS debts; or students spending longer at university and/or graduating at older ages and deferring buying a home.

As noted earlier, researchers at the Centre for Population and Urban Research have also concluded that government policy relating to the Youth Allowance is encouraging many young Australians to delay entry to university.

Table 6.1 also suggests that while the income gap between graduates and non-graduates has widened, the gaps in wealth and the rate of home ownership have narrowed, possibly reflecting the impact of HECS debts on graduates.

APPENDIX A

INDEPENDENT STUDY OF IMPACT OF THE HIGHER EDUCATION REVIEW

Terms of Reference

The first stage of the MCEETYA study will provide a detailed analysis of the issues outlined in discussion papers and Commonwealth subsequent decisions and their impact on the following:

- i. the revenue base of Australia's universities, including the level of public funding
- ii. the cost and impact of tuition fees for students
- iii. living costs associated with university attendance, the level of income support for students and its effect on participation
- iv. student enrolment levels
- v. the participation of students from disadvantaged background in higher education including Indigenous students
- vi. the level of unmet demand for university places by qualified applicants
- vii. the current shortage in teachers and nurses
- viii. teacher student ratios
- ix. the specific effect on rural and regional universities and on rural and regional economies
- x. rationalisation or shifts in university profiles
- xi. research capacity
- xii. staffing and industrial relations
- xiii. the desired future size of the higher education and training sector

Timeframe

An initial report on the study will be produced by the end of 2002. The second stage will report on the final outcome of the Higher Education review process and the areas outlined above. A final report will be available by March 2003 for consideration by the next MCEETYA meeting in 2003.

Steering Committee

The process will be undertaken by the Joint Committee on Higher Education

APPENDIX B

DEFINITION OF NET ENTRY RATE FOR THE PURPOSE OF BENCHMARKING HIGHER EDUCATION OPPORTUNITIES

The net entry rate for this purpose could be calculated as follows:

- Identify the number of non-overseas students commencing an undergraduate award course in a HECS-liable (funded) place who are new to higher education, by State of permanent home residence, by single year of age.
- Calculate the net entry rate for each State and each year of age by dividing the relevant number of commencing students by the number of the corresponding age in the State population (times 100 to give a percentage rate).
- The net entry rate for each State is the sum of the single year of age net entry rates.

APPENDIX C
UNIVERSITY REVENUES BY STATE AND SOURCE

University revenues by State and source, 1995 and 2001																		
	Commonwealth			HECS			Fees and charges			State			Other			Total		
	1995	2001	% change	1995	2001	% change	1995	2001	% change	1995	2001	% change	1995	2001	% change	1995	2001	% change
NSW	1337320	1336181	-0.1	273078	546914	100.3	305299	650980	113.2	12847	14278	11.1	444012	431388	-2.8	2372556	2979741	25.6
Vic	1075678	1087026	1.1	252750	457459	81.0	243504	618009	153.8	48793	45193	-7.4	343615	483608	40.7	1964340	2691295	37.0
Qld	675369	742186	9.9	150915	340908	125.9	142713	347983	143.8	12309	28235	129.4	161431	338663	109.8	1142737	1797975	57.3
WA	380021	408575	7.5	83859	170794	103.7	85529	209054	144.4	15269	57814	278.6	150696	208328	38.2	715374	1054565	47.4
SA	353299	382729	8.3	71057	131453	85.0	46118	112420	143.8	6268	18449	194.3	95525	84950	-11.1	572267	730001	27.6
Tas	110392	112678	2.1	19308	36224	87.6	13649	21481	57.4	1887	7348	289.4	16890	20730	22.7	162126	198461	22.4
NT	44447	44032	-0.9	6122	11972	95.6	4632	7647	65.1	3632	515	-85.8	8620	8417	-2.4	67453	72583	7.6
ACT	286827	313075	9.2	31658	48374	52.8	33107	43498	31.4	2237	1389	-37.9	117224	176579	50.6	471053	582915	23.7
Multi-State	44717	43729	-2.2	13299	27064	103.5	5852	9589	63.9	468	4760	917.1	3479	9422	170.8	67815	94564	39.4
Total	4308070	4470211	3.8	902046	1771162	96.3	880403	2020661	129.5	103710	177981	71.6	1341492	1762085	31.4	7535721	10202100	35.4

University revenue by State 2001 - share by revenue source (%)					
	Commonwealth	HECS	Fees and charges	State	Other
NSW	44.8	18.4	21.8	0.5	14.5
Vic	40.4	17.0	23.0	1.7	18.0
Qld	41.3	19.0	19.4	1.6	18.8
WA	38.7	16.2	19.8	5.5	19.8
SA	52.4	18.0	15.4	2.5	11.6
Tas	56.8	18.3	10.8	3.7	10.4
NT	60.7	16.5	10.5	0.7	11.6
ACT	53.7	8.3	7.5	0.2	30.3
Multi-State	46.2	28.6	10.1	5.0	10.0
Total	43.8	17.4	19.8	1.7	17.3

(Source: DEST Selected Higher Education Finance Statistics)

APPENDIX D

'REGIONAL' INSTITUTIONS FOR PURPOSES OF MODELLING

All Non-Overseas Students by Institution and Rural and Isolated Status, 2001			
Institution	Rural + Isolated	Non-Overseas	
		Total	% Rural + Isolated
REGIONAL INSTITUTIONS			
University of the Sunshine Coast	2467	3,005	82.1
Batchelor Institute of Indigenous Tertiary Education	511	647	79
Marcus Oldham College	77	99	77.8
Central Queensland University	8650	11,349	76.2
University of Ballarat	3241	4,293	75.5
Southern Cross University	5838	9,237	63.2
University of Southern Queensland	8048	14,812	54.3
James Cook University	5176	10,532	49.1
The University of New England	7129	15,879	44.9
Charles Sturt University	11836	26,456	44.7
The University of Notre Dame Australia	173	388	44.6
Australian Maritime College	459	1,036	44.3
University of Tasmania	4612	11,413	40.4
La Trobe University	6473	19,538	33.1
NON-REGIONAL INSTITUTIONS			
Avondale College	132	559	23.6
Deakin University	6010	27,985	21.5
Northern Territory University	855	4,224	20.2
The University of Queensland	5820	28,987	20.1
University of South Australia	3296	21,366	15.4
Australian Catholic University	1461	9,810	14.9
The Australian National University	1218	8,344	14.6
University of Wollongong	1554	10,719	14.5
Queensland University of Technology	4160	29,030	14.3
Melbourne College of Divinity	43	307	14
Edith Cowan University	2268	16,831	13.5
The Flinders University of South Australia	1440	10,964	13.1
University of Canberra	1009	7,771	13
Monash University	4517	34,805	13
The University of Newcastle	2242	17,763	12.6
Griffith University	2862	23,055	12.4
The University of Melbourne	3509	29,776	11.8
Murdoch University	1155	9,908	11.7
Curtin University of Technology	2173	19,561	11.1
National Institute of Dramatic Art	17	156	10.9
The University of Adelaide	1324	12,673	10.4
Royal Melbourne Institute of Technology	2293	22,689	10.1
Victoria University of Technology	1231	14,414	8.5
The University of Western Australia	1028	12,900	8
The University of Sydney	2538	32,278	7.9
Swinburne University of Technology	718	10,421	6.9
The University of New South Wales	1249	29,310	4.3
Australian Film, Television and Radio School	4	94	4.3
University of Western Sydney	1018	27,133	3.8
Macquarie University	700	18,827	3.7
University of Technology, Sydney	720	22,471	3.2
TOTAL	123254	643,828	19.1

