

Chapter seven – Students and Staff

Major changes in the operating environment of universities over the 1990s had a significant impact on the two groups fundamental to university life – staff and students.

Powerful drivers of change included a rapid expansion in places funded by the Commonwealth between 1990 and 1997, the introduction of the Higher Education Contribution Scheme and the deregulation of the overseas and postgraduate education markets that enabled universities to diversify their revenue sources.

There were significant changes to the workplace environment of universities. Universities were required to negotiate enterprise agreements with their staff and towards the end of the decade incentives were provided by the Commonwealth to encourage universities to improve their workplace practices. There were fundamental changes to the way in which staff salary increases were funded. With full supplementation of salary increases no longer being provided by the Commonwealth it was necessary for universities to fund them through increases in productivity. Later on the introduction of the *Higher Education Contract of Employment Award 1998* made it less attractive for universities to employ staff on contract.

These changes resulted in far-reaching changes to the staffing profile of universities. By the end of the decade, almost 20 per cent of academic staff were employed on a casual basis and they made up 88 per cent of staff with teaching only functions within universities. The strongest growth in academic staff occurred in the most junior academic classification although the number of 'above senior lecturers' also increased significantly. As the decade proceeded the growth in staffing numbers did not keep pace with the growth in student numbers.

Demographic changes also impacted on demand. In fact, although the Australian population is predicted to increase by over 13 per cent in the next 20 years the student body is expected to increase by less than five per cent as a result of the ageing of the Australian population. The labour market and the participation of people in higher education are also closely linked. When unemployment rates are low, school leavers are somewhat less likely to enrol in university, taking advantage of the better employment opportunities instead. On the other hand, changes in the labour market over the decade improved the employment prospects of graduates.

This chapter examines how the changing environment for universities, affected the student body and the staffing profile.

7.1 Students

Expansion of the higher education sector

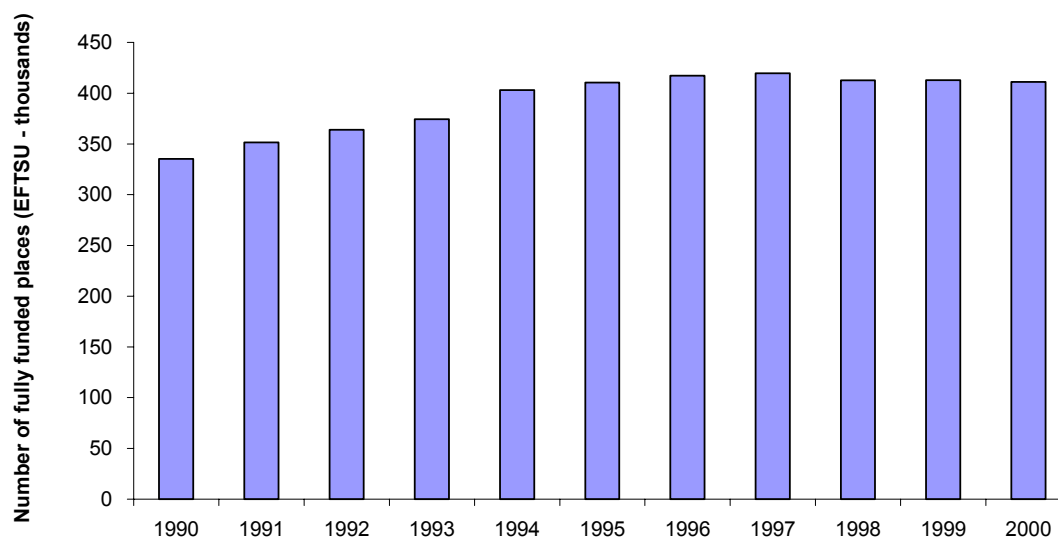
As mentioned in previous chapters, the formation of the Unified National System at the beginning of the decade radically altered the nature of higher education in Australia. It considerably increased the number of universities as well as the number of staff able to conduct research. The Commonwealth Government also increased access to university by increasing the number of fully funded places available to students.

The targets set for student enrolments at universities, expressed as equivalent full-time student units, increased each year from 1990 to 1997 (Figure 7.1). In 1994 the targets were set at over 400,000 for the first time and from that year the proportion of places to go to undergraduates was specified in the target for each university. After 1997 the total national target fell slightly but

remained above 400,000 places. The undergraduate target continued to grow from 342,590 in 1994 to 365,920 by 2000.

In 1998 and subsequent years, the Commonwealth Government paid universities the equivalent of the minimum up-front differential HECS payment for each undergraduate student enrolled above the target level who was liable to pay the contribution. This was equal to \$2,644 per student in 2001. Universities have always been able to enrol more students than the number they were funded for by the Commonwealth. This 'marginal' funding provided some recognition of the costs incurred by universities that enrolled students additional to their funded load.

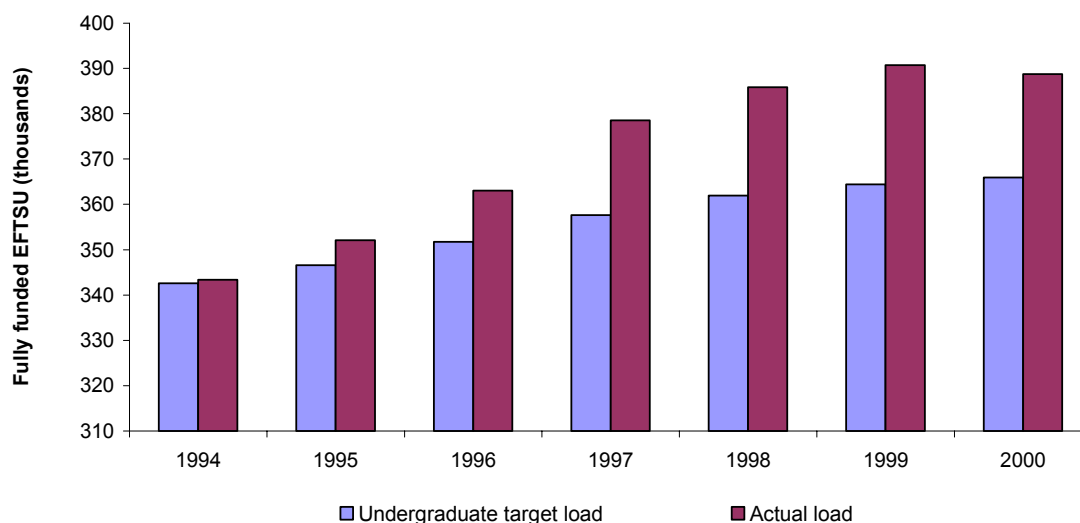
Figure 7.1 Total targets for fully funded student places (expressed in equivalent full-time student unit load) 1990 to 2000



Source: Department of Education, Science and Training Statistical Collection

In 1996 enrolments of undergraduates above the target set by the Commonwealth became significant (Figure 7.2). The reasons for this increase are not clear but given the complex process associated with making offers to new students it is possible universities made too many offers or that there was a higher than usual take-up of offers. The over-enrolment in 1996 may also have been related to the expected growth in the system in following years that did not eventuate. The over-enrolment in 1997 was even more dramatic than in 1996. It is possible that this increase was in response to mooted introduction of marginal funding that the sector knew would be available in 1998. Funding for students enrolled above target totalled \$45.6 million in 1998. In 1999, \$50.8 million was paid to universities for over-enrolment at the undergraduate level and in 2000 almost \$45 million was paid.

Figure 7.2 Undergraduate target and actual load funded under operating grant 1994 to 2000



Source: Department of Education, Science and Training Statistical Collection

Note: Actual load does not include NIDA, ADFA, AFTRS, Batchelor, AMC, Marcus Oldham, fee-paying undergraduates and other domestic non-operating grant undergraduate load.

Over the decade, the number of students in higher education increased by 30 per cent, from approximately 534,500 students in 1991 to 695,500 students in 2000. The number of domestic higher education students increased by around 95,000 or 19 per cent. Box 7.1 provides a comparison of the characteristics of students in 1991 and 2000. The impact of the expansion of the higher education sector on increasing access to a university education, especially by people belonging to equity groups, is discussed in detail in chapter four on access and equity.

There were some major changes in the characteristics of students between 1991 and 2000. The most significant increases were in the numbers of students studying at the bachelor and higher degree levels (Figure 7.3). The only area where student numbers did not increase was in the 'other' undergraduate category that includes students studying for diplomas and associate diplomas. As mentioned previously, the number of overseas students and the number of students studying externally increased significantly over the span of the 1990s. There were shifts in the number of students in particular fields of study especially in business, administration and economics.

Box 7.1 Characteristics of students over the decade

Table 7.1

students	1991	2000	Absolute change	% change
total domestic students	504 880	599 878	94 998	19
total overseas students	29 630	95 607	65 977	223
total students	534 510	695 485	160 975	30
level of course				
higher degree - research	19 431	37 377	17 946	92
higher degree - coursework	24 811	59 624	34 813	140
other postgraduate	48 637	45 422	-3 215	-7

bachelor	380 771	526 809	146 038	38
other undergraduate	55 267	13 910	-41 357	-75
enabling & non-award course	5 593	12 343	6 750	121
total	534 510	695 485	160 975	30
type of enrolment				
internal full-time	328 419	407 877	79 458	24
internal part-time	149 244	192 247	43 003	29
external	56 847	95 361	38 514	68
total	534 510	695 485	160 975	30
gender				
males	249 665	311 371	61 706	25
females	284 845	384 114	99 269	35
total	534 510	695 485	160 975	30
field of study				
agriculture, animal husbandry	9 876	111 361	1 260	13
architecture, building	11 243	15 463	4 220	38
arts, humanities and social sciences	121 353	170 237	48 884	40
business, admin., economics	112 666	180 503	67 837	60
education	79 574	73 680	-5 894	-7
engineering, surveying	40 207	50 780	10 573	26
health	61 874	79 731	17 857	29
law, legal studies	16 310	36 331	20 021	123
science	75 961	115 396	39 435	52
veterinary science	1 612	1 864	252	16
non-award	3 834	8 807	4 973	130
total (a)	534 510	695 485	160 975	30
Indigenous students				
Aboriginal or Torres Strait Islander—males	1 820	2 610	790	43
Aboriginal or Torres Strait Islander—females	2 987	4 740	1 753	59
Total	4 807	7 350	2 543	53
not Aboriginal or Torres Strait Islander	529 703	688 135	158 432	30
Total	534 510	695 485	160 975	30
commencing students by age group				
under 25	134 155	173 646	39 491	29
25 to 29	25 907	39 508	13 601	52
30 to 39(b)	57 857	43 429	n/a	n/a
40 and over		28 935	n/a	n/a
Total	217 919	285 518	67 599	31
award course completions				

domestic students	101 358	136 101	34 743	34
overseas students	6 304	34 988	28 684	455
Total	107 662	171 089	63 427	59
Males	46 710	71 082	24 372	52
Females	60 952	96 007	35 055	58
Total	107 662	171 089	63 427	59
Higher Education Contribution Scheme status				
HECS liable students:				
liability deferred to taxation				
system	265 592	314 754	49 162	18
liability paid	65 494	86 245	20 751	32
Total	331 086	400 999	69 913	21
HECS exempt students:				
total (actual student load)	91 477	156 792	65 315	71
	422 563	557 791	135 228	32
fee-paying students—overseas students				
postgraduate	5 177	29 181	24 004	464
undergraduate	18 503	63 716	45 213	244
other	674	2 705	2 030	301
Total	24 354	95 602	71 248	293
fee-paying students—domestic students				
postgraduate	8 893	51 460	42 567	479
undergraduate	5	4 142	4 137	-
other	3 190	6 076	2 886	90
Total	12 088	61 678	49 590	410
total fee-paying students				
postgraduate	14 070	80 641	66 571	473
undergraduate	18 508	67 858	49 350	267
other	3 864	8 781	4 917	127
total (c)	36 442	157 280	120 838	867
all domestic students by equity group				
students from a non English speaking background (arrived in previous 10 years)	20 769	23 674	2 905	14
students with a disability	n/a	18 926	18 926	-
women in non-traditional area	80 278	125 376	45 098	56
Indigenous (d)	4 790	7 682	2 892	60
rural	93 126	110 914	17 788	19
isolated	9 500	11 218	1 718	18
low socio-economic status	74 231	93 011	18 780	25
Total	282 694	390 801	108 107	38
(a) Students undertaking a combined course are coded to two fields of study and as a consequence the sum of the field of study column will be larger than the amount shown for the total.				
(b) 1991 figure is total for ages 30+				

(c) Open learning courses (undergraduate & postgraduate) are not included in these totals.
 (d) Indigenous data here do not agree with the totals above because different definitions are used in compiling equity data.
 Source: Department of Education, Science and Training Statistical Collection

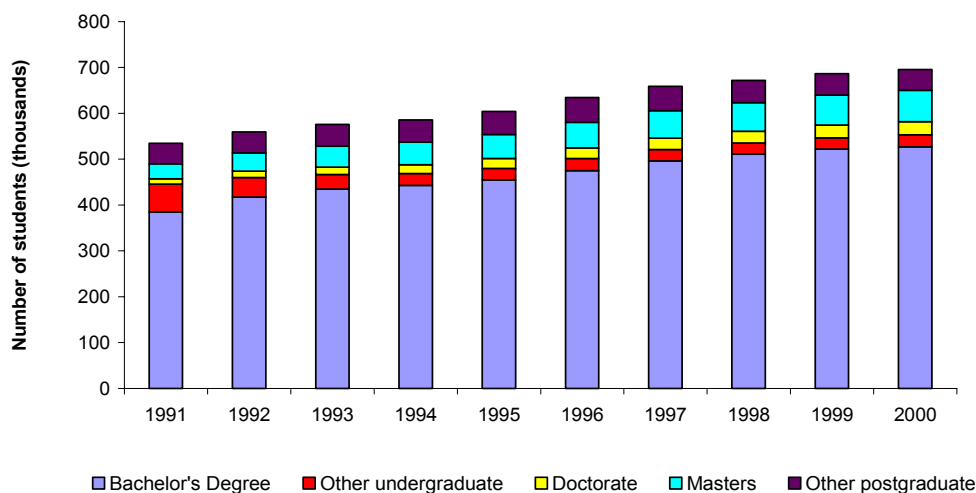
The substantial increase in the number of students participating in higher education during the 1990s raised concerns about the quality of students. A stylised view was that as more students entered higher education, academic ability of the ‘marginal student’ decreased; that is as higher education expanded at the margin, students of lesser academic ability were admitted to institutions. However, there is little evidence to date suggesting that the academic ability of students has declined.

Deregulation and diversification of revenue sources

The partial deregulation of the higher education market had a profound effect on the operation of universities. It began around the mid 1980s with the recognition that Australian universities had the potential to earn export revenue by providing educational services to overseas students. Prior to this time, fully subsidised higher education had been a primary element in Australia’s overseas aid program. Both the Labor and Coalition Governments progressively relaxed prohibitions on the ability of universities to charge fees and streamlined overseas student entry. From 1986 universities were able to charge full fees for overseas students. Universities were quick to take up the opportunity to generate income that this initiative provided and by 1999 revenue from fee-paying overseas students amounted to \$805 million or approximately 10 per cent of revenue to the sector.

There was significant growth in the numbers of overseas students over the decade, with numbers more than tripling between 1991 and 1999 (Figure 7.4)¹¹⁴. Growth in the number of domestic students was less dramatic and between 1999 and 2000, the number of domestic students in Australian universities actually declined. However, the increase in the number of overseas students between 1999 and 2000 more than made up for the decline in domestic students.

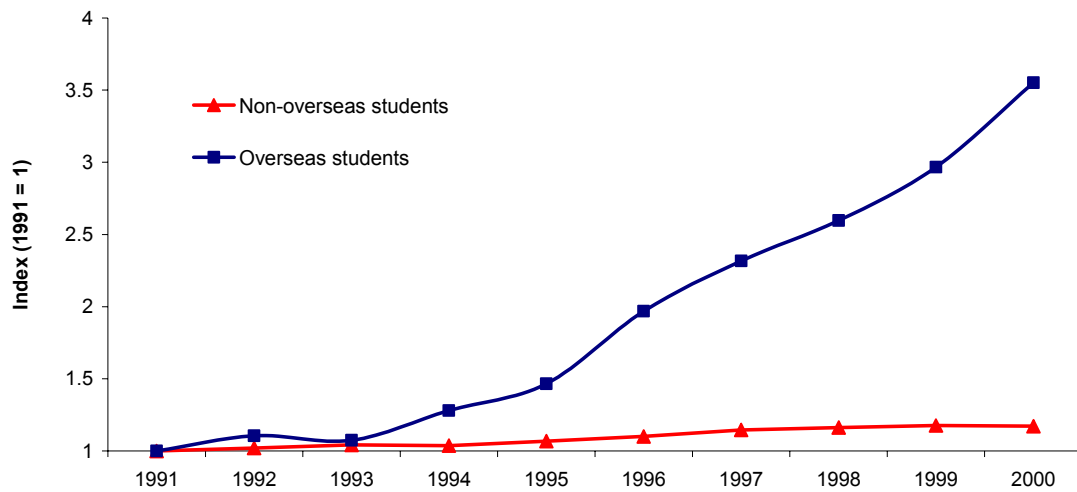
Figure 7.3 Numbers of all students by broad level of course



Source: Department of Education, Science and Training Statistical Collection

¹¹⁴ In the Higher Education Statistical Collection overseas students include those students who are not Australian or New Zealand citizens, or permanent residents, who are studying with Australian institutions either in Australia or in another Country. Prior to 1996 New Zealand citizens were counted as overseas students.

Figure 7.4 Changes in the numbers of overseas and domestic students 1991 to 2000 relative to the numbers in 1991



Source: Department of Education, Science and Training Statistical Collection.

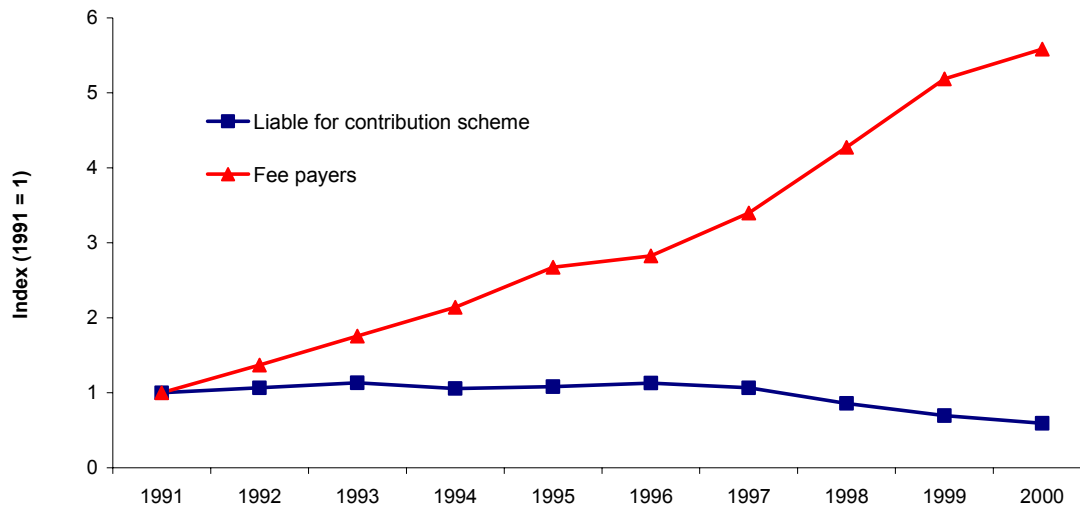
The deregulation of higher education gained momentum in the 1990s. Fee-paying postgraduate courses for Australian students were gradually introduced and by 1994 all but minor prohibitions on fees were removed. Growth in domestic fee-paying students dominated growth in postgraduate studies over the 1990s. In 1999 domestic postgraduate fees provided \$176 million to institutional revenue. The numbers of fee-paying Australian postgraduate students consistently increased from about 13,000 students in 1991 to around 73,000 in 2000 (Figure 7.5). This represents an almost six fold increase in fee-paying postgraduate students. At the same time postgraduate students enrolled under the Higher Education Contribution Scheme declined by around 40 per cent.

Table 7.2 Domestic fee-paying undergraduate places 1998 to 2000

	1998 EFTSU	1999 EFTSU	2000 EFTSU
undergraduate students	829	1,786	2,648

Source: Department of Education, Science and Training Statistical Collection

Figure 7.5 Changes in numbers of domestic postgraduate students from 1991-2000 relative to the number in 1991



Source: Department of Education, Science and Training Statistical Collection

From 1 January 1998, universities were also allowed to offer places to domestic undergraduate students for a fee payable directly to the university. However, fee-paying places could only be offered after institutions filled their target number of Higher Education Contribution Scheme undergraduate places. The number of fee-paying places was also limited to no more than 25 per cent of the total enrolment of domestic undergraduates in any course. Domestic fee-paying students must be charged, at a minimum, the equivalent of the differential contribution that would have been charged had they enrolled on a Higher Education Contribution Scheme liable basis. In addition, all students under the scheme must be able to complete the requirements of their course and have access to the full range of unit electives for their course.

Domestic undergraduate fee-paying places have not been in great demand, with the exception of a small number of popular courses, however, the numbers of students taking this option increased significantly over the three years since its introduction (Table 7.1).

Higher Education Contribution Scheme

The implementation and modification of the Higher Education Contribution Scheme was one of the major drivers of change to higher education in the 1990s. It was the result of the recommendations of the Wran Committee. The Wran Committee had noted that, while taxpayers carried most of the burden of the cost of higher education, relatively few taxpayers either used, or directly benefited from, higher education. The Committee proposed that those students who benefited directly from higher education should contribute more directly to the cost of the system. The Committee recommended that the contribution by students should be related to the cost of the course they undertook. The Commonwealth largely accepted the recommendations of the Wran Committee and in the second half of 1988 announced its decision to proceed with what has become known as the Higher Education Contribution Scheme.

As well as reflecting the personal benefit they receive from higher education, the scheme ensured that no Australian student was prevented from entering university through an inability to pay up-front fees. Students could pay their contribution up-front or choose to make their repayments through the taxation system when they were earning an income.

Box 7.2 Higher Education Contribution Scheme**Table 7.3 Changes in the Higher Education Contribution Scheme repayment thresholds since 1989**

Year	Changes to repayment thresholds
1988-89	Repayment rates were 1, 2 and 3 per cent of a person's income, depending on the level of income. Minimum threshold for compulsory repayment was set at \$22,000. Thresholds were indexed every year by the Consumer Price Index
1990-91	Rates of repayment were increased to 2, 3 and 4 per cent of income.
1993-94	Rates of repayment were increased to 3, 4 and 5 per cent of income. Thresholds were recalculated to reflect Average Weekly Earnings. Indexation of thresholds changed from the Consumer Price Index to Average Weekly Earnings.
1996-97	Four intermediate repayment thresholds were introduced at rates of 3.5, 4.5, 5.5 and 6 per cent. People repaying their contribution scheme debt were required to include the amount by which their taxable income had been reduced by any net rental loss. Minimum threshold for compulsory repayment was \$28,495. This increase was the result of indexation to reflect changes in costs (also partly due to rebasement of minimum HECS repayment threshold in 1993-94).
1997-98	Minimum threshold for compulsory repayment was reduced to \$20,701, thereby increasing the number of people making compulsory repayments.
1999-0	People repaying their contribution scheme debt were required to include reportable fringe benefits as part of their income.

As a result of 1996 Budget measures noted in the table above, substantial changes were made to the contribution required from students. Consistent with the original recommendation of the Wran Committee differential contributions were introduced. The amounts students were required to contribute were differentiated according to three bands based on discipline groups which reflected the different costs involved in providing such courses and the remuneration that could be expected (Table 7. 4).

Table 7.4 Contribution bands at the year 2000

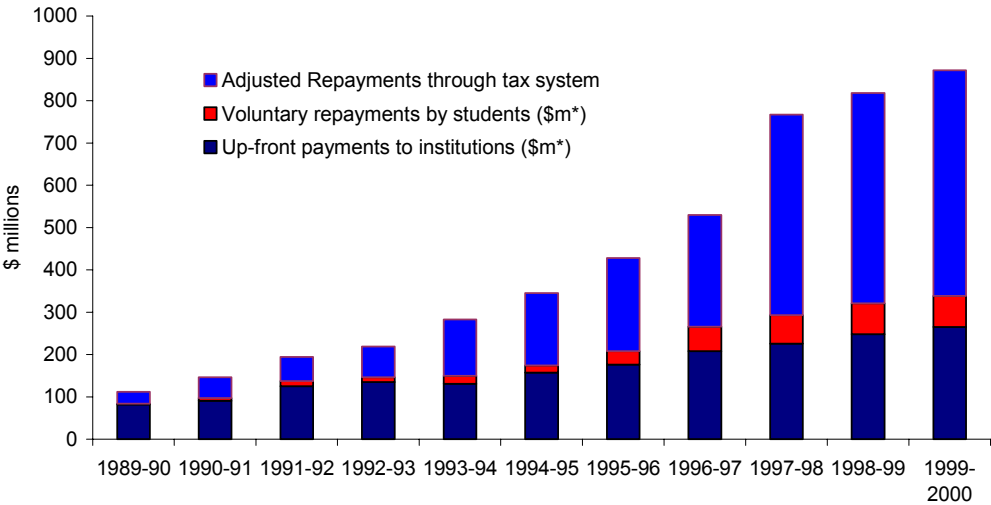
Band	Discipline groups	HECS Contribution Amounts
1	arts, humanities, social studies/behavioural sciences, education, visual/performing arts, nursing, justice and legal studies	\$3,409
2	mathematics, computing, other health sciences, agriculture/renewable resources, built environment/architecture, sciences, engineering/processing, administration, business and economics	\$4,932
3	law, medicine, medical science, dentistry, dental services and veterinary science.	\$5,772

(contributions to be made in a full-time year, (2000))

If students paid the required contribution up-front on the commencement of their course they received a substantial discount. When the scheme was introduced this discount was 15 per cent. In 1993 the discount was increased to 25 per cent with the aim of increasing the proportion of students choosing to pay up-front. If students deferred the payment of their contribution they, in effect, took out a loan with a zero real interest rate with the Commonwealth. They could then either make voluntary repayments¹¹⁵ with a discount, or repay the debt through compulsory payments via the taxation system once their income exceeded a threshold. This threshold, and the actual rates of repayment, has changed several times since 1988-89 (see Box 7.2).

Between the financial years of 1989-1990 and 1999-2000 the debt incurred by students each year through the Higher Education Contribution Scheme grew from \$527 million to \$1.6 billion. The accumulated debt in 1999-2000 was \$6.2 billion. Over this time, the size of students' payments increased, particularly as a result of increased compulsory repayments through the tax system and up-front payments (Figure 7.6). These payments form part of Commonwealth operating grants to universities and as such they do not affect the revenue available to universities overall¹¹⁶. Rather, the scheme affected the balance between private and public payments towards the cost of higher education. In 1991, payments under the scheme represented around 21 per cent of university operating grants. This grew to 31 per cent in 1999.

Figure 7.6 Repayments under the Higher Education Contribution Scheme, 1989-90 to 1999-00

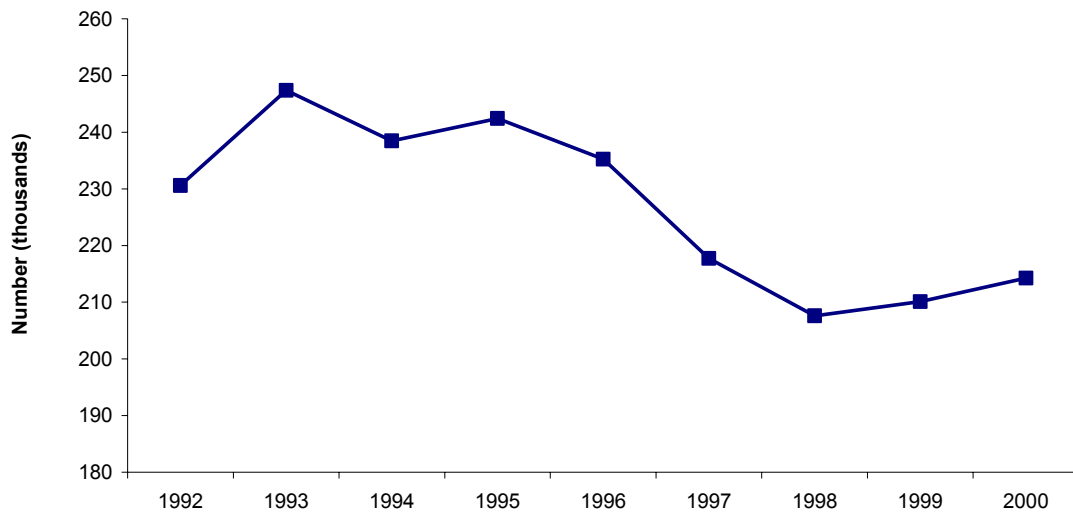


Source: Department of Education, Science and Training Statistical Collection
* in historic prices

¹¹⁵ The Consumer Price Index was used to index debts that remain unpaid for 12 months or more on 11 June each year.

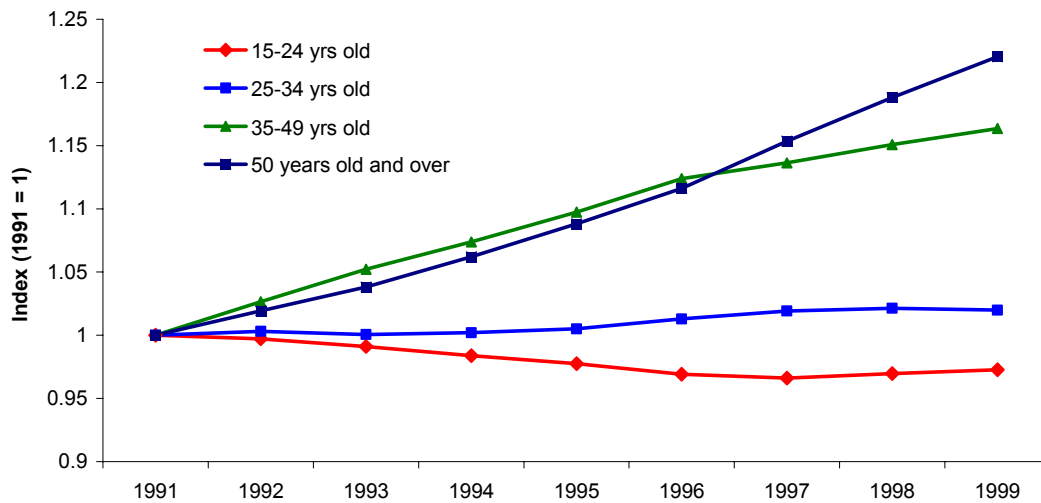
¹¹⁶ That is, the Commonwealth fixes operating grants, which are funded from HECS payments and the Commonwealth budget.

Figure 7.7 University applications 1992 to 2000



Source: Department of Education, Science and Training Statistical Collection

Figure 7.8 Population by age group, 1991 to 1999, relative to 1991



Source: Department of Education, Science and Training Statistical Collection

Demographics

Taken at face value, the 32 per cent growth in domestic student numbers over the decade is somewhat surprising since there is evidence that demand for higher education had actually fallen over the decade. Applications for university places through the State admission centres actually declined from 1993 to 1998 (Figure 7.7).

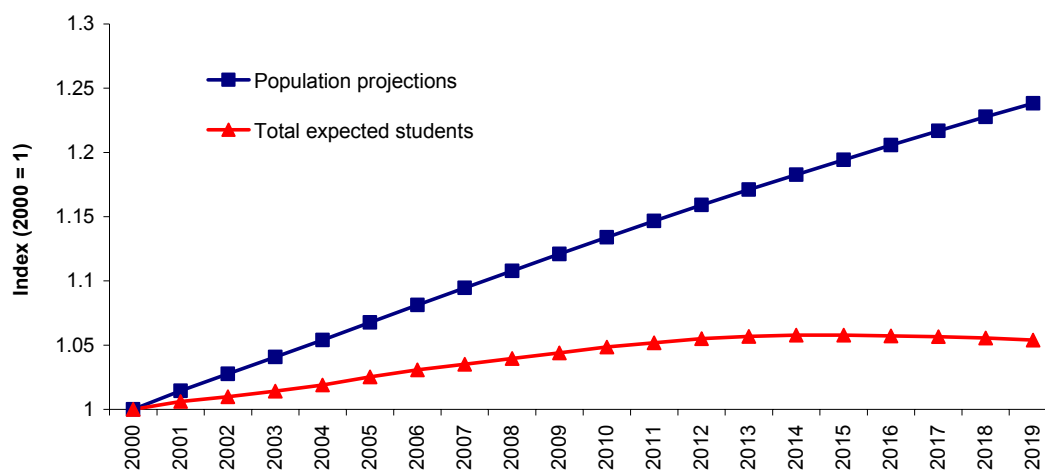
Applications through the admission centres remained fairly stable until 1995 however, between 1995 and 1998 demand for higher education, as measured by applications through admissions centres, fell by approximately 14 per cent. In part, this decline in demand can be explained by changes in demographics during the 1990s. Students under 24 years old make up the highest

proportion of students¹¹⁷ enrolled in universities, however, over the decade, the number of under 24 year old people in the population declined (Figure 7.8).

Demographic changes are also likely to have an impact on demand over the next decade. Population estimates from the Australian Bureau of Statistics indicate that growth in older age groups will continue to outstrip other age groups in the next ten years. In 1999, 35 per cent of the population were over 50 years old and this figure is expected to increase to 40 per cent by 2010.

The likely effect of these demographic changes on the demand for higher education can be gauged by applying the 1999 age participation rates to the population projections for 2000 to 2020. The projections for population and students are presented in Figure 7.9.

Figure 7.9 Population estimates index for years 2001 to 2019 (relative to 1999 population) based on age participation rates in 1999



Source: Australian Bureau of Statistics 1353.0 Integrated Regional Database (IRDB Australia).

While the population of Australia is expected to increase by just over 13 per cent over the current decade, the student body is expected to increase by less than five per cent as a result of the ageing of the population. In fact, if participation rates were to remain constant, student numbers would begin to fall from 2015. The demographic effects are more pronounced at the State/Territory level. For example, demographic movements imply a drop in demand in Tasmania and in South Australia (Figure 7.10).

The influence of the labour market

One of the environmental factors that have a very important effect on universities is the labour market. While no doubt many students value a university education for its own sake it is clear that the majority of students are vitally interested in the return that they get from a degree. For most this return comprises low unemployment and high prospects of a good job. Thus developments in the labour market can be expected to affect the level of demand for university places and also the demand for specific courses.

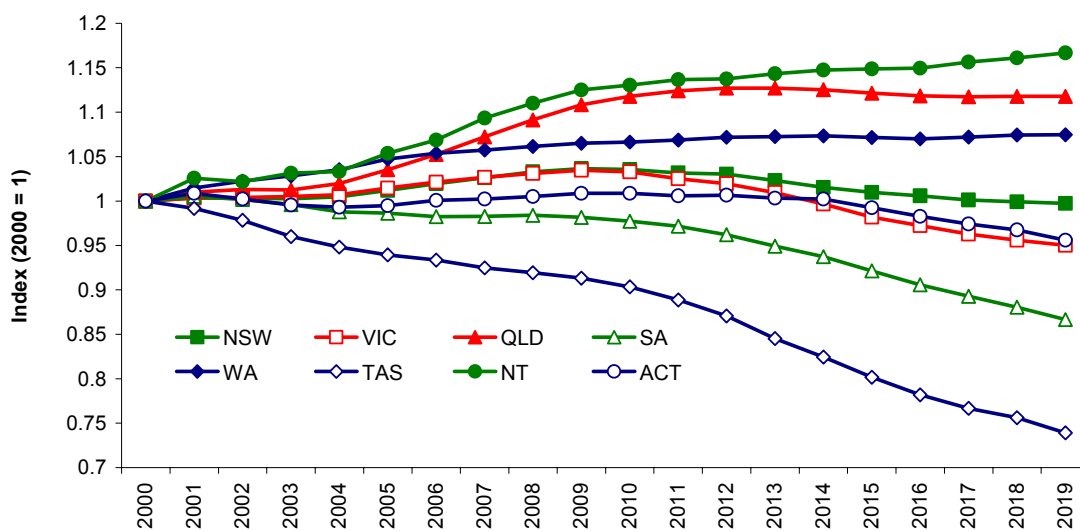
The relationship between the labour market and demand for places is by no means straightforward, however. While a buoyant labour market implies good labour market prospects

¹¹⁷ Those under 24 years old made up around 60 per cent of the student body.

for graduates it also increases the opportunity cost of studying. For example, at the end of the 1990s, when the information technology industries were booming, there was considerable anecdotal evidence of information technology students being poached before they completed their degrees.

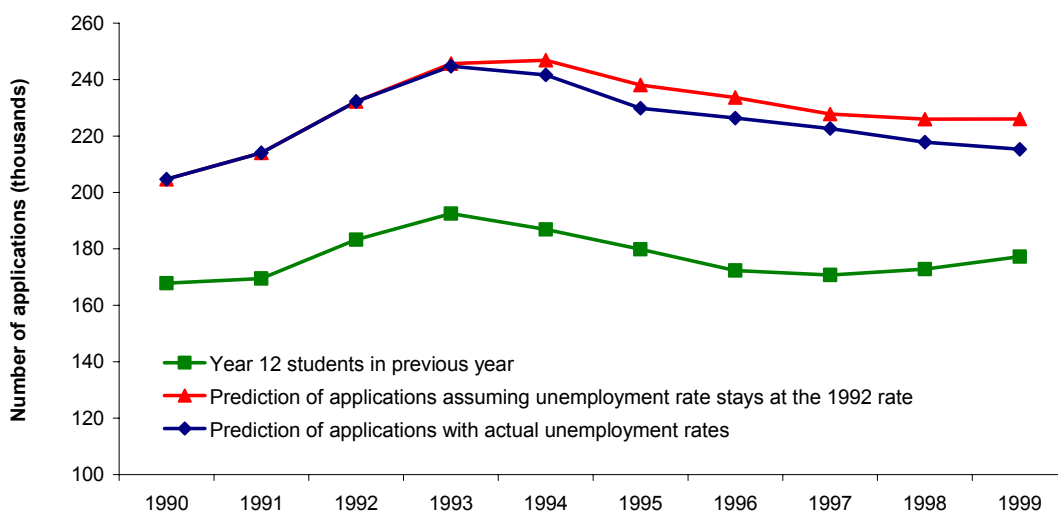
Part of the decline in demand for university places (see Figure 7.7) can be attributed to improving labour market conditions. Li, Karmel and Maclachlan (2000) estimate that for every one percentage point increase in the unemployment rate (for 20-24 year olds) the rate of application from Year 12 students increases by one percentage point. Thus, if 70 per cent of Year 12 students applied for university entry when the unemployment rate was 10 per cent, it is predicted that 76 per cent would apply if the unemployment rate rose to 16 per cent.

Figure 7.10 Changes in populations of 15-19 year olds from 2000 to 2019 in States and Territories relative to 2000



Source: Australian Bureau of Statistics 1353.0 (2000)

Figure 7.11 Predictions of the number of applications for university places by Year 12 students in previous year, based on actual unemployment rates and 1992 unemployment rates, 1990 – 1999



Source: Li, Karmel and Maclachlan (2000)

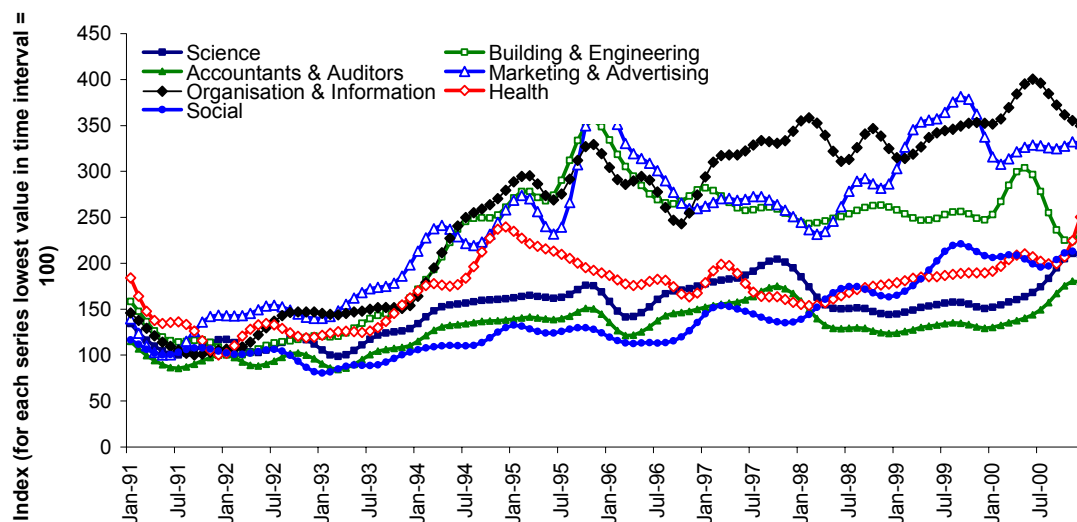
In Figure 7.11 applications are plotted against both the actual unemployment rate and a counterfactual which assumes that the unemployment rate remained at its 1992 high.

The graph indicates that applications in 1999 were around 10,000 less than they would have been if the labour market had remained at the depressed level of 1992. This figure actually underestimates the impact of the unemployment on demand because it does not take account of the effect of unemployment on Year 12 retention. In fact, the apparent Year 12 retention rate was 71.3 per cent in 1991 and rose to 77.1 per cent in 1992 before dropping to 72.3 per cent in 2000, at the same time as the labour market improved.

The overall impact of an improving labour market over the 1990s may have had a dampening effect on demand. However, perhaps more importantly for universities, structural changes in the labour market underpinned significant changes in student demand by field of study. Figures 7.12 and 7.13 show where labour market conditions were buoyant and employment grew.

Labour markets were particularly buoyant in building and engineering, marketing and advertising and organisation and information. Employment grew particularly quickly in business and information professionals as well as in the social, arts and miscellaneous professions.

Figure 7.12 Job Vacancies in selected occupational groups, 1991 to 2000



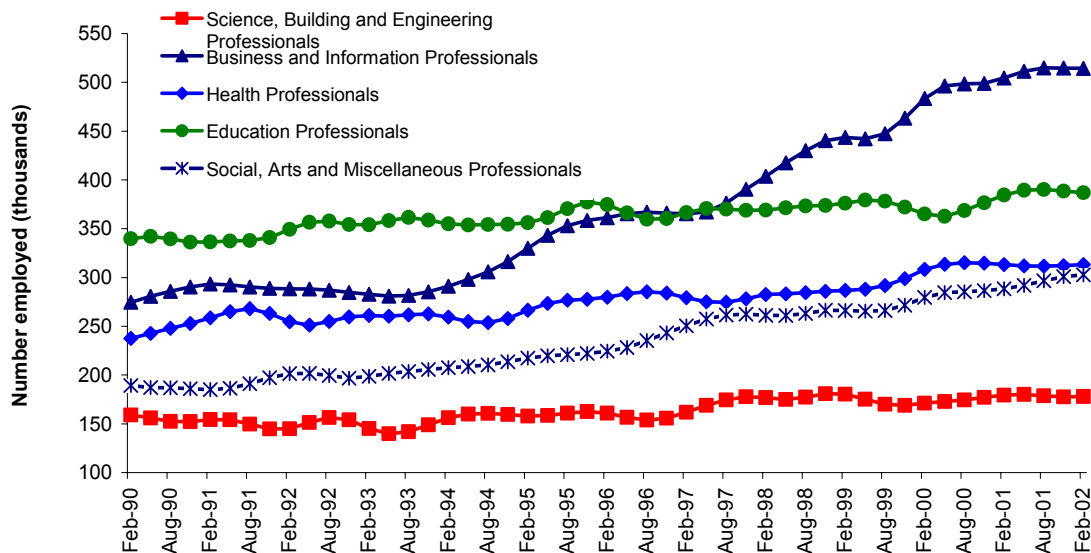
Source: ABS Cat No 6291.0.40.001

While universities are often criticised for being inflexible, it is apparent that universities did respond to some extent to the changing nature of student demand. Growth in undergraduate student places by field of study was by no means uniform and the pattern of growth in the second half of the decade differed from the first half (Figure 7.14). Business, administration and economics grew strongly in terms of student numbers over the whole decade as did science and law and legal studies. Arts, humanities and social sciences; and engineering and surveying; had strong growth overall but little towards the end of the decade. Growth in health has been flat after some growth at the beginning of the decade. Education declined initially and then flattened out. Growth in architecture and building and agriculture and animal husbandry was flat over the whole decade. It should be noted that part of the demand for places comes from overseas students, and this has been particularly important in the area of business studies.

The size of the sector has grown very significantly over the past ten years. As noted earlier, this growth can be attributed to government policy (in terms of domestic undergraduates), demand

from fee-paying postgraduate students and demand from overseas students. Under-pinning at least the first and second of these is the view that the skills obtained at university are valued by the labour market. Available evidence tends to support this view. Employment rates of new graduates have been improving over the 1990s and graduate starting salaries are at their highest level in a decade (Figures 7.15 and 7.16).

Figure 7.13 Employment in Selected Occupational Groups, 1990 to 2000

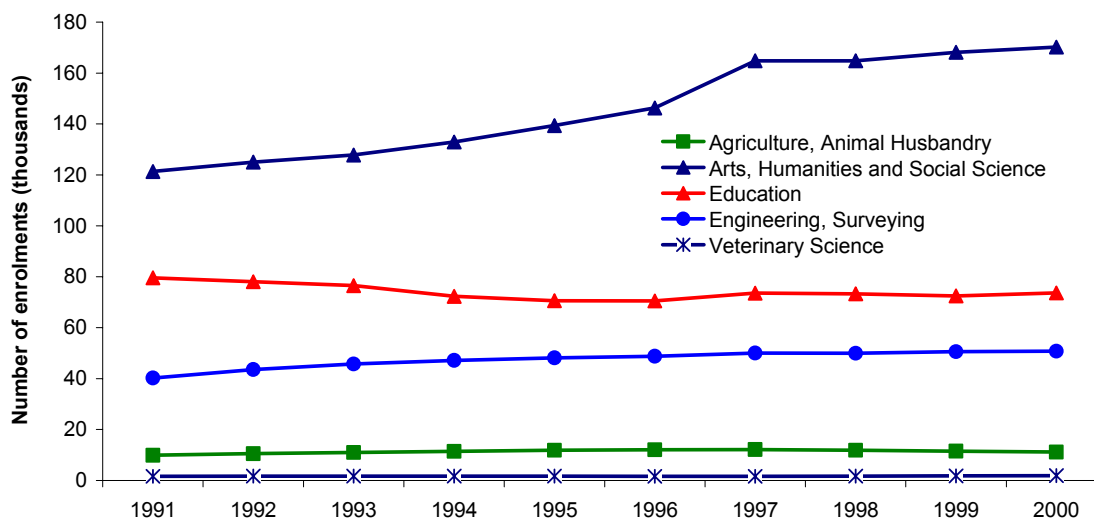


Source: ABS Labour Force Survey (DEWR trend series)

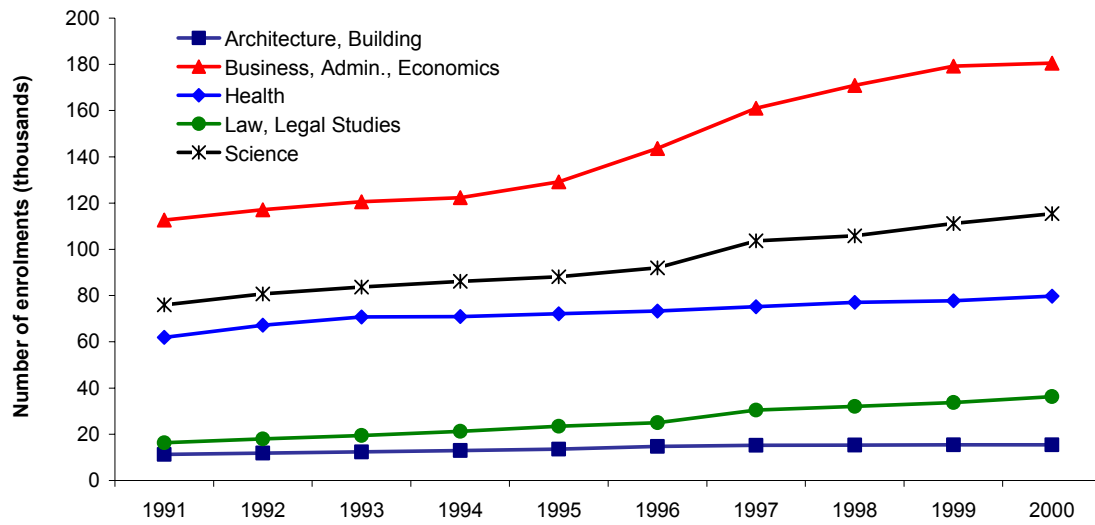
There is no doubt that structural changes in the labour market have favoured graduates. If the structure of the labour market had not changed then one would have expected the large increase in the number of graduates to have resulted in a fall in their relative earnings. Figure 7.17 shows that in 1997-98 (latest data available) there continues to be a large premium associated with higher levels of education, with graduates commanding a considerable premium over other workers.

Figure 7.14 Enrolments by selected fields of study, 1991 to 2000

(a)



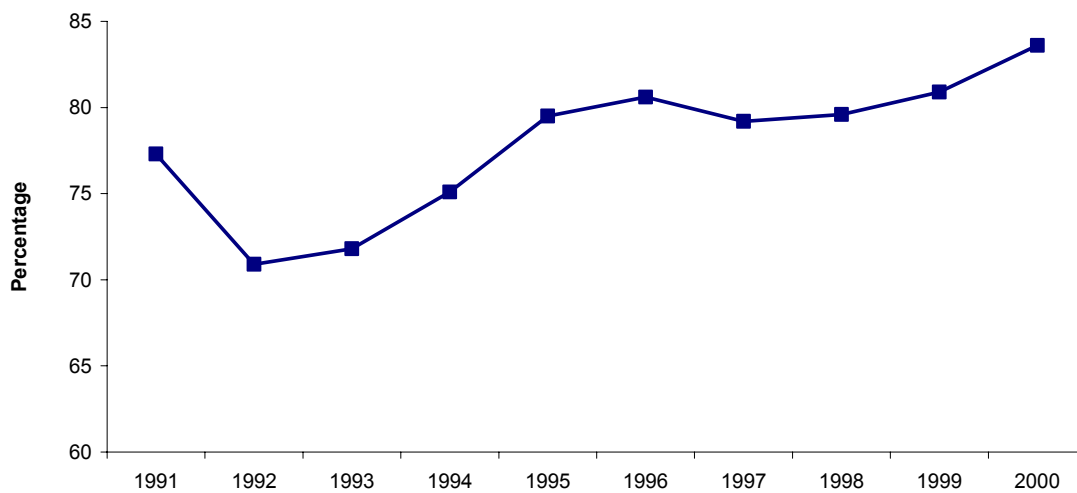
(b)



Source: Department of Education, Science and Training Statistical Collection

* Actual student numbers¹¹⁸

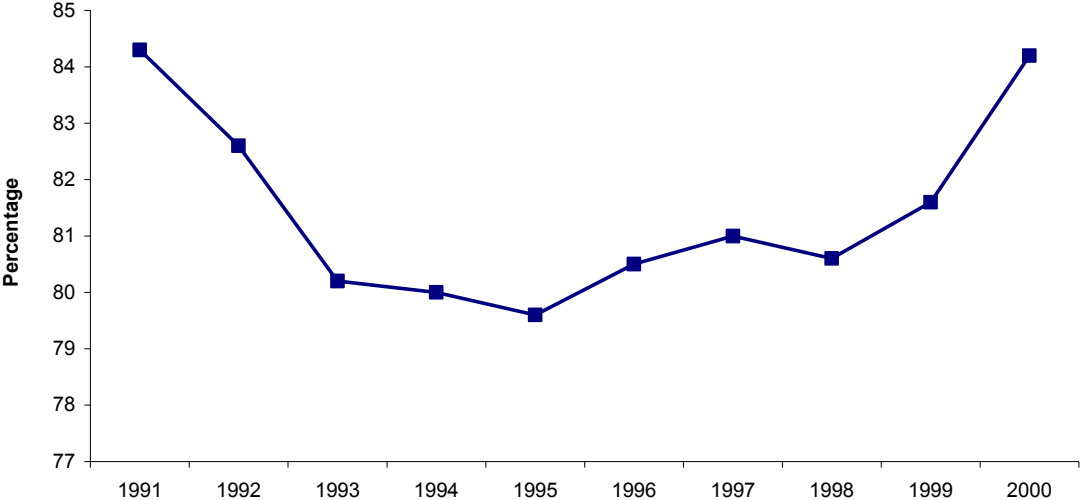
Figure 7.15 Percentage of bachelor degree graduates in full-time employment of those available for full-time employment, 1991 to 2000



Source: Graduate Careers Council of Australia 2001, Table 5 Graduate Destination Survey, 2000

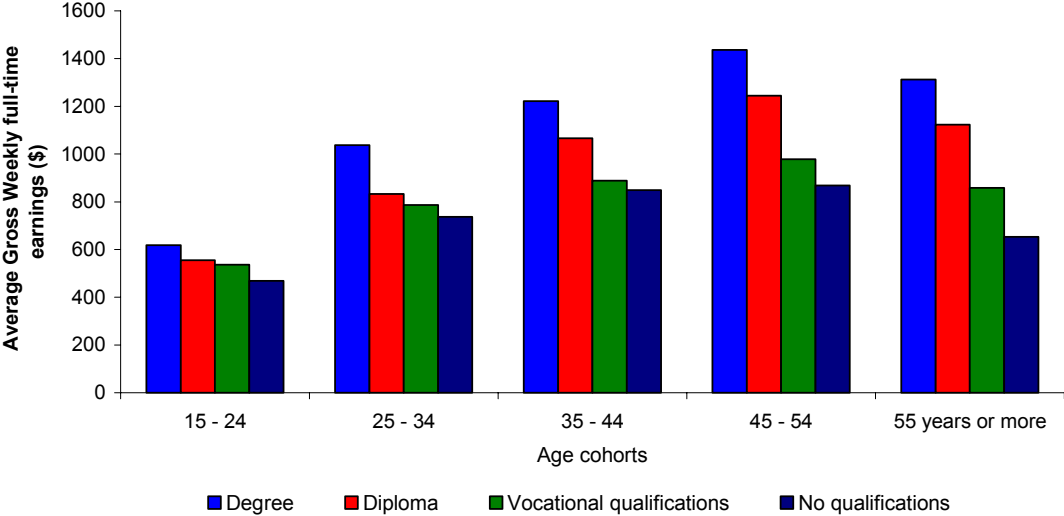
¹¹⁸ Data from 1997 onwards were compiled in a different way to data for prior years to take into account the coding of Combined Courses to two fields of study. As a consequence, the total for some broad fields of study show larger increases that would be the case if data for only one field were to be counted. Counting both fields of study for Combined Courses means that the totals for each year may be less than the sum of all Broad Fields of Study.

Figure 7.16 Median starting salaries for all graduates relative to the annual rate of average weekly earnings, 1991 to 2000



Source: Graduate Careers Council of Australia (2001) Graduate destination survey 2000 Table 2

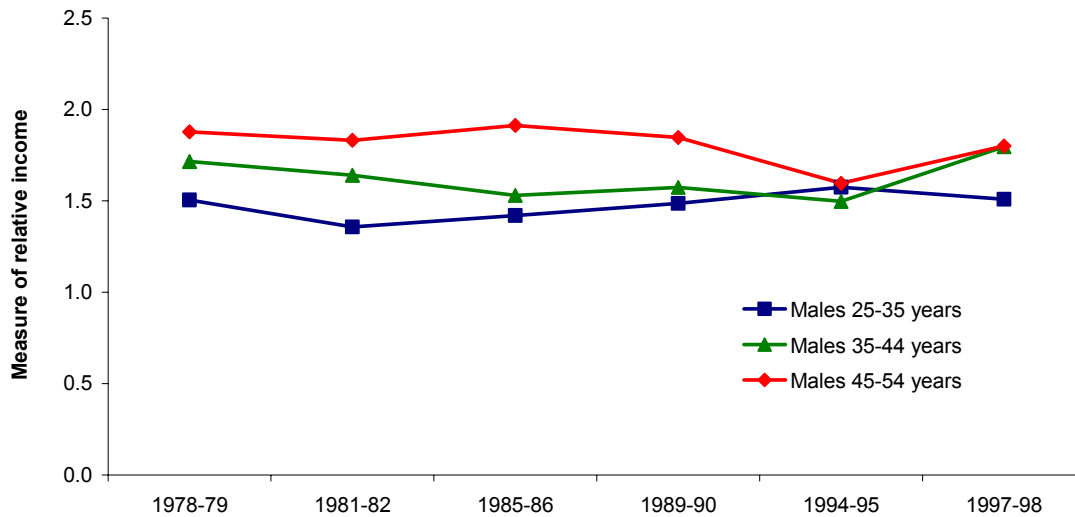
Figure 7.17 Average weekly full-time earnings, Australia 1997-98



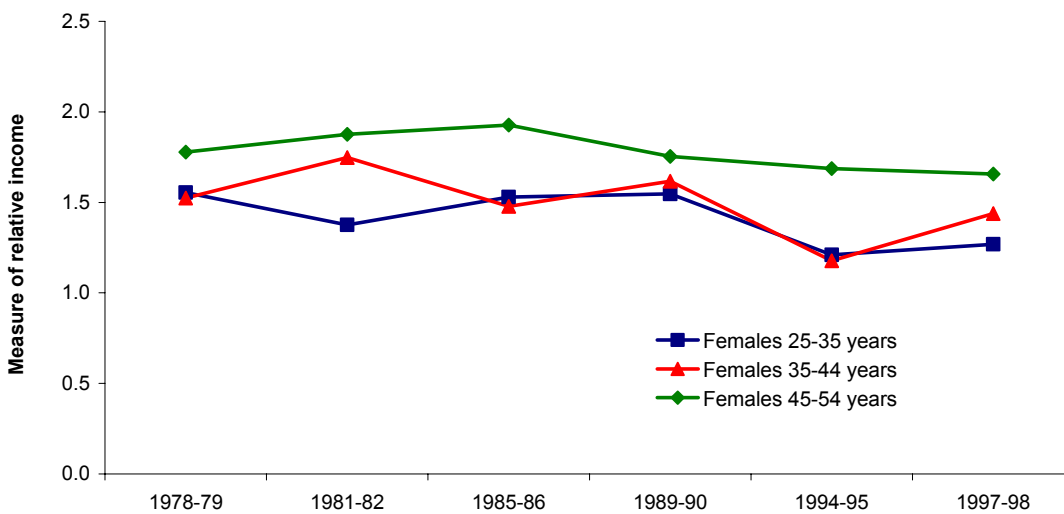
Source: Australian Bureau of Statistics Income survey data

Figure 7.18 Changes in average weekly full-time earnings of male and female degree holders relative to the average weekly full-time earnings of persons with no post-school qualifications 1978-79 to 1997-98.

(a) males



(b) females



Source: ABS Income Surveys

In fact, the relative earnings of graduates have been remarkably stable over the past 20 years. Figure 7.18 expresses the full-time earnings of male and female graduates relative to males and females with no post-school qualification for the age groups that comprise the bulk of the workforce. In 1978-79, 25-35 year old graduates earned, on average, 1.5 times their counterparts without post-school qualifications, as they did in 1989-90 and 1997-98. On average, the relative difference between the earnings of degree holders and those with no post-school qualifications was greater for males than females.

While there are fluctuations in the numbers the overall conclusion is that graduates have maintained their advantage in the labour market, despite the very large increase in their numbers. The fact that the advantage held as graduates increased in age suggests that they

have much better career prospects as well as an immediate return as a result of their completion of a degree.

The idea that maintenance of relative wages of graduates at the same time as very large increases in their number implies a significant shift in the structure of the labour market (in a direction that favours graduates) can be quantified using the methodology of Katz and Murphy (1992). This can be done at the age-group level (see Karmel 1997 for analysis of Australian data from 1968-69 to 1989-90). However, an aggregate analysis (Table 7.5) gives the general picture. In fact it suggests that the labour market has changed to favour graduates in the second half of the 1990s at a faster rate than earlier period.

Table 7.5 Shifts in Demand and Supply of Persons by Level of Educational Attainment, 1978-79 to 1997-98

Degree Holders Relative to those with No Qualifications - change (% pa)						
	Men			Women		
	Relative Earnings	Relative Supply	Relative Demand	Relative Earnings	Relative Supply	Relative Demand
1978-79 to 81-82	-2.5	6.1	1.2	-0.1	17.1	12.6
1981-82 to 85-86	-0.7	7.2	6.9	-0.6	10.5	11.0
1985-86 to 89-90	1.3	3.7	5.8	0.3	3.2	2.6
1989-90 to 94-95	-0.4	4.9	4.7	-2.2	13.7	10.8
1994-95 to 97-98	1.9	7.6	10.1	1.9	10.4	14.4

Source: ABS, income surveys: ABS, Transition from Education to Work, 6227.0; ABS, Education Attainment and Labour Force Status, 6235.0

7.2 Staff

There were major changes in the characteristics of university staff over the decade. Box 7.3 provides a comparison of staff characteristics in 1991 and 2000. The reasons for some of these changes are discussed in the following sections.

Changes to workplace practices¹¹⁹

Throughout the past decade, the Commonwealth encouraged universities to reform their workplace practices. At the beginning of the decade operating grants to universities were supplemented by the Commonwealth to take account of changes in salary and non-salary costs. This was fundamentally changed in 1993 by the introduction of a new approach to the funding of universities for salary increases and the requirement that universities negotiate enterprise agreements. The first agreement delivered supplemented salary increases of 1.4 and 1.5 per cent. A second agreement delivered another two per cent salary increase, which were not supplemented and had to be funded by productivity improvements.

In 1996, a new index for operating grants was introduced based on the view that all wage increases should be productivity-based and that productivity improvement should result in savings to public expenditure. University certified agreements delivered salary increases of

¹¹⁹ Readers are referred to chapter eight on governance for more details of these changes to the workplace environment in universities and indexation arrangements.

approximately 11-12 per cent in the period 1997-1999. As these salary increases significantly exceeded the supplementation to operating grants resulting from the application of the Safety Net Adjustment, universities were required to achieve efficiencies. The change from centralised wage fixing to one of enterprise level agreements resulted in pay and conditions varying from institution to institution.

Box 7.3 Staff characteristics over the decade (FTE)¹²⁰

Table 7.6

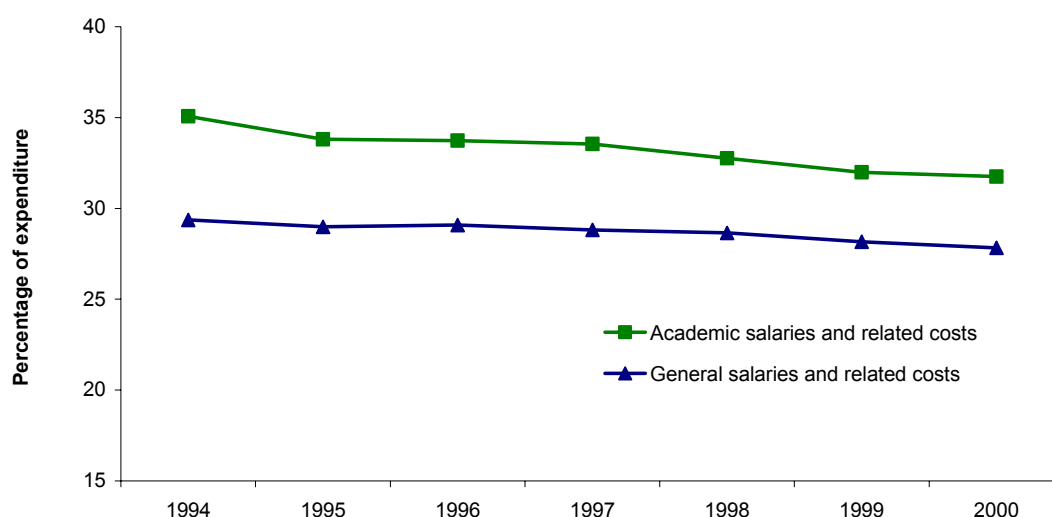
	1991	2000	absolute change	% change
Mode of work				
full-time	59 753	61 586	1 833	3
part-time	6 015	7 976	1 961	33
total (FTE)	65 768	69 562	3 794	6
total (FTE) including actual casuals	73 009	82 009	9 000	12
Full-time and part-time staff by current duties classification				
above senior lecturer	5 100	6 555	1 455	29
senior lecturer (level c)	6 971	7 730	759	11
lecturer (level b)	11 421	10 161	-1 260	-11
below lecturer (level a)	4 496	5 458	962	21
non-academic classifications	37 780	39 659	1 879	5
total (FTE)	65 768	69 563	3 795	6
Full-time and part-time staff by function				
teaching only	3 612	844	-2 768	-8
research only	6 404	7 866	1 462	23
teaching and research	23 370	23 144	-226	-1
Other	32 382	37 709	5 327	16
total (FTE)	65 768	69 563	3 795	6
Full-time and part-time staff by current duties term				
tenured term	45 264	48 261	2 997	7
limited term	17 722	21 087 3	365	19
other term	2 782	215	-2 567	-9
total (FTE)	65 768	69 563	3 795	6
Full-time, part-time and actual casual staff by gender				
academic staff: males	21930	22 899	969	4
academic staff: females	10329	14 101	3 772	37
Total	32 259	37 000	4 741	15

¹²⁰ In full-time equivalent (FTE) terms a member of staff who has a normal full-time workload has a full-time equivalent of 1.00. A fractional full-time or part-time staff member has a FTE of less than 1.00. The fraction will represent the ratio between the number of agreed normal work hours for that person and the number of normal work hours which would be required of a member of staff having the same classification type and level as that person, but with a full-time work contract.

non-academic staff: males	18 063	18 177	114	1
non-academic staff: females	22687	26 812	4 125	18
Total	40 750	44 989	4 239	1
total (FTE)	73 009	82009	9 000	12
Full-time and part-time staff by type of organisational unit				
FTE for academic organisational units (excl. TAFE)	48 772	44 835	-3 937	-8
academic support organisational units	8 406	8 586	180	-2
student services organisational units	1 610	1 880	270	17
public services organisational units	947	539	-408	-43
general institution services and institution overhead services organisational units	13 934	13 229	-705	-5
independent operations/cooperative research centres	890	494	-396	-44
total (FTE)	74 559	69 563	-4 996	-7
student-staff ratio for higher education sector	(1993) 15	19	4	27

Source: Department of Education, Science and Training Statistical Collection.
Note: Data includes actual casual staff for all years. The 2000 actual casual staff figures are preliminary and unpublished.

Figure 7.19 Academic and general staff salaries and related costs as a percentage of total expenditure, 1994 to 1999



Source: Department of Education, Science and Training Statistical Collection

In mid 1998, *The Higher Education Contract of Employment Award, 1998* was introduced. This award, which applied to both academic and general staff, made the employment of staff on contract more expensive. To all intents and purposes staff re-employed on contract had the

same terms and conditions as those in continuing or permanent employment. This had a significant impact on the levels of casual, tenured and contract staff working at the higher education sector.

Towards the end of the decade, in order to encourage universities to adopt more flexible and efficient management structures, the Commonwealth provided additional funds to supplement operating grants equivalent to an additional two per cent rise in staff salaries. This supplementation was made available through the Workplace Reform Programme on a voluntary basis to universities, but was conditional on their meeting a set of criteria for improving their management, administration and workplace relations.

Impact of changes in the pattern of expenditure

The changes in the higher education policy environment in the 1990s and the need to find funds from other sources changed the behaviour of universities. One notable change was the reduction of the proportion of expenditure devoted to staff. The wage bill for both academic and general staff declined over the decade, with the decline in the proportion of total expenditure on salaries and related costs being greater for academic staff (Figure 7.19). Overall the proportion of expenditure on salaries fell from just over 64 per cent in 1994 to around 60 per cent in 1999.¹²¹ This was at a time when the higher education system was expanding and there was considerable growth in the number of students attending university. The implications of these two divergent trends are discussed later in the chapter.

The four percentage point reduction in the proportion of expenditure on salaries and salary costs during the 1990s could have been the result of changes in the number of staff, changes in staff salaries or changes in non-salary expenditure. While university expenditure did increase, and there was a rise in staff numbers and the level of staff salaries, overall the proportion of university revenue spent on staff declined because a much greater proportion of university revenue was allocated to non-salary expenses¹²². There may be a number of reasons for this, for example, greater expenditure on information and communications technology, infrastructure and other non-salary items.

Changes in staff numbers

Between 1991 and 2000 the number of university staff increased by 12 per cent (Figure 7.20). Growth in academic and non-academic staff was strong over the period 1991 to 1996. Thereafter, there was a decline in both academic and general staff levels in 1997 and 1998 with a recovery in 1999 and 2000. Staffing levels did not, however, return to 1996 levels.

The changes in the growth rate of university staff are interesting in that they coincide with changes in wage setting arrangements and salary supplementation. The slower growth of staff after 1993 coincides with the introduction of new supplementation measures linked to enterprise bargaining. When supplementation arrangements changed again, in 1996, there was a marked decline in both academic and general staffing levels¹²³.

¹²¹ Salary and related costs pre 1994 could not be included because of changes in the way data were reported by institutions.

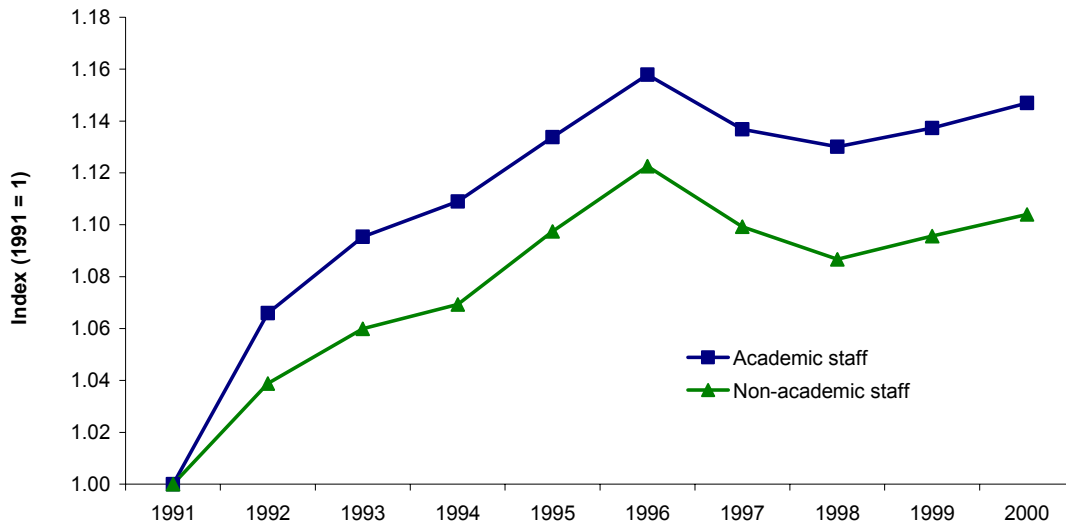
¹²² In nominal terms, over the period average salaries increased by 25 per cent, and non-salary expenses increased by 60 per cent. Staff over the period increased by four per cent.

¹²³ It is likely that factors other than changes in salary supplementation were also instrumental in the staff shedding that took place in 1996. In that year, the Commonwealth Government also announced reduced future operating grant funding for the sector whilst in the same year a fairly aggressive enterprise bargaining round resulted in wage increases of 11 to 12 per cent (over two years) sector-wide. Subsequent bargaining rounds achieved similar amounts up until the end of the decade.

Changes in mode of employment

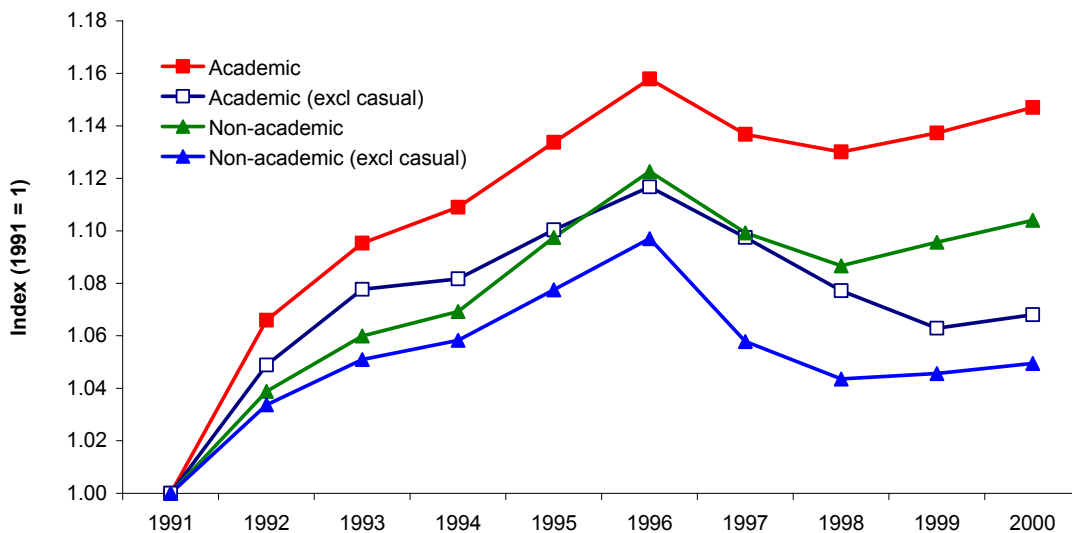
The recruitment behaviour of universities in the latter part of the decade was different to that in the early 1990s. In the case of both academic and non-academic staff much of the post-1996 recruitment was of casual staff (Figure 7.21).

Figure 7.20 Changes in the numbers of academic and non-academic staff 1991 to 2000, relative to staffing levels in 1991



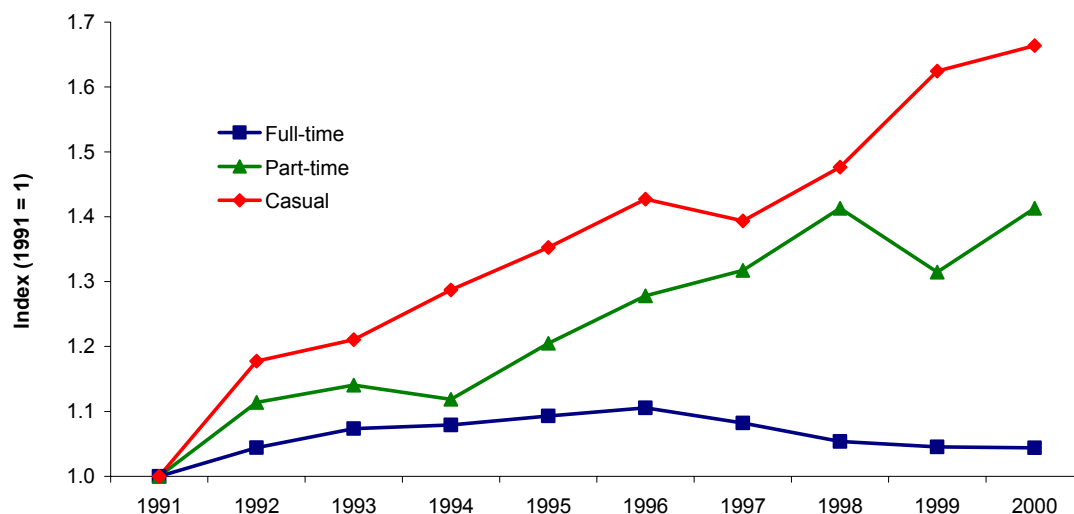
Source: Department of Education, Science and Training Statistical Collection

Figure 7.21 Changes in the numbers of academic and non-academic staff (including and excluding casual staff) 1991 to 2000 relative to staffing levels in 1991



Source: Department of Education, Science and Training Statistical Collection

Figure 7.22 Change in the number of academic staff by work contract, 1991-2000, relative to those employed in 1991



Source: Department of Education, Science and Training Statistical Collection

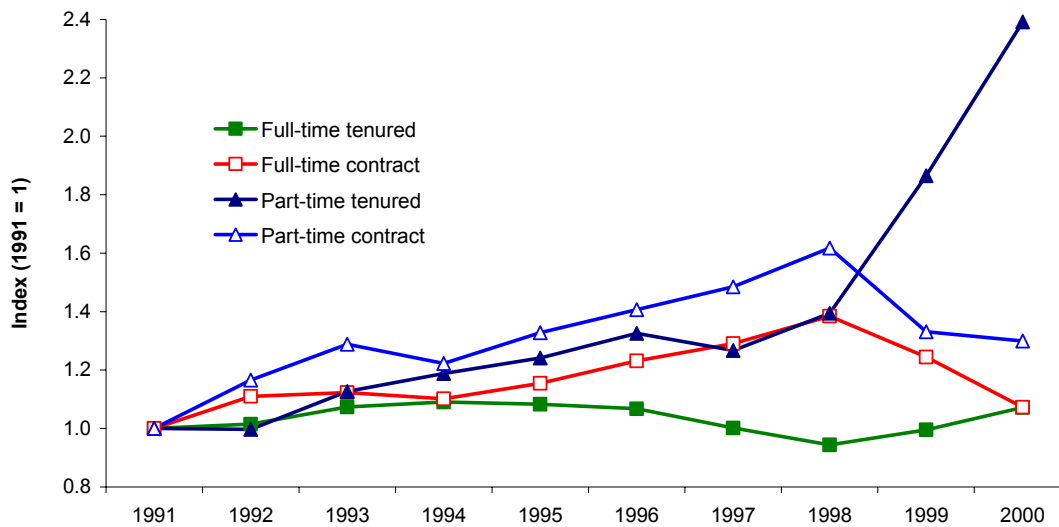
The increase in the recruitment of casual staff was evident throughout the decade. Much of the growth in staff in 1998 to 2000 was due to growth in recruitment of casual staff. The increase in casual staff might well have been, as universities argued, an attempt to improve flexibility in the use of staff. One other possible reason, however, is that *The Higher Education Contract of Employment Award, 1998* made the employment of staff on contract more expensive. At the end of the 1990s, almost 20 per cent of academic staff and 12 per cent of non-academic staff were employed on a casual basis.

As well as a large increase in the number of casual academic staff employed in universities during the 1990s, there was also a considerable increase (41 per cent) in the number of part-time academics employed (Figure 7.22).

It should be noted that the reduction in staff numbers that occurred in 1996 fell mainly on the casual and full-time academic staff. It is not surprising that casual academics bore the brunt of the staff reduction since these were the employees most easily shed. The reduction in full-time staff was most likely due to the voluntary redundancies offered as a response to the increased wage bill following enterprise bargaining.

It is clear that in 1999 and 2000 there was also a move from contract to tenured or continuing, employment (Figure 7.23). Both full-time and part-time contract staff declined while staff in tenured positions increased. Again it is likely that the introduction of *The Higher Education Contract of Employment Award, 1998* not only caused a shift to casual employment but also caused a substitution of contract employment with tenured employment.

Figure 7.23 Changes to the numbers of full-time and part-time tenured and contract academic staff 1991 to 2000 relative to their numbers in 1991



Source: Department of Education, Science and Training Statistical Collection

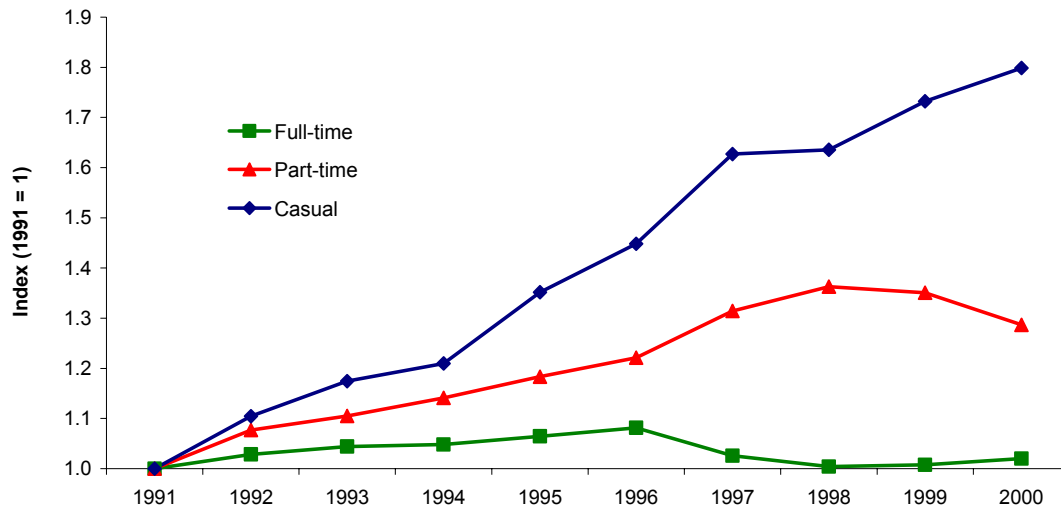
There are similarities between the academic and general staffing trends over the decade. Full-time staff grew by two per cent but, as with academic staff, there was much more growth in part-time and casual staff. These two groups increased by 29 per cent and 80 per cent respectively (Figure 7.24).

The largest proportion of growth for both academic and non-academic groups over the period was from the casual sector. Since 1996 the full-time staff in both groups has decreased, but this trend started to reverse for non-academic staff in 1999. The growth of academic full-time staff continues to decline probably as a result of cost-driven measures in response to the events, previously discussed, occurring in 1996.

Changes in the functional profile of academic staff

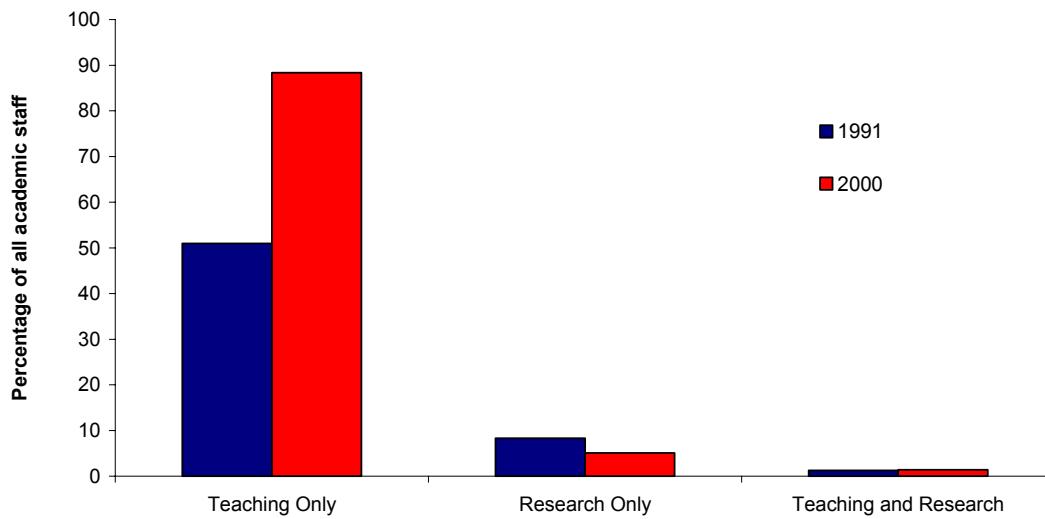
The increased employment of casual academic staff was not evenly distributed over the different aspects of the work of academics. The most significant increase in the use of casual staff was in teaching only functions (Figure 7.25). In 1991 casuals made up 51 per cent of teaching only staff, and in 2000 their share was 88 per cent. In contrast, in the research-only function the proportion of casuals slightly decreased (from 8 per cent in 1991 to 5 per cent in 2000), while their small share of one per cent in the teaching and research function stayed unchanged during the decade.

Figure 7.24 Changes in the numbers of full time equivalent non-academic staff by work contract, 1991-2000, relative to their numbers in 1991



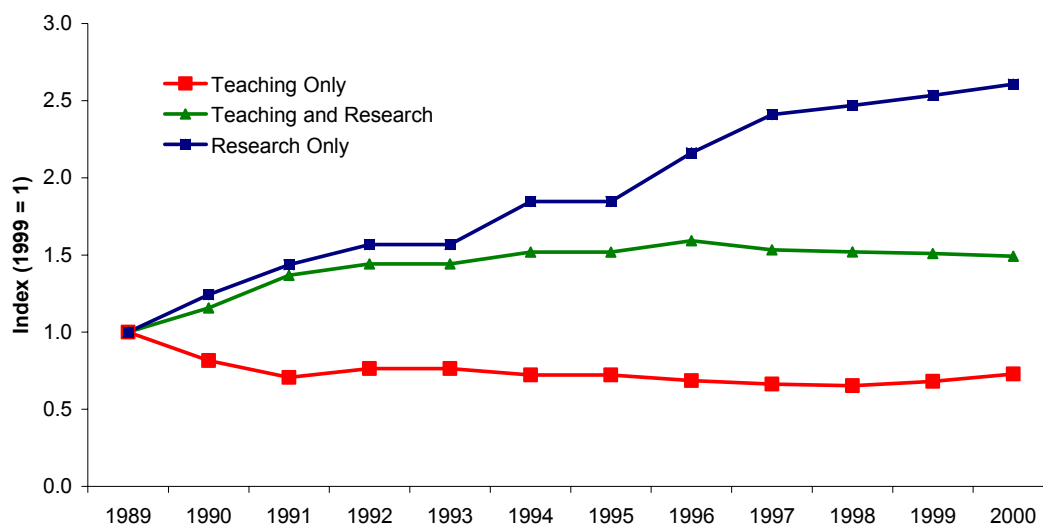
Source: Department of Education, Science and Training Statistical Collection
 Note: The 2000 actual casual staff figures are preliminary and unpublished.

Figure 7.25 Casual academic staff as proportion of total academic staff by function, 1991 to 2000



Source: Department of Education, Science and Training Statistical Collection

Figure 7.26 Changes in the numbers of full-time equivalent academic staff by function, 1989 to 2000, relative to their numbers in 1989



Source: Department of Education, Science and Training Statistical Collection

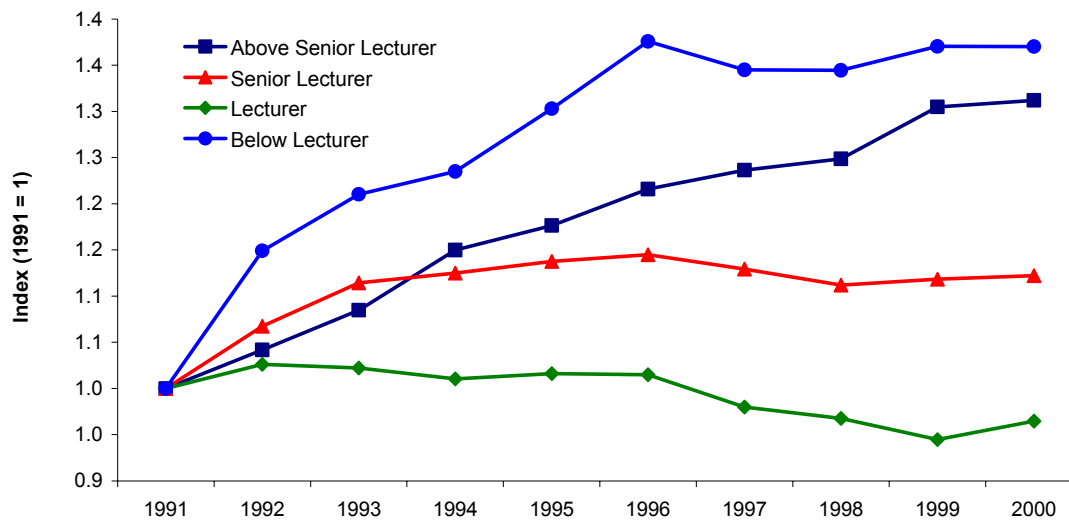
Note: Data includes actual casual staff for all years. The 2000 actual casual staff figures are preliminary and unpublished.

The abolition of the binary system in 1989 resulted in a reconsideration of the role and functions of academic staff and the appropriate balance between teaching and research. Over the period 1989 to 1998 the greatest growth was in research-only staff, with the number of full-time equivalent academic staff growing by almost 140 per cent (Figure 7.26). Growth of staff undertaking teaching and research functions grew steadily until 1993 and was relatively stable thereafter while teaching-only staff declined by 36 per cent. The decline in teaching-only staff may have been largely due to academics from the former colleges of advanced education pursuing research since the removal of the binary divide gave staff from these institutions greater opportunities to undertake research. The transfer of these academic staff would therefore also account for some of the increase in the teaching and research category.

Research-only academic staff continued to grow between 1996 and 2000 despite a reduction in total academic staff. The focus of university activity was to some degree re-directed from teaching to research over the period 1989 to 2000. To some extent the expansion of research staff over the period was also related to the need for universities to increase their capacity to win research grants in an increasingly competitive research market.

The number of full-time equivalent academic staff increased by 15 per cent between 1991 and 2000. Although growth across academic classifications varied considerably, there was a polarisation of academic staff classifications over the decade. This was the result of the strongest and most sustained growth occurring in the most senior and junior academic classifications (Figure 7.27). The numbers of academics in the 'below lecturer' classification increased by 37 per cent between 1991 and 2000, faster than any other group over the period. In 2000 'below lecturers' represented 27 per cent of academic staff as opposed to 23 per cent in 1991. The 'above senior lecturer' classification, representing the smallest group of academics, also grew steadily throughout the decade. In contrast, the proportion of academics in the 'senior lecturer' classification remained fairly static. And the largest group of all classifications, 'lecturers' was the only classification whose numbers declined over the period between 1991 and 2000. Lecturers made up 33 per cent of academic staff in 2000 compared to 40 per cent in 1991.

Figure 7.27 Change in the numbers of full-time equivalent academic staff by classification, 1991-2000, relative to staffing levels in 1991

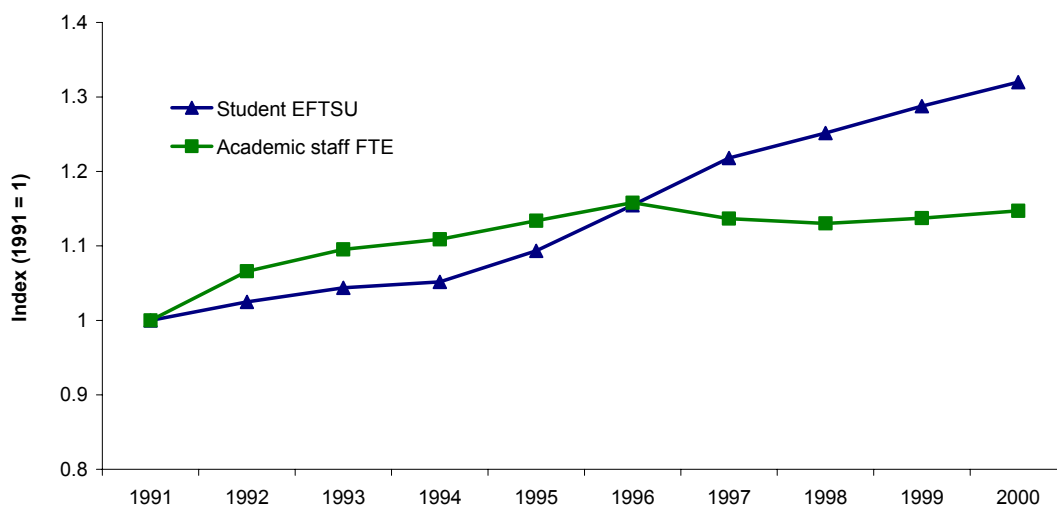


Source: Department of Education, Science and Training Statistical Collection

Relationship between changes in staffing and changes in the student body

Apart from changes to salary supplementation and the introduction of enterprise bargaining, the significant changes over the past decade in the size and composition of the student body made it unlikely that the staffing structures of universities could remain unchanged over the decade. It is worth considering the relationship between student and staff numbers. While student numbers increased by 32 per cent between 1991 and 2000, academic staff only increased by just under 15 per cent over the same period (Figure 7.28). Between 1996 and 2000 students increased by 14 per cent, compared to a decline in staff of just under one per cent. At least part of these shifts may have been attributed to the need for universities to fund pay rises.

Figure 7.28 Changes to the numbers of academic staff (full-time equivalent) and the numbers of students (equivalent full-time student units) 1991 to 2000 relative to their numbers in 1991

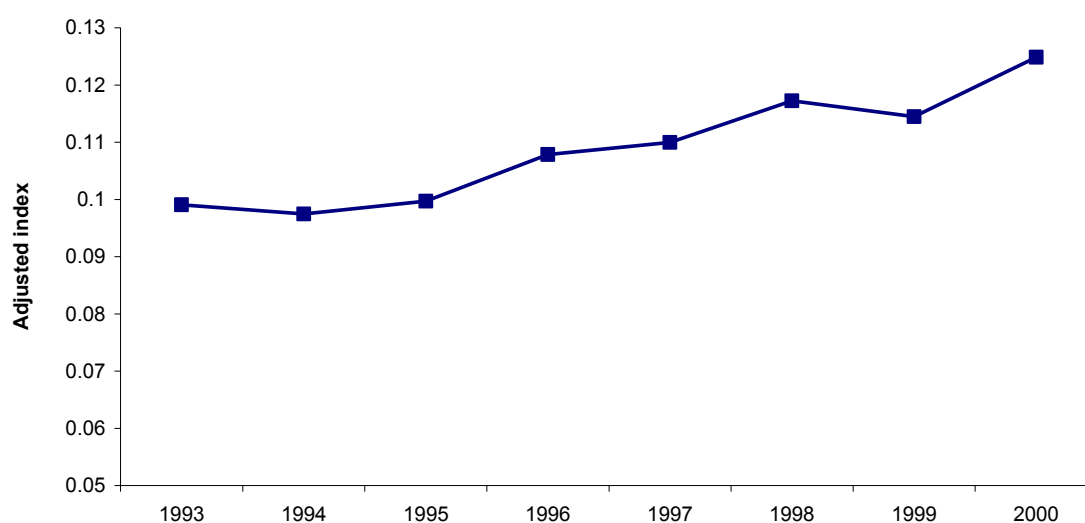


Source: Department of Education, Science and Training Statistical Collection

An issue of interest is the extent to which universities were strategic in reducing staff. One perspective on this can be obtained by measuring the degree of alignment between academic organisational units (staff numbers in particular subject areas) and student numbers in subject areas.

A measure of such alignment is an index of structural imbalance¹²⁴, which shows the percentage of staff required to be redistributed between academic organisational units in order to achieve a distribution of staff identical to the distribution of students^{125, 126}. By tracking this index over time we can examine the degree to which staff structures have followed the changing distribution of students (Figures 7.29 and 7.30).

Figure 7.29 Student-staff alignment for major academic organisational units, 1993 to 2000



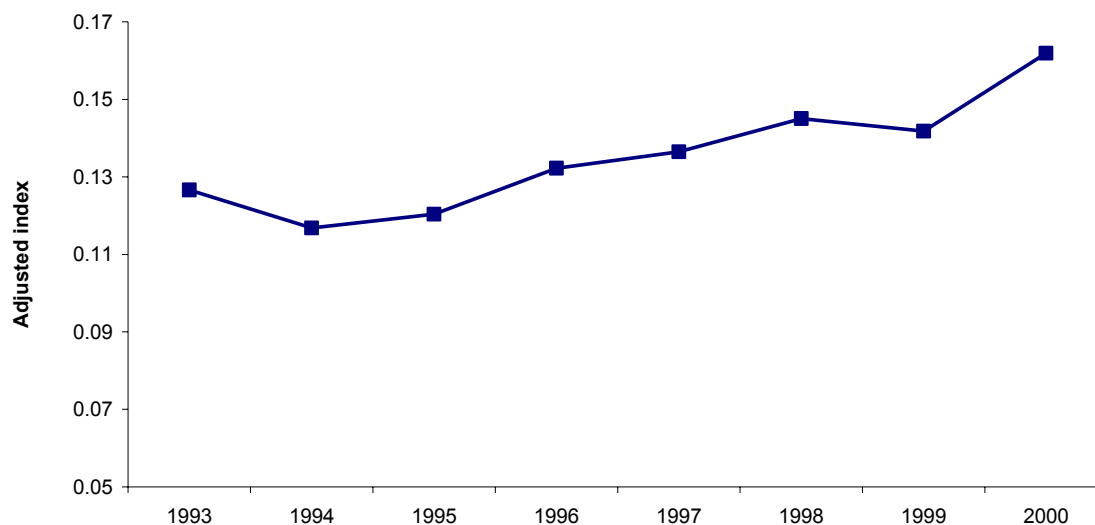
Source: Department of Education, Science and Training Statistical Collection

¹²⁴ See Appendix 7.1 for details of the calculations used to determine the index. It is based upon the index developed by Duncan and Duncan (1955) used to measure sex segregation.

¹²⁵ A problem encountered when developing the index is the number of staff who are not accounted for in any of the academic organisational unit groups. Each year, the proportion of non-academic organisational unit staff varies significantly within institutions and between institutions. This would, no doubt, affect the quality/accuracy of the index. To overcome this variability, it was decided that institutions with 15 per cent or more non-academic organisational unit staff should be excluded from the calculation. There was little change in the index for the major academic organisational groups after the adjustment was made, the index for minor groups, though higher, looks more in line with that for the major groups (Figures 7.35 and 7.36).

¹²⁶ Staff numbers are measured in terms of full-time equivalence (FTE) and these include full-time, fractional full-time and actual casual staff with a teaching only or teaching and research function in an academic organisational unit. Student numbers, on the other hand, are expressed in terms of equivalent full-time study units.

Figure 7.30 Student-staff alignment for minor academic organisational units, 1993 to 2000



Source: Department of Education, Science and Training Statistical Collection

The student-staff indices, as depicted in Figures 7.29 and 7.30, indicate an increase in imbalance in the distribution of staff and student numbers, at both the major and minor academic organisational unit level. While one would want to be careful from concluding too much from this one index, the results support the notion that universities were not changing their staffing profiles to match shifts in student demand.

7.3 Conclusion

Changes in Commonwealth policies from the late 1980s onwards had powerful effects on the student and staffing profiles of Australian universities over the past decade. Underlying these policy changes was a commitment to the expansion of access to higher education, an acceptance that students should contribute to the costs of their education given the substantial private benefits they received from attending university, and the need to limit public expenditure.

The creation of the unified national system at the beginning of the decade, which created a comprehensive university system as well as increases in the number of Commonwealth funded places significantly expanded access to university. Targets set by the Commonwealth increased steadily throughout the first half of the decade, before levelling-off after 1997 and the Commonwealth provided additional funding towards the end of the decade for students enrolled above a university's target load.

From the mid-1980s onwards the Commonwealth had encouraged universities to find funds from other sources in order to ensure that the system was able to expand. The policy of charging overseas students fees for their studies in Australia had a major impact on enrolments, and consequently revenue over the course of the decade. Likewise, the introduction of fees for postgraduate studies by coursework had a major impact on revenue as well as on the profile of postgraduate students. The number of domestic postgraduate students paying fees increased five-fold whilst those studying under the Higher Education Contribution Scheme dwindled.

The focus on containing public expenditure led the Commonwealth to encourage universities to increase their flexibility in respect of staffing practices and affected the way the salary increases

were funded. Prior to 1993 universities received salary supplementation for actual salary increases in the sector. In 1993, universities were required to negotiate enterprise agreements to obtain salary increases, some of which were supplemented and some not. These changes affected staff numbers and staff structures. While overall staff numbers increased significantly between 1991 and 2000, by the middle of the decade there was a growing disparity between the numbers of staff and the numbers of students. In addition, there was a noticeable casualisation of the staffing profile and a reduction of the proportion of revenue expended on salaries. Furthermore, the introduction of the *Higher Education Contract of Employment Award 1998* made it less attractive for universities to employ staff on contract and there was considerable growth in the numbers of tenured staff employed part-time.

The transforming changes to universities over the past decade was further complicated by changing demographics and fluctuations in the labour market over the 1990s. At the same time that the Commonwealth sought to increase the size of the student body, a reduction in the number of students under 24 years of age and a more buoyant labour market, reflected in lower unemployment rates, reduced demand for higher education. On the other hand, changes in the structure of the labour market have strengthened the position of graduates. The demographic outlook indicates, at the national level, modest growth in student demand to 2010, with virtually no change in the following decade.

Appendix 7.1

Calculation of student-staff index

The following sets out the method of calculating a student-staff index, which is defined as:

$$(1) \quad I = \sum_j \frac{S_j}{S} I_j$$

We define

$$t_i = \frac{T_i}{T_j} \quad \text{and} \quad T_j = \sum_i T_i$$

$$s_i = \frac{S_i}{S_j} \quad \text{and} \quad S_j = \sum_i S_i \quad S = \sum_j S_j$$

where T_{ij} = number of teachers in field of study i and institution j

S_{ij} = number of students in field of study i and institution j

$$I_j = \frac{1}{2} \sum_i |s_i - t_i|$$

also note that

S is measured in terms of equivalent full-time student units (EFTSU);

T is measured in terms of full-time equivalent (FTE); and

i is measured in terms of academic organisational unit (AOU).

Reflections of a Retiring Vice-Chancellor

Professor Lauchlan Chipman, former Vice-Chancellor of Central Queensland University

I took up my appointment as Vice-Chancellor and President of Central Queensland University (CQU) on July 31, 1996 – a five-year term that expired in 2001. I understand I was selected largely because of my experience with regional institutions. I had been the first pro-vice-chancellor of the University of Wollongong, and subsequently was appointed pro-, and later a deputy vice-chancellor at Monash University, with special responsibilities for overseeing the integration of its then newly acquired Gippsland Campus, the former free-standing Gippsland Institute of Advanced Education, and the birth and start-up of the greenfield Berwick Campus, in Melbourne's rapidly growing outer south-east.

It was also relevant that at the University of Wollongong I had responsibility for the oversight of the management of the Professional and Graduate Education (PAGE) Consortium involving a number of universities as well as the national Special Broadcasting Service (SBS), and at Monash University the newly acquired (through merger with the Gippsland Institute) Distance Education Centre. Central Queensland University was evidently very dependent on distance education enrolments for about half of its Commonwealth-funded equivalent full-time student unit (EFTSU) load. Flushed with the naïve view that academics making the transition towards management should actually learn something about it, I obtained a Diploma of Tertiary Education (Administration) from the University of New England, thus incidentally giving me a 'customer perspective' on life as a distance education student, as well as of being a student with a well-regarded regional university, and one a long way from my home.

I also had experience with a new university, having joined the University of Wollongong in 1975 as Foundation Professor of Philosophy, and served as Deputy Chair of its Academic Senate and as an elected member of its council. The former Wollongong University College of the University of New South Wales had just begun to experience its autonomy, in what proved to be extraordinarily difficult times for the city, its host region, and the higher education sector generally. Central Queensland University, though an institution which could trace its Rockhampton lineage to 1967, was also essentially a new university, having successfully passed through a short period as the University College of Central Queensland, under the sponsorship of the University of Queensland.

I regarded it as relevant – though I suspect the selection committee regarded it as less so – that I also had inside experience of some of the 'elite' institutions in Australia and abroad, including appointments at three of Australia's so-called 'Group of Eight' universities. It also seemed relevant that my academic education had encompassed both a professional degree (Law) as well as a liberal arts degree (specialising in Philosophy, supported by Political Science and History), with my subsequent interests extending into Economics. My legal and philosophical education had been at the University of Melbourne, where I later enjoyed a Senior Lectureship in Philosophy. Most of my postgraduate work in Philosophy was done at Oxford, where I obtained my Doctorate. I combined my philosophical and legal interests as Visiting Professor in Jurisprudence at the University of Sydney Law School, and as Liberal Arts Fellow in Law and Philosophy at Harvard Law School. To me it was important that I could bring some participant experience of what a variety of universities of established reputation actually did to maintain their reputation, to an institution that was yet to earn its reputation.

What attracted me to Central Queensland University was the recognition that here was a university with tremendous potential, but one that had not yet clearly grasped that potential, or the steps that would be necessary if it was to be achieved. My predecessor Professor Geoff Wilson had done a tremendous job of creating a strategic plan, and laying the foundations for a selection of areas of research strength, while at the same time bridging what were known locally

as the moats, that some claimed had previously separated the institution from its host communities.

In examining the documentation before my arrival, I could see three danger signs. The first was that Central Queensland University had become critically dependent on distance education enrolments. This was a danger for two reasons. Distance education is the area in which institutions are most exposed to competition, including price competition, much of it internationally sourced. To date this potential competition has still not manifested itself, largely because the commercial potential of becoming a global distance education provider has not yet been fully grasped by the country that, inevitably in my opinion, will ultimately dominate the world distance education market, namely the United States.

This will be the sphere in which globalisation will most readily manifest itself, with the ability to shift input costs, including interactive academic servicing, to low-cost countries, while delivering the products to medium and high yield markets. It can also dominate new campus provision, by being the outsource supplier of proven curriculum, top quality courseware, and basic academic servicing, standing behind locally delivered classroom lectures, tutorials, and laboratory classes. There was on my arrival little comprehension of the fact that the strategy of growth through distance education was a very high risk one. Or alternatively, here was a future to be seized.

The second danger sign was that Central Queensland University's mother city of Rockhampton was stagnating through a period of no growth, and staring decline in the face. While participation in higher education was still below the State and national averages, reaching or exceeding these averages was going to be extraordinarily difficult given that the city's stagnation was reflected in the school age demographics. Wisely, my predecessors had seen the need to broaden the base of on-campus provision, so that there were now University campuses in Mackay to the north, Gladstone and Bundaberg to the south, and Emerald to the west.

While this was a smart move, it had added to the University's costs considerably. Let there be no mistake – multi-campus delivery is more costly to an institution than delivering the same courses and programs to the same total number of students on a single site. The University's southernmost Central Queensland campus, Bundaberg, is roughly the same distance from its northernmost, Mackay, as Melbourne is from Canberra, while the distance west from Rockhampton to Emerald is about the same as from Melbourne to Albury, without any regular air link between them. The two closest, Rockhampton and Gladstone, are 80 minutes apart by car.

On the other hand, building and operating a multi-campus university is very much cheaper than creating and maintaining a separate university at each campus site. Although the University had acquired, and still maintains, an enviable reputation for leadership in the use of technology for multi-site interactive delivery, it has a legitimate complaint that the extra costs associated with multi-campus delivery (or, alternatively, the savings that this facilitates compared with creating free-standing universities in each of these sites), are not given sufficient weight in the dollar rate of per-equivalent fulltime student funding. (A number of other Australian universities, including Monash and the University of Western Sydney, could mount the same argument, though I doubt there is any that is exposed to these extra costs to the extent of Central Queensland University).

The third danger sign was that the academic profile was virtually identical with that of the former Gippsland Institute of Advanced Education – despite their location in socio-economic, cultural, physical, and political environments that could not have been more different! There were faculties of business, applied science, education, engineering, and health sciences, with talk of separating out a sixth faculty of computing and information technology. Here was a new university with the same profile as an off-the-shelf college of advanced education. Five – not to say six – faculties represented an unsustainable administrative cost for an institution of about

6,000 equivalent full-time student units at the time. It was a profile that indicated neither a relevance to its location, nor a distinctive approach to the task of providing Australia with an appropriately diverse mix of higher education institutions.

Plainly, these represented problems requiring early solutions. But it was after my arrival that I discovered the most worrying immediate problem facing the institution. The financial books were in good shape. It was operating a balanced budget. There was no accumulated deficit. Debt levels were prudent and manageable. However, on closer examination it became apparent that each year the University was spending about \$1 million more than it was earning. It was able to do this because it was raiding distributed carry-forwards that were not being replenished. On current trends, including reasonable expectations about student growth, this would be possible for just three more years, after which time the University would face spiralling deficits, no reserves adequate to manage them, and no strategy in place to arrest them. The map of a journey from comfort to insolvency was staring us in the face.

The University had adopted a strongly devolved management structure, notably in the academic area, however it had done so in the absence of a robust policy framework, and a weak set of central financial controls. To exaggerate only slightly, devolution had been interpreted by its beneficiaries as meaning those at the decanal level could spend money on their terms and conditions as they saw fit, in accordance with their priorities, and if and when they ran out, the vice-chancellor at the centre would have the problem of finding them more!

Plainly, devolution in the academic area makes a great deal of sense, to the extent that it recognises that these are the people who are closest to their markets, and need to be able to respond quickly to perceived changes, and to the extent that it recognises that centralising a process, financial or otherwise, is foolish unless it adds value commensurate with the added cost. However, there are at least three other necessary conditions that must be satisfied if devolution is to be effective. First, the management information systems must yield timely, reliable, and relevant information to decision-makers at all levels, and enjoy the confidence of those decision-makers. To the extent that they do not, heads of devolved responsibility centres will create mini-administrations, duplicating the work of central management (on the ground that they have no confidence in what is provided centrally), and inevitably developing their own ways of coding and reporting information which at its worst makes the actual state of their operations virtually incomprehensible to anyone outside.

Second, for devolution to work, there must be promulgated policies in relation to all of those areas in which it is desirable for the institution to have a consistent position. These can range from the seemingly obvious, although often ignored, such as compliance with all applicable Federal and State laws, regulations, and policies, to those where the institution wishes to exercise a discretion in a consistent way, ranging from policies in relation to standards for the assessment of student work, through policies relating to purchasing and travel, policies relating to entering into quasi-contractual relationships with external agencies, to policies dealing with managing staff performance.

Third, there must be a culture of compliance. My experience, and one that is confirmed through discussions with my peers as by no means unique, is that this is one of the biggest management problems currently bedevilling Australian universities. You can have the wisest and most clearly promulgated policies in the world, but it is to no avail if in practice there are significant degrees – indeed any degree – of non-compliance. Much of this non-compliance reflects calculated indifference rather than wilfulness, but the consequences are much the same.

At Central Queensland University none of these three conditions was satisfied, and even on my last day I was still not confident the third had really been achieved. It is impossible, both culturally and practically, for a vice-chancellor and his or her immediate staff to act as a police

force monitoring compliance throughout a devolved organisation. It requires among other things a strengthening of the powers and scope of authority of the university's internal audit committee, commonly a committee of the governing body, so that it can — through a mixture of systematic and random audits, for example — first identify and then recommend action regarding compliance issues, with the ultimate sanction of asking the vice-chancellor to report to the governing body on what action has been taken to ensure compliance where areas of deficiency have been identified. A compliance-level report should also be a standard part of the annual performance review of managers at all levels. However the precondition of all of this being achieved is the re-engineering of academic and administrative processes and their incorporation as simplified value-adding processes in management information systems that earn user confidence.

As far as the academic profile was concerned, the six faculties were reduced to five. Four would have been ideal but the price in terms of quarrel and delay would have been too high.

They are:

- Education and Creative Arts – to enable the Central Queensland Conservatorium of Music to be brought incorporated into a school, and to create the capacity to move more broadly into the creative and performing arts in the future;
- Informatics and Communication – combining for the first time in Australia those concerned with the technology of communication, such as computing and information technology, and those concerned with its content, such as journalism and media studies, to work together in potentially synergistic ways;
- Business and Law – to facilitate a broadening from traditional commerce programs to special applications such as tourism, with the possible incorporation of a School of Law at a later date;
- Arts, Health and Sciences – embracing the common North American idea of placing the Arts and Sciences together, with Health as a unifying link through such areas as social work, human movement sciences, and nursing, drawing on the traditional sciences as well as contemporary social sciences and humanities; and
- Engineering and Physical Systems – combining professional Engineering, Building, Maintenance, and Physics.

Each Faculty comprised multi-disciplinary schools, rather than the previous discipline-based departments. Each was designed so that there would be porous boundaries between and within faculties, to facilitate ease of program reorientation and academic movement in response to shifting student demand. All decanal positions were spilled, and the new position of Dean was made a contract appointment, advertised externally as well as internally, with no tenure, and no reversionary substantive position.

Operationally, faculties were henceforth reconceived as profit centres rather than cost centres, as they had been previously. The first duty of the Dean was to ensure that he or she earned sufficient revenue to enable the faculty to achieve its objectives. The intention, only partially achieved, was to break away from a culture in which the Dean saw his or her job as being primarily to spar with fellow Deans and the vice-chancellor over the manifest injustice of the distributive formulas used to allocate the academic share of the Commonwealth Operating Grant! Rather, the central allocation would be just one of many lines on the revenue side of each Dean's statement of planned income and expenditure.

It was also necessary to abort an unsustainable capital development program for the Rockhampton and Emerald Campuses. It had been planned to spend (borrow) some \$5 to \$6 million to construct a new academic building for the faculty of business. Given property values in Rockhampton, it would have been worth less than \$2 million the day it was completed. Instead, through the development of the 'Smart City' initiative with the Queensland State Government, more than twice the space was obtained in restored surplus downtown Rockhampton State Government buildings for a fraction of the price.

Similarly, a \$1 million building plan in Emerald was abandoned, in favour of the joint development of the already under-utilised Emerald TAFE Campus as a comprehensive jointly managed post-secondary facility, the first of its kind in Queensland.

It was increasingly clear to me that the University needed to pursue a massive growth strategy if it was to have the clout in terms of student numbers, a credible breadth and depth of viable academic courses and programs, and a revenue base that would provide it with the flexibility and fiscal capacity to take greater responsibility for its own future development. It was also abundantly clear that this was not going to come from publicly subsidised student load, irrespective of who occupied the treasury benches in Canberra over the next three or so electoral cycles. It would have to come from fee-paying students. In 1997 Central Queensland University became the first, and at the time of writing, is still the only Queensland public university to enrol full fee-paying Australian undergraduates. Despite this policy adjustment, it was also clear that the overwhelming majority of our fee-paying students would be international.

As there were limits, not yet reached, on the number of international students the University could attract to its Central Queensland campuses, without running up against severe infrastructure limitations, it was decided to take Central Queensland University to where the students were. In a series of audacious moves, the University established campuses, all on a joint venture basis, in Sydney, Melbourne, Brisbane, the Gold Coast, Fiji (Suva), Hong Kong, Singapore and Malaysia. All are either trading profitably, or on track to do so. By outsourcing the employment of the academic staff to our joint venture partner (not the same in every location), which in no cases was another university, while at the same time maintaining the quality control of academic staff recruitment, these campuses were not subject to the industrial restrictions that limit flexibility in universities; for example in relation to the ratio of tenured staff and the employment of casuals. By concentrating on small group teaching using comprehensive resource materials designed originally for distance education students, and teaching all year round, but not supporting staff to undertake research, staffing costs per student are very low. At the same time the use of leased classroom properties means that it is not difficult to enlarge or contract infrastructure in the light of demand; in particular, the University was not subject to an enrolment ceiling set by existing physical facilities but could keep modifying its provision essentially as demand dictates. There is no theoretical limit to the growth that can be pursued in this way, although increasingly such growth does generate digestion problems for any university.

Thus the vision eventually implemented was of a loop containing essentially a hybrid of two institutions; Central Queensland University Regional, with its five Central Queensland campuses, each of a traditional comprehensive sort, and one virtual campus (that served by traditional distance education) catering mainly – but not exclusively – to publicly subsidised students, and Central Queensland University Global, with its four Australian campuses in Sydney, Melbourne, Brisbane and the Gold Coast (Perth has been mooted also), and its four offshore campuses and delivery sites, in Fiji, Hong Kong, Singapore, and Malaysia, catering almost exclusively to full fee-paying students. On current trends Central Queensland University Global will soon overtake Central Queensland University Regional in student numbers, though both are growing, and have done every year.

The idea is that Central Queensland University Global generates earnings well in excess of costs, which then subsidise the broadening of teaching and research capacities at Central Queensland University Regional, thus enabling it to strengthen its reputation at a faster rate than would be possible in reliance on Commonwealth funding, this in turn making the degrees awarded through all sites (which are presented seamlessly to students) more attractive, thus increasing demand ... and so on, around the loop.

No longer is Central Queensland University spending more than it is earning, but each year it generates a healthy operating surplus. During my five years at Central Queensland University there was only one mandatory redundancy (and that at a very senior level), and not one hour lost in industrial disruption. The total number of students virtually doubled, and is now well above the Plimsoll line of 8,000 equivalent full-time student units. Revenue in 2001 is forecast at \$170 million.

Key to this was the appointment of a Vice-President (Corporate Development) with a very senior background in the corporate sector, as a core member of the senior executive team. Previously Central Queensland University had not had a deputy vice-chancellor; this too was a key appointment, comparable to a Provost General in the United States sector, or a Managing Director – Operations, in the Australian corporate sector. Without these appointments the vice-chancellor could not have given adequate attention to innovation, joint venture development, and external relations, much in the way of a United States university president, nor could the other senior executive members have concentrated as effectively as they did on their specific portfolio areas of responsibility in administration, research, and academic development.

To conclude, what were the three biggest challenges? The first was getting the Financial Services Division into shape. Its modernisation, and reorientation to something more like a contemporary corporate planning, budget, and corporate financial services provider with strong management accounting skills, proved more difficult, more frustrating, and more time consuming than anybody foresaw, and was very properly a source of continuing anxiety to the governing council as well as the senior executive.

The second was managing the confidence of council more generally. Unfortunately there had been a long tradition, common as I understand it in the former college of advanced education sector, where aggrieved individual staff members would communicate directly with individual members of council; often the first the vice-chancellor would ever hear of this would be a phone call from the chancellor. Direct griping to individual board members in this way by employees would be totally unacceptable in the commercial sector – another disanalogy between corporate boards and university governing bodies.

The third was common to every university of which I have any personal knowledge, and that is the existence of a small but dangerous pocket of perpetually disgruntled academic staff who take permanent delight in publicly, though typically anonymously, fouling their own nest.