

### 3 Tuition fees and accessibility: the Australian HECS

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#### 3.1 Background

To what extent do higher tuition fees have an effect on the accessibility of higher education? In answering this question, the Australian experience with the reintroduction of tuition fees through the Higher Education Contribution Scheme (HECS) in 1989 is of particular interest. Under this HECS-system, students have to contribute approximately a quarter of the average costs of the training program, either by paying up-front or by taking out a loan and defer repayment through the tax mechanism until after graduation. The most important motivation for the introduction of the HECS was the sheer need to attract additional resources to enable further expansion of the higher education system, as the government encountered budgetary problems. But an important condition was that such private contributions should not hamper access to higher education for people from disadvantaged backgrounds.

Also in other countries the costs of higher education have gradually shifted from governments, or taxpayers, to the students and their parents (Johnstone, 1999). This gradual shift towards private contributions is heavily debated. Both in policy circles and in the academic debate the question “how much students should contribute to their own education” has received ample attention. This question may have become even more urgent in recent years, with OECD countries witnessing an increased fiscal pressure in combination with often sharply rising participation rates in higher education (Barr, 1998a).

From the Dutch perspective, the debate on tuition fees is of particular interest, because tuition fees form an increasing source of revenues for higher education institutions. Moreover, the differentiation of the higher education system in terms of students, programs, duration of courses and life-long learning opportunities will put more emphasis on pricing strategies, their aims and effects.

In the public debate, it is often argued that higher tuition fees translate into lower enrollment rates in higher education. In principle, this need not be a problem. Tuition fees could promote self-selection among students so that only people with sufficient academic competences go to higher education. Talent or innate ability is unevenly distributed among society. People invest in higher education up to the point where the marginal cost of their investment is equal to the marginal private benefit in terms of higher lifetime income. The effect of public subsidisation is that less talented individuals would calculate a positive net present value of participating in higher education. So when there is no student selection, public support to higher education could lead to a reduction of the average quality of the student population.

Also, in the real world there is imperfect insurance against future income uncertainty, and people tend to be risk-averse. A rise in tuition fees could then go along with a reduction in human capital investment by risk-averse individuals (private returns to schooling are reduced). And to the extent that talented people decide not to go to college or university because of the risky investment, tuition fee increases could be harmful. The central issue in this chapter is whether tuition fees endanger access to higher education and, if they do, how governments can prevent that potential students (from particular groups) might get excluded from participation.

In Section 3.2 we first discuss the relevant economic theory and recapitulate the arguments that have been put forward in debates on tuition fees as well as some results on the relationship between tuition fees and accessibility that have been found in the literature. The Australian HECS is described in more detail in Section 3.3, and an evaluation of the HECS is presented in Section 3.4.

## 3.2 Private contributions and economic theory

### 3.2.1 Why private contributions?

Private contributions to higher education can be made in several ways, such as through forgone earnings, expenditures on books and payments of tuition fees which cover (part of) the direct costs of education. In this chapter we concentrate on tuition fees. Three basic reasons have been put forward in the literature to legitimate tuition fees:

- Small difference between private and social returns to schooling;
- Equity considerations;
- Reduction of moral hazard / adverse selection.

First of all, no clear evidence for the presence of human capital spillovers is found in the data. Estimates on the private and social returns to higher education are typically in the same order of magnitude (see Chapter 2 for a more elaborate discussion). And when the difference between private and social rates of return to schooling is small, there is no strong case for government intervention to change the current level of participation in higher education.

The second argument that justifies tuition fees has to do with equity. Public subsidies to higher education have a regressive income effect. The average taxpayer funds a service from which only a fraction of the population directly benefits. As students have a higher expected lifetime income than the average taxpayer, government support to students imply an income transfer to tomorrow's well-off. To mitigate such regressive income effects, it is equitable to ask for a private contribution to the costs of higher education (see, for instance, Oosterbeek, 1998). We should add that this is a rather controversial issue, and some people claim the opposite: education helps to reduce income disparities in the economy, and to that end government should support education (*cf.* Teulings, 2000).

Third, tuition fees can help to ensure that the decision to enter higher education is taken seriously. The individual investment encourages and motivates students to work hard (moral hazard is reduced). In addition, if students have to pay a price themselves, they probably will demand value-for-money. On top of that, higher education institutions will compete by offering an attractive price-quality package (Eurydice, 1999). And tuition fees could help to filter out the people who do not belong in a higher education program, so it helps to reduce the adverse selection problem. This effect operates on the borderline between economics and psychology (therefore, being economists, we shall refrain from a detailed treatment of this issue).

All in all, sharing the costs between society and the individual participants in higher education is both efficient and equitable. However, to prevent potential students from under-investment in higher education, governments should safeguard accessibility (we shall come back to the question how to protect access to higher education in greater detail below).

### 3.2.2 The impact of tuition fees

Tuition fees are expected to have a negative influence on the decision to attend higher education, as they lower the net present value from the educational investment. But measuring the effects of tuition fees is difficult. It is hard to single out the pure effects of tuition fees from all other variables influencing the enrollment decision. In addition, it is almost impossible to identify potential students who did not attend college for the sake of tuition fees. Finally, cases of introducing tuition fees at institutions or in particular countries do not happen so frequently.

The major results of the rich literature on this issue will be discussed here. Leslie and Brinkman (1987) and Heller (1997) review a number of American studies of the 1970s to the 1990s. Their major conclusion is that students are responsive to prices and that – *ceteris paribus* – for every \$100 increase in tuition price one would expect the participation rate to drop by about 0.7%-point. For an average weighted tuition fee of \$3,420 and a national higher education participation rate of 0.33 in 1982/83 (*cf.* Leslie and Brinkman, 1987), this corresponds to a price elasticity of -0.73. Others (Manski and Wise, 1983; Moore *et al.*, 1991; Gladieux and Hauptman, 1995) add that particularly low-income students are more sensitive to tuition price levels than higher income students. McPherson and Schapiro (1997, 1998) stress that, though enrollment rates for all racial groups have risen, the gap between the enrollment rates of Whites and other racial groups has widened. This variation in price sensitivity among different racial groups is also shown by Heller (1997).

In addition, Kane (1995) shows that increases in net costs over time are related to decreases in enrollment rates for lower-income students in the US. Next to that, evidence shows that increases in net cost did not inhibit enrollment for more affluent students. However, middle-income students also seem to have reached a price threshold, particularly in the private sector institutions (Breneman, 1994; Campaigne and Hossler, 1998). Based on these findings,

McPherson and Schapiro (1997) conclude that policies that call for cross-subsidisation among students, such as the high tuition – high aid strategies, make sense from the viewpoint of economic efficiency (although targeted student support by the government would be a better policy instrument).<sup>1</sup>

Leslie and Brinkman (1987) address the quandary that participation rates have not gone down in the US while tuition fees increased. They explain this phenomenon by noting that tuition prices did not increase so much in real terms, and that financial support ameliorated access. In addition they note that demand is known to be affected not only by price but by the money income of the buyer, by tastes and preferences, and by the value of the good from a consumption or an investment perspective.<sup>2</sup>

In the Dutch situation Sterken (1995) finds a long-term enrollment elasticity of -0.5, so a permanent increase of the tuition price by 1% would correspond to a reduction in student enrollment of 0.5%, which is a rather strong effect.<sup>3</sup> In contrast, Huijsman *et al.* (1986) find students' higher education demand fairly insensitive to the tuition fee level: they obtain an elasticity of -0.003. Oosterbeek and Webbink (1995) also find a very low elasticity (close to zero). In addition, a recent study by SEO (2000) shows that students hardly seem to respond to financial incentives. Changes in tuition fees or grants have a very small impact on participation.

All in all, in the literature it is found that the price elasticity of higher education is not large, especially not for students from more affluent backgrounds. However, students from socio-economic disadvantaged backgrounds seem to be negatively affected by price increases, even when they are compensated through student support.

After this quick scan of the literature on the impact of tuition fees on student enrollment, we now turn to the Australian experiences with tuition fees in their Higher Education Contribution Scheme.

<sup>1</sup> The high tuition – high aid strategy comes down to a situation in which richer students pay a substantial part of the costs of education which is partly used for providing discounts to poorer students (pooling of risk among students). However, in practice there have been considerable increases in net tuition for low-income students, leading to a growing gap between enrollment rates for high-income and low-income students and to an increased concentration of low-income students at the least costly institutions and programs.

<sup>2</sup> An additional explanation could be expected skill-biased technical change, increasing the future returns to schooling. Also, Bils and Klenow (2000) show that the expected rate of economic growth has a strong impact on the expected returns to schooling.

<sup>3</sup> It should be noted that the econometric specification in Sterken (1995) is disputable.

### 3.3 The Higher Education Contribution Scheme in Australia

The Australian Higher Education Contribution Scheme (HECS) provides an outstanding experience for analysing the effects of introducing or raising tuition fees. First of all, the introduction of the HECS meant a sudden demand for private contributions in a situation where the individual participants in higher education did not pay any contributions at all. Second, the level of tuition fees to be paid was substantial, around 23% of the average costs of higher education programs in 1989 (when the HECS was introduced). A third argument for choosing the Australian case is that the government tried to limit the negative influences of charging tuition fees on participation in higher education. In particular, they offered a deferred repayment scheme through the tax system for those who could not or did not want to pay the tuition fees up-front. This is a rather novel system, and it has received ample international attention. When studying the impact of tuition price on accessibility, the choice for Australia is therefore a natural one. In the following sub-section we discuss the history and rationale of the HECS. Next we address the features of the tuition fee system and how tuition fees can be paid. In addition, we elaborate on the developments in tuition fee policies since 1989. Finally we evaluate the HECS.

#### 3.3.1 History and rationale

Table 3.1 summarises the most important historical developments in Australia with respect to tuition fees in higher education.

**Table 3.1 Some important historical developments in Australian higher education, tuition fee policies**

1854	Inception of Australian higher education sector, foundation of University of Sydney.
1854-1974	Tuition prices are charged to students.
1974-1985	Abolishment of tuition fees, Australian higher education is funded virtually exclusively from federal government sources.
1985	Higher education fees appear again, initially in the form of a "Higher Education Administration Charge" (\$A250 per student).
1986	Introduction of fees for certain Australian postgraduate students.
1989	Introduction of Higher Education Contribution Scheme.
1997	Differentiation of tuition fees into three tariff bands.
1998	Institutions are allowed to admit (a limited number of) students on a cost-covering basis.

As can be seen from Table 3.1, tuition fees were not new in Australia when HECS was introduced in 1989. The major arguments put forward in the discussion about whether or not to reintroduce tuition fees can be summarised as follows:

- Particularly during the late 1960s, the 1970s and the late 1980s there has been a rapid growth in the demand for higher education (Karmel, 1999). This development indicated the transition from an elite system to a mass and eventually a universal tertiary education system. Though the

increase in student numbers can partially be explained by demographics, the most important contributing factor is an increase in access;

- This growth was expected to continue because, as with other industrialised countries, traditional manufacturing industries were being replaced by the so-called “knowledge processing sector”. As such, it was and still is expected that society would need more higher education graduates (*cf.* West, 1998);
- Public funds were regarded too limited to enable the desired expansion of the higher education sector (Meek and Wood, 1997). Until the mid 1970s, public funding for higher education grew rapidly. But since the oil shocks of the 1970s, the social service and health burden on the national treasury was rising dramatically (Karmel, 1999). In addition, a general change toward a smaller government and restrained levels of taxation has led to an end of the expansion in the public support for higher education (Harman, 1989);
- There has been a longstanding debate on the appropriate balance between public and private financing of higher education in Australia. In this debate, more and more stakeholders got convinced that on the one hand the clear private benefits from obtaining a degree justify some private contributions to the costs of education. On the other hand, the private contributions should not impede access to higher education, particularly not for students from disadvantaged backgrounds (Chapman, 1997);
- Finally, it was expected that reintroduction of tuition price would not have an important effect on the demand for higher education. This view was supported by the observation that the abolishment of tuition fees in 1974 has had little impact on improving access of lower socio-economic status (SES) students.

Regardless of the strong arguments in favour of tuition fees, the introduction of the HECS fees was heavily criticised, both by student unions and political interest groups. However, next to the arguments used to defend the HECS, Minister Dawkins offered the HECS-proposal as part of a larger package of reforms for the funding of higher education. The Minister’s statement that public funding of universities was only going to be increased if HECS was put into effect, was the final trigger to have parliament accepting the HECS-proposal. If HECS was not accepted, higher education funding would have been frozen. Most members in parliament did not want to refrain universities from increased funding, which was perceived to be absolutely necessary.

### 3.3.2 The Higher Education Contribution Scheme

When tuition fees were reintroduced in 1989, the Australian government established a system aimed at raising the revenues of higher education institutions, without erecting financial barriers to participation in higher education. Since then, students in Australia generally have been required to contribute to the cost of higher education. In the following, we describe the HECS-system in more detail.

HECS applies to Australian or New Zealand students in Commonwealth funded higher education award courses which lead to degrees, diplomas, associate diplomas, graduate diplomas, graduate certificates, Master's qualifying courses, Master's courses or Ph.D.s. HECS applies to around 80% of all students enrolled in universities. Some categories of students are exempted from the HECS payments, such as TAFE-students (Technical and Further Education), students charged tuition fees by the institution, students in non-award courses, students with an Australian Postgraduate Award (scholarship), participants in enabling courses for disadvantaged students, and students with a merit-based equity scholarship. In addition, all foreign (overseas) students have to pay a cost-covering tuition rate up to \$A26,000 (Dfl.36,400) in 1996.

The level of HECS-tuition fees is determined by the Minister of Education. The HECS rate was originally set to recover 20% of the costs of an average university program, which was \$A1,800 (Dfl.2,500) in 1989. The level of HECS has been indexed to the cost of living and has risen to \$A2,450 (Dfl.3,400) in 1996. These rates relate to full-time students. Part-time students pay proportionately less. Table 3.2 illustrates the development of tuition fees under the HECS-system.

**Table 3.2 Tuition price levels under the HECS**

	1989	1996	1997	1999
Uniform:	\$A1,800	\$A2,450	Low: \$A3,300 Middle: \$A4,700 High: \$A5,500	Low: \$A3,409 Middle: \$A4,855 High: \$A5,682

Note: \$A1=Dfl.1.31≈€0.60 (January 2001).

Source: DEETYA (1999a) and Dawkins (1999).

Until 1997 tuition fees were equal for all fields of study. However, because HECS is fundamentally a cost recovery system, charging fees that reflect the differential costs of the various training programs have been strongly advocated from the beginning. As of January 1997, tuition fees were differentiated into three tariff bands: low, middle, and high (*cf.* Table 3.2).

This new differentiated tariff structure is not consistent with a pure cost recovery model. The new pricing structure is a hybrid model, in which both costs and expected future benefits from obtaining a particular degree have been given a weight (Chapman, 1997). As such, the most expensive tier not only includes expensive courses like medicine, dentistry, veterinary science and engineering, but also law, which is one of the cheapest courses. Other inexpensive programs, such as economics and business, are charged at the medium level. In addition, compared to the uniform tuition level of 1996 (\$A2,450), the weighted average private contribution has increased by about 70%.

HECS payments are made on a semester basis. Normally, students have two choices in how to pay their HECS contribution:

- Pay up-front with a 25%-discount;
- Defer or partially defer their payments until after graduation.

The first alternative allows students to make their HECS contribution directly to the institution at the beginning of each semester. Because students do not use any government facilities to defer their payments, they get a 25%-discount on their payments. In the 1999/2000 situation this implies that a student enrolled in a “band 1” subject will be charged an up-front rate of \$A2,557 instead of \$A3,409. Over the years, the number of students choosing the up-front payment option has increased, up to 29% in 1997.

The second alternative, chosen by the majority of students (71% of HECS-liable students in 1997), enables students to defer payment of HECS until after graduation. In this method of deferred payments, the Commonwealth government pays the tuition price to the institutions and provides the students with a loan. An important characteristic of the HECS-loan is that no interest is charged on the outstanding debt. The total debt is only indexed annually by adjusting it in line with the cost of living on the basis of the Consumer Price Index. A combination of both payment options is also possible. Since 1998, students may choose to pay part of the fees up-front (at least \$A500) with a 25%-discount, and defer the remainder.

When students opt to defer their payment they have to give their Tax File Number to the institution. This identification number is used by the institution to report details of the debt every semester to the Australian Taxation Office (ATO), which further administrates the loans and their refunding. Repayments of the HECS-loan are collected through the tax system and are income-contingent. This implies that people repay at different rates, depending on annual income after graduation. Graduates with high earnings repay more rapidly through higher (monthly) installments than graduates with lower earnings.<sup>4</sup>

The repayments only start when annual earnings exceed a certain threshold. Until 1996, this threshold was equal to the average taxable income of Australians working for pay (\$A27,675 per annum in 1996). Since 1997, the income threshold at which repayments start has been lowered (for instance, in 2000/01 it was \$A22,346). The annual repayment rate increases with the level of income. If income exceeds the minimum threshold, ATO will withdraw automatically 3% of the total taxable income as HECS-repayment. A growth in income leads to a successive gradual increase in the repayment rate up to a maximum of 6% of total taxable income. The HECS

<sup>4</sup> Recall from Chapter 1 that the Dutch repayment system also includes some income-contingent characteristics by the opportunities offered through the means test for those who expect to have difficulties with their repayments.



repayment thresholds are adjusted each year to reflect any change in average weekly earnings.

Table 3.3 presents the repayment rates and income thresholds for 2000/01.<sup>5</sup>

**Table 3.3 Tariffs for income-contingent repayment of study debt in Australia, academic year 2000/01**

Income (\$A)	Tariff (%)
below 22,346	0
22,346-23,565	3
23,566-25,393	3.5
25,394-29,456	4
29,457-35,551	4.5
35,552-37,420	5
37,421-40,223	5.5
40,224 and above	6

Note: 1 \$A=Dfl.1.31=€0.60 (January 2001).

Source: Australian Taxation Office, [www.ato.gov.au](http://www.ato.gov.au).

### 3.4 Evaluation of the HECS

The primary objective of HECS was to allow the higher education sector to expand without a substantial growth in government funding. In particular, HECS aimed to reintroduce private contributions without jeopardising accessibility to higher education. In this section we will evaluate the HECS-system.

The introduction of tuition fees in Australia in 1989 does not seem to have had any major negative effects on student enrollment. In exploring the effects of the HECS on accessibility, several types of studies have been employed. First, some studies address the issue whether HECS affected the private rate of return to higher education. Chapman and Chia (1989) conclude that the effect of HECS would be so small that demand for higher education (even by students from disadvantaged backgrounds) would not be hampered. Also the 1997-changes to the HECS (lowering of income threshold and differentiated tuition fee rates) would hardly change the high rates of return and, as such, were unlikely to reduce the attractiveness of higher education (Chapman and Salvage, 1997).

Some other studies evaluate the effects on students from different socio-economic backgrounds. The major conclusion is that the proportions of students from different socio-economic backgrounds have hardly changed since the introduction of HECS (Chapman, 1997;

<sup>5</sup> Apart from these automatic repayments through taxes, graduates are allowed to make voluntary repayments of any amount at any time. If the voluntary repayments amount to \$A500 or more, the HECS-debt will be reduced by the amount of that payment plus an additional 15%.

Andrews, 1999). People from lower SES groups benefited as much as other groups from the increase in student numbers (though they are still under-represented in the student population).

The effects of HECS on individual decision making have also been measured through attitudinal surveys. On the basis of a survey immediately after the introduction of HECS in 1989, Robertson *et al.* (1990) conclude that HECS had little effect on the composition of the pool of applicants and no effect on the composition of those accepting an offer to enroll. On the request of parliament, the Higher Education Council imposed a system of monitoring the effects of the HECS, particularly for the socio-economically disadvantaged. In their first survey in 1991, executed by the consulting firm Ernst and Young, it was found that school leavers gave a low ranking to HECS for deciding not to go to higher education. School leavers who intended to go to university and adults indicated HECS as a middle-ranking factor for deciding not to enroll, after academic factors and more pressing economic factors. The Council concluded that “most qualified applicants from across groups in the study would not be significantly deterred by HECS” (Higher Education Council, 1992, p.21).

Using data from the Australian Council of Educational Research (ACER), Chapman and Chia (1993) compare the composition of 18-year-old students in higher education in 1988 and 1993. Students were distributed among three family wealth categories and then compared on the basis of their participation rates. For all three categories, participation rates had gone up by around a third between 1988 and 1993. Though the participation rate of those from wealthy backgrounds is larger, the introduction of HECS did not exert any discernible effects on the socio-economic composition of the student body.

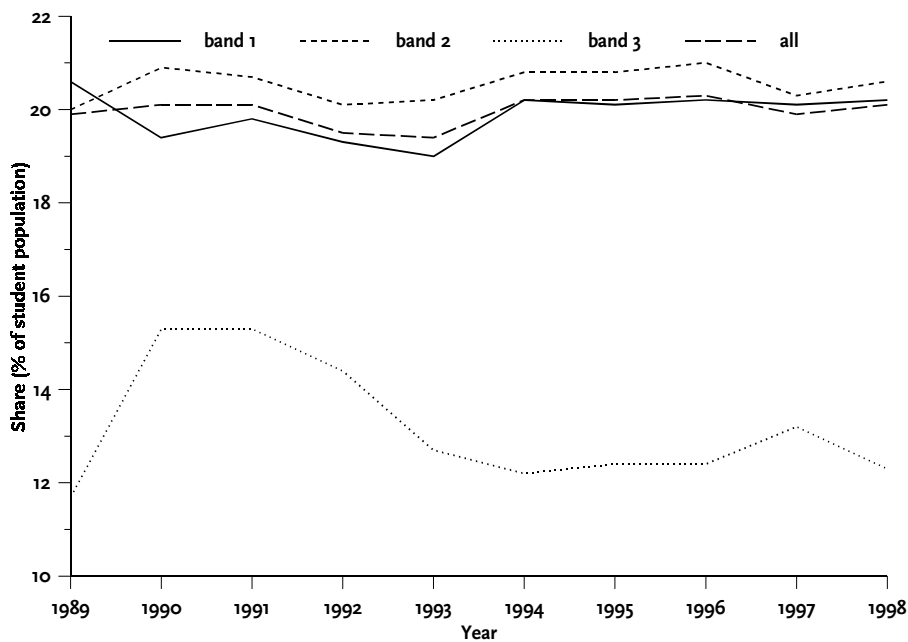
More recently, Ramsay *et al.* (1998) survey students eligible to enter the University of South Australia and compare the views of students from low socio-economic status entering the institution through the university’s special access scheme (USANET) with the views of a control group. An interesting finding is that HECS appeared to have a more positive impact on the decision to enroll for the USANET-students than for the control group. All in all, the surveys on the attitudes of students do not support the idea that HECS erects a barrier to higher education. At the national level, Encel (2000) studies the effectiveness of a number of government programs targeted at indigenous Australians. He finds that their participation has shown a fairly steady increasing trend since 1987, though participation rates are still lower than for the non-indigenous population.

Students choosing the deferred payment option have to accept a debt. Opponents have indicated that some groups of (potential) students might be unwilling to incur a HECS-debt because they dislike debt (Andrews, 1999). This debt-aversion stems from either the aversion to the risk of being unable to repay the debt, or because it shifts expenditures from the future to the present. In an unpublished report by Sharp & Anderson Marketing Consultants, it is concluded that SES-background of people had no strong or consistent effect on debt-aversion as measured by the willingness to apply for new mortgages or personal loans and the amounts

involved. All in all, there seems to be no support that HECS deters people from low SES-backgrounds because of debt-aversion (Andrews, 1999).

A next step in the HECS arrangements was taken in 1997 when the income thresholds at which repayment through the tax system starts was lowered and when tuition prices increased substantially and fees were differentiated into three tariff bands. The question thus emerges whether low SES-students are under-represented in the three HECS-bands. Figure 3.1 shows the share of commencing students from low SES-backgrounds.

Figure 3.1 Share of commencing students from low SES backgrounds (17-24 year)



Source: Andrews (1999).

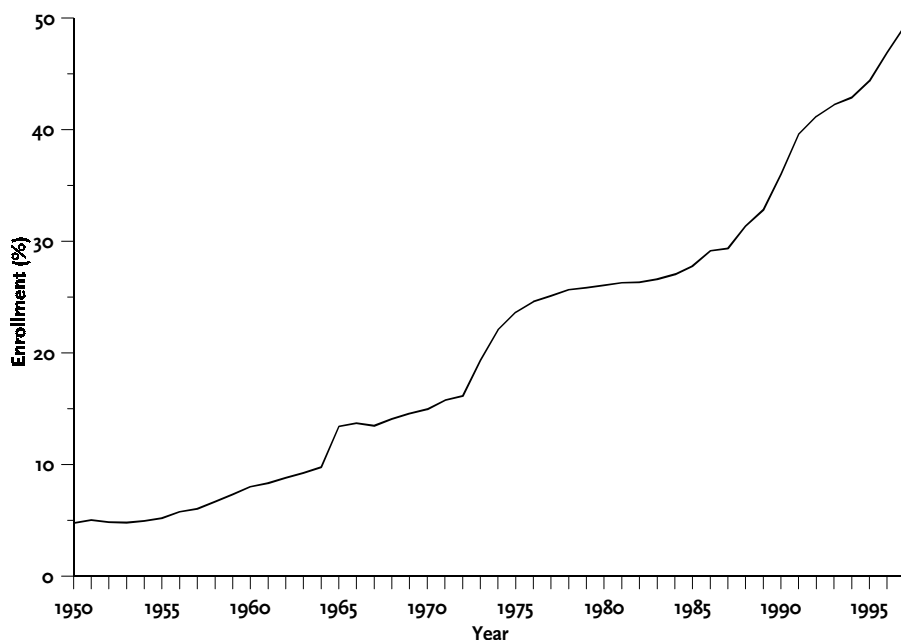
First of all, this figure shows that the proportion of commencing students from low SES-background has been stable around 20%. From the figure it also appears that low SES-students are particularly under-represented in band 3 fields (law, medicine, etc.). This situation, however, has been a long-term feature which certainly prevailed before the introduction of HECS in 1989. Such inequalities have been recognised as long as universities exist in Australia. A Commonwealth Education Survey in 1984 already indicated a domination of students from high socio-economic backgrounds in veterinary science and law. However, the choice of courses does not seem to be determined by financial motives. Recent work of Harvey-Beavis and Elsworth (1998) and James *et al.* (1999) found that subject choice is primarily influenced by the intrinsic interest in the field. Also, under-representation of low SES-students in band 3 fields can probably be explained by the very high entrance scores required in conjunction with the relatively low performances of low SES-students at secondary school.

A second interesting conclusion from this figure is that the recent changes in the HECS-system (increasing and differentiating fees, lowering the income threshold) do not appear to have any effect on the proportion of students from low SES-groups. However, because students can attend courses from differently priced programs, the price borders between the various disciplines are not fully clear. This has made the original simple HECS structure a bit less transparent.

Between 1989 and 1997 total enrollment in universities increased from 441,076 to 658,827 students. This reflects a rate of growth that never could have been funded by public means. In addition, the number of rejected applicants for higher education places has fallen substantially. Together with a stable distribution of students and new entrants over different socio-economic groups, this brings us to the conclusion that more people from all social classes attend higher education (Andrews, 1999). However, though the participation of low SES-groups remains stable, these groups are still seriously under-represented in higher education (DEETYA, 1999b).

The higher education sector also witnessed a rapid expansion in terms of the percentage of people in the 20-24 age cohort enrolled in a higher education program. Figure 3.2 shows the historical development over the 1950-1997 period. In 1950, about 5% of the 20-24 year-old people participated in some form of higher education; by 1997 this percentage has risen to 50%. The average annual growth rate in student enrollment over the 1950-1988 period was 5.3%, and over the 1989-1997 period it was 5.2% (recall that HECS was introduced in 1989). This is a negligible difference.

**Figure 3.2 Enrollment in higher education (percent of age cohort 20-24)**



Source: Enrollment data are taken from DEETYA (1998), and population data on the 20-24 cohort are taken from UN (1999).

Opponents of HECS complained that the new and untried arrangement would cause an enormous administrative burden. It is true that university administrators need to collect all up-front HECS payments and have to forward data about the individual debt of all persons who choose to defer their payments. The government compensates the institutions for these administrative costs, which were estimated at about \$A12 million (in 1995). This is approximately 2% of total HECS-revenues.

The administrative burden as a result of the deferred payment option mainly stems from the additional tasks for the Australian Taxation Office (ATO), which administers the loans and collects the repayments. In addition, once the individual's income exceeds the income threshold an automatic trigger imposes the appropriate charge. It has been estimated that the administrative burden of this arrangement is about \$A5,5 million per year. This is about 1% of total HECS revenues in 1995 (Chapman, 1997).

The actual experience with HECS shows that repayment rates of the debt are high. Recent statistics on repayments through the tax system show that after its initial years of operation the total amount repaid has increased very strongly. So it can be concluded that most graduates are able to repay their HECS-debt. In fact, most of the graduates repay their debt even within ten years, as can be seen from Table 3.4.

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**Table 3.4 Outstanding debt in HECS-system**

Age of outstanding debt	% of total
Studied before 90/91	1%
Last studied 90/91	2%
Last studied 91/92	4%
Last studied 92/93	7%
Last studied 93/94	10%
Last studied 94/95	13%
Last studied 95/96	17%
Last studied 96/97	46%
Total	100%

Source: Dawkins (1999).

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Winding up, the general conclusion to be drawn from all studies with a direct or indirect focus on the effects of HECS is that ever since its introduction higher education has expanded considerably without lowering the proportion of students from low SES-groups. The under-representation of low SES-individuals is mainly the result of non-financial (barely manipulable) factors such as values and attitudes. HECS is only of minor importance, if there is any influence at all. By-and-large, there is no evidence that HECS reduced accessibility of higher education (Chapman, 1997). Even the recent increase and differentiation in fee levels does not seem to have influenced applications and student enrollment. In addition, the rate of repayment by

graduates who deferred their tuition payments until after graduation through the tax system appears to be considerably higher than expected. Most graduates repay their HECS-debt in full within a period of 10 years after graduation. Finally, the administrative system collecting tuition fees up-front or after graduation through the tax system operates effectively and efficiently.

Altogether, the introduction of private contributions through HECS and its subsequent changes do not seem to have had a negative influence on the accessibility for students from lower SES groups. The socio-economic composition of the student population did not change, implying that participation in higher education also increased for low-SES students. This suggests that applicants are relatively unresponsive to changes in tuition fees. However, we do not know what the developments would have been without the introduction of HECS and its successive changes. So while the conclusion that HECS did not deter accessibility seems warranted, a skeptic may argue that higher education enrollment could have increased even more rapidly without private contributions (the counterfactual).<sup>6</sup> Though we cannot refute this argument, we are inclined to conclude from the Australian case that private contributions to higher education can be introduced or increased without hampering access to higher education, as long as payment is contingent on the individual (future) income situation.

<sup>6</sup> A possible way to try and take account of the counterfactual would be to run a regression for student enrollment on tuition fees, per capita income and perhaps some other control variables. The obtained regression coefficient for per capita income captures the consumption motive for education and the role of capital market constraints (in both cases the predicted sign is positive). So when credit market problems are solved through provision of loans – as in the HECS system – the obtained income effect would mainly reflect the consumption value of higher education.