

# Shifting Trends in Higher Education Funding<sup>1</sup>

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## Introduction

Government participation to the economy increased substantially during the previous century. Public spending by the six largest economies increased likewise on average by 12% in 1913 to 45% of GDP in 1981 (Maddison in Archer, 1993: 2). By 1986 an average of 11.6% of total government spending, equal to 5.4% of GDP, was channeled to government spending in OECD countries (de Villiers, 1996: 214-215). In 1998 the corresponding figures were 12.9% and 4.6% respectively (OECD, 2004: Table B2 & B4). The high levels of spending on education can be linked to the development of the human capital model, formulated in the sixties<sup>3</sup>. According to the human capital model, people are made more productive by further training and the market will subsequently pay higher remuneration to well trained workers. This resulted in the believe that more investment in human capital will lead to higher economic growth rates and that the rates of return on these investments for both government and private individuals are very profitable. Developing countries invested heavily in education, but the gap between developed and developing countries rather increased than decreased. The question to be answered then is whether investment in education is at all worth the while for government or the individual.

In the first section of the paper we explore the dual nature of higher education – i.e. the public and private characteristics – by briefly stating the relevant theory and then discuss the profitability of investment (rates of return) in education. In the second section we explore the international practice regarding public and private funding of higher education, discuss the rational for levying private fees and examine the types of institutions and modes of financing (both for students and institutions) in selected countries. The paper then draws on the international experience to extract lessons for a country like South Africa, especially regarding student financial support.

## Private and public benefits accruing from higher education

### *Theoretical background*

Distinguishing between the private and public characteristics of higher education is no easy task. Private goods are both rival (for example, if someone drinks a cool drink there will be less available to

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<sup>3</sup> Theodore Shultz, Edward Denison and Gary Becker did pioneering work in this field. See for example Rosen (1987) and Cohn and Geske (1990) for a good discussion of this period.

other consumers) and excludible (if I buy a cool drink it is mine alone and I can consume it myself). With public goods, like streetlights, the situation is totally different. If one person walks underneath a lamppost there is not less light left for other consumers and people can make use of the light irrespective of whether they paid their taxes. Once a public good is produced nobody can be prevented from consuming the good, giving rise to the problem of free riders. The question to answer is to what extent is higher education a private or public good?

Cemell (2003) distinguishes among four functions of higher education, namely its training of highly skilled personnel, its development of new knowledge and research, its contribution to community service and an ethical function, that may include social critique. Knowledge that one student acquires in the education process does not mean that there is less knowledge available for the other students. In the training of students the contact that one student makes with a lecturer (during lectures) does not decrease the time available for the other students. In this sense higher education may be regarded as a public good. However, it is also true that the more individual time (for example during consulting hours) one student requires from a lecturer the less time is available for other students. Also, if educational institutions reserve the number of seats available to new students, the acceptance of one student implies that fewer places are available to other potential students. Higher education therefore does display certain characteristics of private goods. Certain groups can for instance be prevented from entering higher education by levying high fees. This is a common practice and has been used from the earliest years to prevent prospective students from poorer communities (considered to be of a lower social status) to enter higher education.

Since higher education also exhibits characteristics of private goods, the question can be posed to what extent public funding is defensible. Melick (1982:105) focuses on three reasons why the government should be involved in education, namely risk taking, uncertainty and insufficient liquidity. Young people are uncertain about the benefits that they will reap from further education and they sometimes come from families that do not value education or do not receive proper guidance in this regard. If a student enrolls in the wrong programme it might be a costly mistake. Due to the long term nature of an investment in education, people from poor communities may be reluctant to take the risk of post secondary education if it is not subsidised by the public sector.

Fundamental research and research results (Cemell's second function) forms the basis for future and applied studies. If the government makes no contribution to this research, it might not be undertaken at all. The results of the research are published in research journals and become public assets. A strong case can thus be made for public financing of such research. At higher education institutions research is

also initiated by the private sector contracting institutional experts to become involved in specific research projects. Cemmell (2003) views this as part of the community function of universities and in this process the researchers face very few risks. Some researchers even have to sign confidentiality clauses and in the short run private institutions can thus keep these research results a secret. However, knowledge built on research of the past and the course content of higher education is a function of previous research. If basic research is not properly funded the rate at which core research is undertaken will slow because more research will focus on profitable activities. In this context Cemmell (2004) sees education in the long run as a public good.

As far as the social-ethical function of education is concerned, Cemmell (2004) is of the opinion that it is not an excludible product. As long as people's human rights are not violated in the process of criticism, it cannot be seen as a public good. There are numerous studies that focus on the indirect benefits of education, like better communication, more responsible behaviour, more law abiding behaviour, more involvement and understanding of the democratic process and to contribute towards the intellectual and cultural well-being of the community. These indirect benefits are not excludible and are passed on from one person to another as they make contact. In this light higher education can be regarded as a public good. Higher education can also be regarded as a merit good that justify involvement of the state in the education system because the community benefits from it. This can also be linked with externalities, discussed in the next paragraph.

There is a difference of opinion as to how indirect benefits of education should be treated. These aspects have not been quantified with any great deal of accuracy. Some of these benefits are seen as non-economic and some writers are of the opinion that it must not be included in the calculations. As Melck (1982: 103-105) rightly points out the positive externalities of education may result in the undersupply and overpricing of education if the provision of education is entirely left to market forces. In this respect the payment of state subsidies are justified to correct for market failures. The magnitude of government involvement is however uncertain. Melck (1982: 19) states clearly that no study has been done that categorically determined the magnitude of private and public benefits of education. No new light has since his dissertation been shed on this problem of quantifying the benefits of education. On the one hand it is very difficult to quantify the benefits of education, but it is also very difficult (and some would argue impossible) to distinguish between private and public benefits on the other.

It must be kept in mind that only a certain portion of education expenditure is subsidised. If free education is provided it is normally only tuition fees that are not imposed, but cost items like housing, transport and other additional costs must be borne by the students themselves. If education is said to

be freely supplied, bursaries must be provided that covers both the accommodation costs and earnings forgone. In the early school phase this is done to a large extent when learners have no opportunity costs while attending schools, because they are too young to work legally. When the state subsidises higher education the subsidy is normally calculated on only part of the student's total costs.

The belief in South Africa that higher education is a basic right assumes that education is a public good. This, linked with article 29 of the Constitution of South Africa can create the belief that education should be primarily publicly financed. With the most recent changes in policy by institutions like the World Bank, the World Trade Organisation and individual countries like the United Kingdom that are of the opinion that the individual should make a greater contribution to the costs of higher education, it becomes clear that higher education cannot be seen as a pure public good. It seems as though individuals will in future contribute to a greater extent towards their own higher educational costs.

When looking at the costs and benefits of education we must distinguish clearly between the private and public nature thereof. Although we can distinguish between the private and public components it is very difficult to quantify these items. Certain educationists are of the opinion that economists try to measure the immeasurable when they do cost benefit analysis, growth accounting or educational production functions. Due to these and other measurement problems, the results of these studies must therefore be treated cautiously.

We will first look at the private costs and benefits of education (for a detailed discussion of the difference between private and public benefits and costs of education see for example de Villiers, 1984: 51-56 and 74-85). We can distinguish between direct and indirect private benefits. Direct benefits refer to the higher earnings that highly skilled workers normally receive, the fact that education make them more productive and qualify them for more profitable occupations. Indirect benefits of education come in the form of more study opportunities that are available to highly skilled people, a greater variety of occupations that can be chosen from, greater flexibility to adapt to a changing environment, it broadens people's frame of mind and makes it possible to lead a fuller life. The individual also has direct costs like class fees, textbooks, stationary as well as additional transport and other costs, like more expensive housing costs in a university town than in other cities. There are also indirect costs in the form of income foregone because a person is studying and not working (and this is normally the biggest cost item).

*Profitability of investment in education*

One method that can be used to calculate the profitability of an investment in education is cost benefit analysis. With this method the costs and benefits are discounted to their present value and if the present value of the benefits is greater than the present value of the costs it is profitable to undertake a project. Another method, and a more generally used one, is to calculate the interest rate that will equate the discounted values of the benefits and costs. This is also known as the internal rate of return. Worldwide several studies have been done to calculate the profitability of investment in education. Psacharopoulos and Patrinos (2002) give a good summary of these results of studies that have been done in 98 countries over the period 1960-1999. These results are summarized in Table 1.

**Table 1**  
*Rate of return of investment in education*

Region	Social			Private		
	Primary	Secondary	Higher	Primary	Secondary	Higher
Asia	16.2	11.1	11.0	20.0	15.8	18.2
Europe/Middle East/North Africa	15.6	9.7	9.9	13.8	13.6	18.8
Latin America	17.4	12.9	12.3	26.6	17.0	19.5
OCED	8.5	9.4	8.5	13.4	11.3	11.6
Sub-Saharan Africa	25.4	18.4	11.3	37.6	24.6	27.8
South Africa (1980)	22.1	17.7	11.8	-	-	-
<b>World</b>	18.9	13.1	10.8	26.6	17.0	19.0

Source: Psacharopoulos & Patrinos (2002: 14) and Psacharopoulos (1994)

From Table 1 certain clear tendencies can be deduced. Firstly, the private rate of return is higher than the social rate of return for all areas and all levels of education. On average for the world the private rate of return for primary education is 7.7 percentage points higher than the social rate of return and the corresponding figure for secondary schooling is 3.9 percentage points. On average the private rate of return for higher education is no less than 8.2 percentage points higher than the social rate of return. This gives the impression that there seems to be scope for individuals to pay more of their own cost for higher education. However, one has to remember that the table includes countries where higher education is almost fully subsidised which increase the private rates of return to artificially high levels, because the individual's contribution to their own education is very small. The private rates of return is higher than the social rates of return for all educational levels, but the rates normally decrease as the level of education increases. The rates of return in developing countries are normally higher for all

levels of education than the rates in developed countries. Let us now take a closer look at the situation in developing countries.

When one looks at the sub-Saharan Africa region (which South Africa forms part of) it is clear that the rates of return are the highest of all regions in the world for all levels of education. Especially the private rate of return on higher education is very high. Very little research on this topic has been done for South Africa. There are no private rates of return available for South Africa, but according to Psacharopoulos (1994) the social rate of return for all levels of education is higher than the average for the world (see Table 1). These rates are based on studies done in metropolitan areas in Kwazulu-Natal and may not be representative of the whole of South Africa. Although there are no obvious reasons to believe why the private rates will not also be higher, there is no empirical evidence to prove it. (New research in this field has just been published for South Africa and will be included before the paper is read in September.)

The high private rate of return is a good argument to increase the private fees of education. The implication of these high rates is that private fees can be increased without the fear that it will become unprofitable for the individuals to invest in their own education. The high social rates of return also indicate that investment in education is a profitable investment for the state. This means that an argument can be made in favour of increased public expenditure in education. Here it is important to draw a distinction between different fields of study, because there are not uniform rates of return for all higher education programmes. No studies on this topic has been done in South Africa, but research elsewhere in the world by Psacharopoulos (1994: 1329-1331) indicates that the social rate of return is the highest in law (12.7%), economic and business sciences (12.0%) and engineering (10.9%). The highest private rate of return is in engineering (19.0%), economic and business sciences (17.7%) and medicine (17.7%). These rates indicate that there is a case to be made in favour of the introduction of differentiated class fees for different fields of study and that certain fields of study may be financed to a larger extent by the students themselves. In his article the results of 98 research projects were incorporated, but it is unclear for how many countries and for what time period these rates were calculated. There is no conclusive proof in the South African case whether the public sector must increase its contribution to education or whether more must be paid by the individual. (It seems like proof might now be available. The paragraph will be amended before September to include the new findings.)

Differentiated rates of return are further proved by a study in Britain concerning learners that passed at least two subjects on A-level (Economist 2003b). Learners that studied in fields like law, mathematics and economics earned 25 per cent more than what graduates earn on average. Social studies give a

10 per cent premium, in languages and education the premium is very low while negative returns are experienced in arts. One must remember, however, that student numbers increased by 25 per cent over the last decade in Britain and like any product the returns may decrease as the supply increases. According to Melck (1982:114-115) there are advantages on both the demand and supply sides of the education market to levy private fees. From an administrative point it is more efficient, but it also fulfils the same role as the levying of a direct tax. With different fees between higher education institutions the students themselves can decide about possible rates of return. With public provision it is frequently found that no institution excels, but that all institutions tend to be average. Efficiency on the supply side can be increased by greater competition and in such conditions institutions normally adapt more easily to a changing environment and they tend to accommodate a wide range of students to a larger extent.

### **Public and private fees in higher education**

#### *The international experience*

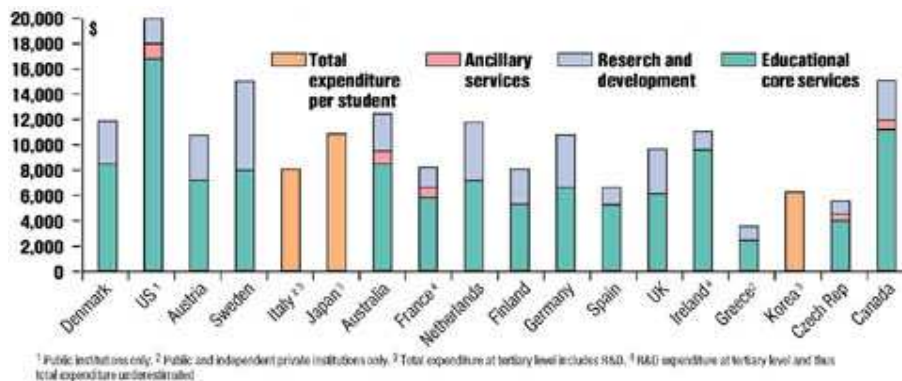
In most countries some form of public financing of higher education is experienced despite recent arguments raised against public investment in higher education. Firstly, some people are against investment in higher education because they first want a 100 per cent enrolment in primary and secondary education before attention should be given to higher education (World Bank 2004). This point of view ignores the multi dimensional role of higher education and ignores the difference of higher education relatively to primary and secondary education in the training of people for the labour market and economic development (Cemmel 2003). Higher education fulfils a unique economic role that cannot be fulfilled by the school system. The emphasis on higher education as a public good is closely linked to its status as a human right that will be compromised if market based or other discriminatory exclusions are allowed to become more relevant, which is feared under the impact of GATS and other cost sharing initiatives. Social criticism is also generated as part of the democratisation function of higher education and is the result of the self-critical method of analysis that is part of the academic learning process.

Total expenditure on higher education per student, both private and public, differs substantially among countries. In OECD countries, for example, this varied between \$4 000 in Greece in 2003 to \$20 000 in the USA (Figure 1). Also, if higher educational expenditure as a percentage of the GDP is used as a yardstick, America spends the highest percentage on education (Figure 2). Although extra funds *per se* do not guarantee greater efficiency and quality, it does seem as though America's higher education is more successful if it is compared with the systems in other developed countries. [In a recent study in Shanghai (quoted in Economist, 2004a), a list of the top 50 universities in the world included only 15

universities outside America. From Europe only Oxford and Cambridge made it to the top ten while no university from Europe made the top 40.]

**Figure 1**

*Expenditure on higher education per student in OECD countries*

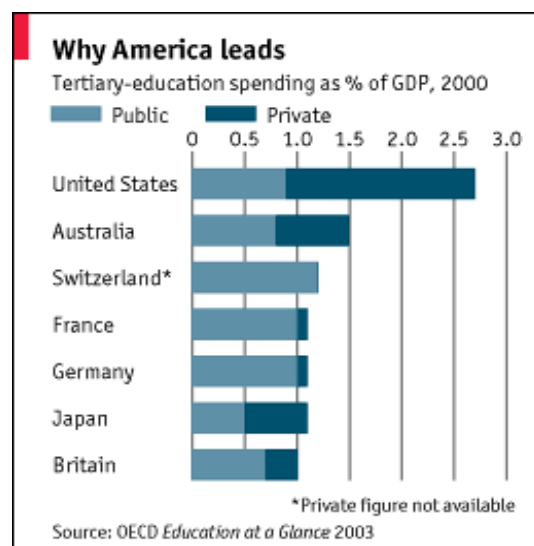


Source: OECD, 2003

When expenditure on higher education is considered (Figure 2), America's contribution is the highest ( $\pm 2.7\%$  of GDP) of the OECD countries. Especially the private component of educational expenditure is much higher than in any other country.

**Figure 2**

*Expenditure on higher education as percentage of GDP*

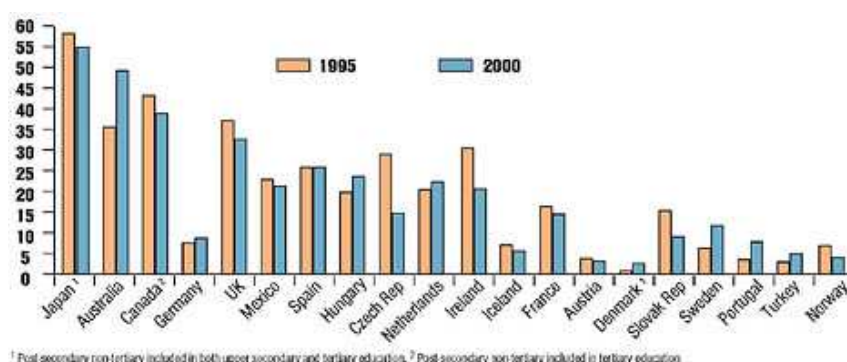


Source: Economist, 2004a

The share of private financing at higher educational institutions in OECD countries, with the exception of Australia, did not increase much during the period 1995-2000. Apart from the 15 per cent increase in Australia, there were only marginal increases in Germany, Hungary, Netherlands, Denmark, Sweden and Portugal and in Spain it stayed the same. In Japan, Canada, UK, Mexico, Czech Republic, Ireland, Iceland, France, Austria, Slovak Republic and Norway it decreased (Figure 3). The private contribution to higher education differed substantially between countries. In 2000 only 3% of total higher educational expenditure in Denmark were privately funded while the corresponding figure in Japan was 55%.

**Figure 3**

*Share of private expenditure in relation to total expenditure at higher educational institutions in OECD countries*



Source: OECD, 2003

### *Levy of private fees for higher education*

New Classical economics teaches that the optimal price policy is where price equals marginal cost. This follows from the implicit assumption that rational consumers base their preferences on the benefits they receive and that they are good in evaluating it. The education market is however far from perfect and the product that is supplied is not homogeneous. Similar types of programmes supplied by different universities or technikons normally differ in relation to the content and the method of instruction. In such a market with differentiated goods every higher education institution acts as a monopoly in the presentation of their unique programmes. One could thus say that the educational market is typically characterized by monopolistic competition.

Several studies have been done to determine the price elasticity of the demand for tertiary education. The results tend to indicate that the demand is fairly price inelastic, which may be the case since class fees are only a certain portion of a student's total costs (Melck 1982: 122-125 in the case of America). These results were confirmed in research by the Bureau of Economic Research (2004) at the University

of Stellenbosch. Their study covered the period 1994-2004. These results indicate that students from higher income groups are less sensitive for price changes than students coming from poorer communities. One of the reasons why the price elasticity of the demand for higher education is relatively price inelastic is because forgone income of students is much higher than the class fees they have to pay. It was however found that the price of higher education programmes do play an important role in influencing the length of time that students tend to stay at higher education institutions.

An optimal price policy allows for the practice of price discrimination. For price discrimination to be applied the educational market must be divisible, sub-units must have different elasticities and it must not be possible to sell a commodity in a high-price market that was bought in a low-price market. In education the third requirement is satisfied but there is great doubt whether the first two requirements are satisfied. It is therefore advisable to allow for price discrimination with bursaries or scholarships and loans. One disadvantage of too high prices may be that prospective students from especially poorer communities might not even bother to find out what forms of financial support is available (Melck, 1982: 125). As discussed earlier, students from especially poor communities face huge financial risks if they want to enrol for higher education. This factor may thus prevent students from these communities to be successfully incorporated into higher education.

The levying of class fees has two important advantages. Firstly, it makes it possible for higher education institutions to plan independently and secondly students are more motivated. Inefficiency (wastage) occurs when the price of goods and services is below the market value – and the same applies to higher education. According to Stevens (in Economist 2004a) universities fulfil the role of only “a rite of passage” to certain students. The levying of class fees also strengthens the power of students as clients. This may be the reason why better quality higher education is supplied in America than in most European countries. A form of selection takes place in the context that higher education institutions can choose students that really want to learn and students focus on the programmes they really want to study. In the process they try to pass at secondary school at levels that will automatically guarantee their entry into those courses. Class fees fulfil both an allocative and a rationing function in higher education – exactly the same function that prices fulfil in a market driven economy.

#### *Higher Education Systems in selected countries*

Table 2 summarises the education systems in selected countries according to the number of institutions that are private and public, the available student financing agencies and lastly the main revenue sources for institutions in that country.

**Table 2**

Summary of the Higher Education System in selected countries

	Higher Education Institutions (HEI)	Financing Agencies	Revenue Sources
<b>Australia</b>	<p><b>Publicly funded</b> 40</p> <ul style="list-style-type: none"> <li>▪ Higher Education Funding Act (38)</li> <li>▪ Contract basis (2)</li> </ul> <p><b>Private institutions</b></p> <ul style="list-style-type: none"> <li>Universities 2</li> <li>Other (e.g. theological training)</li> </ul>	<p>Higher Education Contribution Scheme (HECS)</p> <ul style="list-style-type: none"> <li>▪ Department of Education, Training and Youth Affairs</li> <li>▪ Australian Tax Office</li> <li>▪ HOI</li> </ul> <p>Open Learning Deferred Payment (OLDPS)</p> <p>Donations, Scholarships, bursaries, Student Financial Supplement Scheme</p> <ul style="list-style-type: none"> <li>▪ Youth Allowance</li> <li>▪ Austudy</li> <li>▪ Pension Education Supplement</li> <li>▪ Abstudy</li> </ul> <p>Postgraduate Education Loan Scheme (PELS) – for post-graduate; structured degrees</p>	<ul style="list-style-type: none"> <li>- HECS in 3 cost bands regarding <ul style="list-style-type: none"> <li>▪ Relative cost</li> <li>▪ Rate of return</li> </ul> </li> <li>- students pay 25–35% of tuition <ul style="list-style-type: none"> <li>▪ Pre-paid = 25% discount</li> <li>▪ Loan from government @ 0% real interest rate of pay back according income stream</li> <li>▪ Combination of above</li> </ul> </li> <li>- Other sources: <ul style="list-style-type: none"> <li>▪ International students</li> <li>▪ Research income</li> <li>▪ Summer programme</li> <li>▪ Overseas campuses</li> </ul> </li> </ul>
<b>United Kingdom (UK)</b>	<p><b>Universities</b> 115</p> <p>Publicly funded but with institutional autonomy</p> <p><b>Colleges</b> 55</p>	<p>Higher Education Funding Councils (HEFC)</p>	<ul style="list-style-type: none"> <li>- 61.38% Abe funds</li> <li>- Other sources <ul style="list-style-type: none"> <li>▪ Class fees</li> <li>▪ Private sector</li> <li>▪ Donations</li> </ul> </li> </ul>
<b>America</b>	<p><b>HEI granting degrees:</b></p> <p><b>Government universities</b> 1 700</p> <p><b>Private universities</b> 2 300</p> <p>Mainly non-profit</p> <ul style="list-style-type: none"> <li>▪ Doctoral/research univ (261)</li> <li>▪ Masters coll &amp; univ (610)</li> <li>▪ Baccalaurate colleges (607)</li> <li>▪ Associate's colleges (1 669)</li> <li>▪ Specialized institutions (767)</li> </ul> <p><b>HEI granting certificates:</b></p> <p><b>Private, profit orientated</b> 4 000</p>	<p><b>Pel Grants</b></p> <p>For low-income students</p> <p><b>Student Financial Aid</b></p> <p>Bursaries, loans &amp; work-study assistance</p>	<p>Mixed financing</p> <p>Costs varies significantly regarding institution, program, income sources</p> <ul style="list-style-type: none"> <li>▪ <i>“the most heavily endowed institutions are also the institutions that can charge the highest tuitions because affluent parents are willing to pay this premium ... to the most prestigious institutions”</i></li> </ul>
<b>Egypt</b>	<p><b>Public HEI</b> 63</p> <p><b>Universities</b> 12</p> <p>Technical or professional 51</p> <p><b>Private universities</b> 4</p> <p>(99% of students in public HEI)</p>	<p><b>Placement Bureau (Ministry of HE)</b></p> <p>Regulates admission</p> <p><b>Supreme Council of Universities</b></p> <p><b>Central Administration of Al-Azhar Institutes</b></p>	<p>Officially “free” but government contribution = 85% (1995)</p> <p>15% from other sources:</p> <ul style="list-style-type: none"> <li>▪ tuition fees for high quality programmes</li> <li>▪ token tuition fees</li> <li>▪ generate income through speciality university centres (co-operation with industry, patents, continued training for industry, produce intermediary industrial products, donations etc.)</li> </ul>
<b>India</b>	<p><b>Public Universities</b> 229</p> <p><b>Colleges</b> 8 000+</p> <p>± 75% private</p>	<p><b>University Grants Commission (UGM)</b></p> <p><b>Educational Loan Scheme</b></p> <p><b>Private bank sector loan schemes</b></p>	<p>Universities: “Maintenance &amp; development grants”</p> <p>(great variety – certain universities earn up to 50% of income through tuition fees)</p> <p>Private aided colleges: 50% “free seats” &amp; 50% “payment seats”</p> <p>Unaided private colleges: Determine own fees under government determined ceiling</p>
<b>Brazil</b>	<p><b>Public HEI</b> 181</p> <ul style="list-style-type: none"> <li>Universities 42</li> <li>Multi faculty non-univ 11</li> <li>Single faculty non-univ 128</li> </ul> <p><b>Private institutions</b> 711</p> <ul style="list-style-type: none"> <li>Universities 64</li> <li>Multi faculty non-univ 132</li> <li>Single faculty non-univ 515</li> </ul>	<p>No government loans to undergraduates at public institutions, post graduates get Government loans available to students at private institutions</p>	<p>Distinguish between elite public sector and mass private sector</p> <p>±67% of HE students in private institutions, only marginally subsidized by government.</p>

Canada	<b>Allowed to give Degree (diplomas)</b> Public 261 Private 78 <b>Other post-secondary institutions</b> "thousands"	<b>Financial aid to students by government</b>  <b>Other aid:</b> HE, private loans, work study program, tax aid	Public institutions receive most income from state – universities very autonomous Other sources: tuition fees, research subsidies, private and government research contracts, donations, investment income
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Source: ICEFAP, 2002; Chapman, 2002: 6, 14–15; The White House, 2004; CICIC, 2004; HEFCE, 2004b: Key facts.

*Educational financial support practices in selected countries*

Higher education typically consists of a combination of private and public institutions. In each country the relative combination between private and public institutions differs. In South Africa the number of students enrolled in private higher education institutions is very small. It is a world-wide phenomenon that the relative contribution of the public sector towards higher education is decreasing. For example, the so-called 'rijksbijdrae' in the Netherlands decreased from 84.4% of total income in 1985 to 69% in 2001 (Jongbloed & Salerno, 2003: 32). It is expected that individuals must contribute to a greater extent to cover the cost of their own education. This is in line with the world-wide high private rate of return on higher education. Due to the relative decrease in public funds, higher education institutions must generate more income themselves to decrease the deficits. Although the information about this is not very conclusive, it does seem that in countries with a high contribution by the public sector, class fees are treated as the balancing item of the budget. In almost all countries public financing schemes exist to enable students from poor communities to afford higher education. This support ranges from bursaries or scholarships to loans with different repayment or interest rate criteria. Subsequently the practices in different countries will be discussed.

In Australia the Higher Education Contribution Scheme (HECS) is used. With this system Australian citizens are allowed to pay back their higher education tuition fees through the tax system against their future income. They have to start paying back their fees when they are incorporated into the labour market and their income is above \$21 000 Australian per annum. Graduates pay back their debt at a zero per cent real interest rate. With this system the cost of higher education is rolled from the state onto the individual who are expected to receive the benefits from the system (Maslen, 2004). One of the negative aspects of this practice is that it was found that these graduates are more inclined to try to avoid paying taxes than any other citizen.

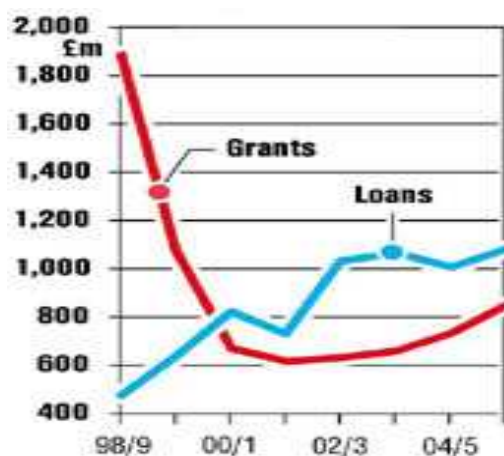
In Britain the higher education debate revolves around the proposed Higher Education Bill of the Blair government. The question is whether the costs of higher education must be primarily financed by the state (as is currently the case in Britain and the largest part of Europe) or whether it must be recovered from students to a larger extent (as is the case in America). The other issue is whether these higher

fees must be financed by higher future taxes of graduates or by means of loans and whether the state or the higher education institutions must determine the fees (Economist, 2003a). According to the new legislation students at English universities will from 2006 onwards have to pay fees up to a maximum of £3 000 per year, while a fixed fee of £1 125 is currently levied that is controlled by the state (Economist 2004a). Provision is made for students from poorer communities, because those that qualify will receive a grant of £2 700 per year with the possibility of a further loan of £3 555 (Economist 2004b). The fees that students have to pay is still much lower than the minimum real costs of at least £10 000 per year in social sciences (with the cost in engineering and natural sciences being much higher). The graduates will start paying back through the tax system (like in Australia) once their annual income exceeds £15 000 (Maslem, 2004).

Although public funding for higher education increased from about £4 500m in 1989 to approximately £7 500m in 2004, the expenditure per student decreased from almost £8 000 per student in 1989 to just above £5 000 in 2003 (OECD 2003 and HEFCE 2004). An interesting tendency is that the state's contribution towards student assistance changed drastically over the last couple of years. From Figure 4 it is clear that the granting of loans to students to enable them to afford tertiary education is recently more popular than the allocation of grants. This is in line with the tendency elsewhere in the world that students must take more financial responsibility with regards to the cost of their higher education.

**Figure 4**

*Public financial assistance to students in England*



Source: OECD, 2003

In America the average tuition fees payable at universities in 2004 is \$4 500 which is \$1 000 lower than the proposed maximum in England (Economist 2004a). It was found that children from more affluent families are more likely to go to higher education institutions during recessions than children from poorer

regions (Hazarika 2002). Students from poorer families frequently do not have the assets to serve as guarantee for credit and must do part-time work to supplement their income to afford higher education. They are less likely to take these risks during recessions. As was stated earlier, the American universities seem to be more efficient due to more competition between the different institutions. In most European countries no or very low tuition fees are imposed, while tertiary institutions in America are in fairly tight competition (much more competitive than in South Africa) and it does seem as though this competition enhances greater efficiency.

In Canada it was found that increasing tuition fees led to a decrease in students enrolling at higher education institutions and that the high fees influenced the choice of professions (CAUT 2003). Also diversity (especially important in a South African context) was negatively affected because students from poorer families could no longer afford these high fees. For example, it was found that the increase in tuition fees changed the profile of the students to such an extent that the average annual family income of students in the medical faculty increased from \$80 000 to \$142 000 Canadian within three years.

In Latin America, as well as much of East Asia cost-sharing and revenue diversification at higher education institutions moved into the direction of greater reliance on a tuition and fee-dependant private higher education system. Together with this the public institutions ask very low fees. Students from richer families receive a superior secondary education and are thus more able to pass difficult university entrance exams at public institutions. This has the result that students from richer communities attend the 'free' public institutions while students from rural or poorer areas are frequently forced to pay high tuition fees at (sometimes) inferior institutions. While the concept of cost sharing has been recommended by several commissions in India, it is still not accepted as official policy (Johnstone 2004).

#### *Lessons to be learned from the income-contingent loan scheme of the United Kingdom*

The United Kingdom is moving towards an income-contingent loan scheme to be implemented in 2006<sup>4</sup>. Basically the scheme boils down to a loan granted to a student that is big enough to pay for total tuition and other living costs. The student has to pay a zero real interest rate on this loan, but only start paying back once his/her income is above a certain minimum level. The payment is made jointly with income tax or pension payments. For a needier student a grant is given additionally to compensate the student for his/her present unfavourable circumstances.

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<sup>4</sup> This section is extracted from a paper by Barr (2004) where it is discussed in more detail.

Some people are of the opinion that higher education is a basic necessity and should be provided free of charge. However, food is also a basic necessity, but nobody argues that food must be provided free of charge. There is definite proof of the private benefits of higher education (as discussed earlier) and in that sense it makes sense for students to bear some of the costs of their higher education. Few students have the ability to finance their education and an income-contingent loan scheme provides those funds to students. The important thing is that it is not the students that are paying for the loan, but the graduates when they earn more than a specified income. If the loan is big enough, education is actually free at the point of use.

According to Barr the income contingent loan scheme to be implemented in the UK has three legs. The first is that higher education institutions must be free to charge variable prices and that prospective students use these price signals to decide where to undertake their studies. An internationally renowned institution may ask a higher price than an institution that is not regarded so highly in international terms. Variable fees also mean that higher fees is asked for the student that can afford more (note that 'can afford' refers to a person's earnings as a graduate and not to the student's family income while being a student) and is progressive in the sense that it shifts resources from today's best-off (those who lose some of their fee subsidy due to higher fees) to today's worst off (those who have to receive a grant) and tomorrow's worst off (those that due to a low income do not pay their loan back in full). Secondly, the default interest rate should be linked to the cost of the government to borrow thus ensuring no market distortions. The third aspect is that action should be taken to promote access. He stresses the importance to inform prospective students from especially poorer regions about the costs and benefits of higher education. In these regions learners frequently underestimate the benefits of higher education and simultaneously overestimate the cost of it. They are thus generally unwilling to take out a loan to finance their higher education. Barr further argues that income-contingent loans have a built-in insurance against inability to repay and therefore take away the risks that students from poor communities face when taking out a normal loan. The supplying of grants or scholarships to these students to cover the cost of studying at a higher education institution will also further help to overcome this problem.

The UK system has a lot of similarities with the National Student Financial Aid Scheme (NSFAS) operational in South Africa. The biggest difference is that only the very poor benefit from NSFAS awards and that the amounts that universities and technikons receive are allocated using a racially based formula. When these higher education institutions in turn allocate these awards to the students, the only criteria they consider is that the student must be financially needy and show potential to succeed. This however implies that there are less funds available for needy students that are attending

historically white institutions. Although this racially based allocation formula had some merit given South Africa's history, the NSFAS and the Ministry of Education should work towards a system where financial need and not race determines the allocations that higher education institutions receive. The biggest problem with a system like the UK's, described above, is to set up seed money to start the scheme. If it is considered to be too expensive at undergraduate level it should, by way of a pilot, be introduced on postgraduate level. At this level students had already shown some academic excellence and are not likely to drop out. Many post-graduate students also have access to some form of bursary or grant and the financial burden for the loan scheme should not be too big. Much research is still needed in this area to determine the feasibility of such a system for South Africa.

### **Conclusion**

Since higher education display characteristics of both private and public goods, it is difficult to scientifically determine the magnitude of the total private gain (direct and indirect) from higher education. The private and public advantages of higher education are yet to be quantified. Available rates of return do however indicate that private investment in higher education is profitable, although research in specific developing countries in this regard is very limited.

Although government spending increased in the previous century, government's share to higher education relative to the private contribution is decreasing world-wide. Europe especially seems to be looking for ways in which to increase private contributions to higher education. Government funding however remains the most important source of income for higher education institutions world-wide. All countries make provision for students from poor communities in various ways. The income-contingent loan scheme of the UK has application potential for South Africa, especially if something similar could be implemented on the postgraduate level initially.

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