Creating Public-Private Dynamics in Higher Education Funding: A Discussion of Three Options

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1. Introduction

In January 2004, the *Economist* ran a couple of articles on the sorry state of higher education. One was called "Pay or Decay" (Economist 2004) and painted a very bleak picture of universities in Britain and elsewhere in continental Europe. The message was twofold: (1) students should bear more of the costs of bringing them a university degree, and (2) universities should be freed from the burden of state planning and regulation. The model propagated by the magazine to fulfil both goals simultaneously was one in which universities would be free to decide on the level of the tuition fees and the number of students admitted to their programs. It was argued that governments would have to rethink the way they fund their higher education institutions. This recipe for reform would be a significant break with Europe's tradition of providing individuals with a higher education at very little or no cost. While some will disagree with part of the evidence brought forward by the *Economist* to justify its call for reform, there is no denying that students receive a significant private return out of their investment in higher education. Graduates earn significantly more than non-graduates and are less likely to be unemployed, therefore there is an efficiency argument that can be brought forward to justify the raising (or introduction) of tuition fees to be paid by students. One may also invoke the equity argument because most students are from families that may be regarded as more advan-

taged than others. In other words, the funding of higher education is very much one of finding a balance between public and private contributions.

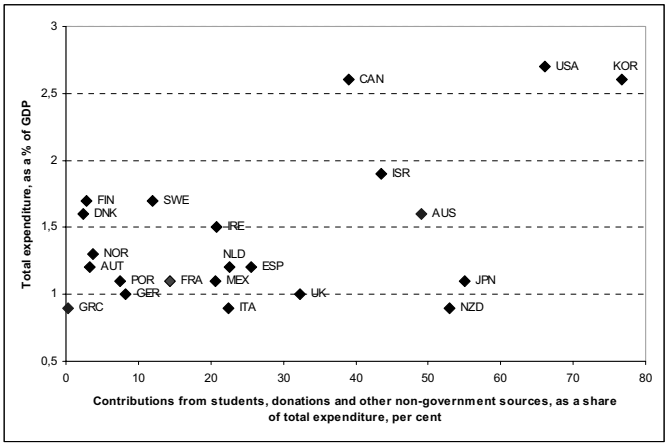
This public-private debate is also very much present in the incentive structure for the mechanisms used by governments to allocate public funding to the providers of higher education. Given that governments face increasing claims on their purse from sectors such as health care, security, and care for the elderly, one cannot expect that higher education providers are likely to receive more state funding. Both governments and providers will try and make sure that whatever is received in terms of public subsidies is used in the most cost-efficient way. The mechanisms for allocating public funds contain a number of regulations and incentives that each have implications for the achievement of higher education's three main goals, that is: quality, efficiency, and equity. Policymakers' efforts at promoting cost efficiency and enhancing educational quality have given rise to a diverse and sometimes quite elaborate array of funding systems and regulatory frameworks. To bring these incentive frameworks and incentive structures as closely as possible in line with incentives to generate increased private resources for higher education would seem to be the challenge that governments and providers are confronted with these days. Indeed, in many countries, policymakers and parliaments are seriously rethinking the way their higher education systems may be funded, coordinated, and steered; and to what extent public entities and private agents should be responsible for meeting the cost of higher education.

The message of this contribution is that it is not only the *level* of (public and private) funding, but just as much the basis and *criteria* according to which public funds are made available that can improve the efficiency, quality, and accessibility of higher education. To discuss these criteria (in section 5), this chapter looks at funding mechanisms – *funding models* – and how they may be classified (section 3). Three options for the public funding of higher education are discussed (section 4), along with their potential in realising the goals of generating additional private funding and contributions to the goals of efficiency, quality, and access. Preceding this analytical part, section 2 briefly presents some factual information on the contributions made by the public sector and the private sector in terms of financing higher education.

2. Public and private expenditure on higher education

A great deal of literature exists on the appropriate means for funding higher education (Greenaway and Haynes 2003; Chapman 1997; Barr and Crawford 1998) that suggests that the burden of paying for higher education may be shifted away from the general taxpayer to the student. This chapter is not the place to start a debate on the arguments that state that the main beneficiaries of higher education (i.e., students) should bear the main burden of the cost of tuition. Instead we merely present some basic facts on the relative shares of the public and private shares in the funding of higher education systems in some OECD member states.

Figure 1: Expenditure on higher education institutions, 2000



Source: Based on OECD (2003), Table B 2.1b (Tertiary education total) and Table B 3.2 (Tertiary Education; relative proportion of private sources).
Note: Contributions from students are net of tuition fees paid by government.

Based on figures from OECD's *Education at a Glance* (OECD 2003), figure 1 simultaneously shows total expenditure on tertiary (or *higher*) education institutions as a percentage of GDP (vertically) and the share of total expenditures that originates from non-public sources such as students, donations, and other non-government sources (horizontally). The message expressed by the OECD (OECD 2004, pp. 131-132) is that those countries that have been able to channel more than 2% of GDP into higher education – the United States, Korea, Canada, and Israel – all raise a substantial share of funding from these alternative sources. The Netherlands occupies a 'middle position'; it raises one-fifth of spending

from private sources, higher compared to many other OECD countries, but well below the share in the countries with a high (i.e., more than 2% of GDP) total spending on higher education. Many of the Western European countries are situated in the left part of the diagram, where private contributions are low and higher education expenditure is between 1 and 1.5% of GDP.

Many OECD member states traditionally provide individuals with a higher education at very little or no cost -Germany, France, and the Scandinavian countries. In many European countries full-time students only pay a low tuition fee or no fee at all. In many other countries (e.g., the UK, the Netherlands) government offsets the fees by means of grants and scholarships.

Figure 2: Resource flows to and from higher education institutions

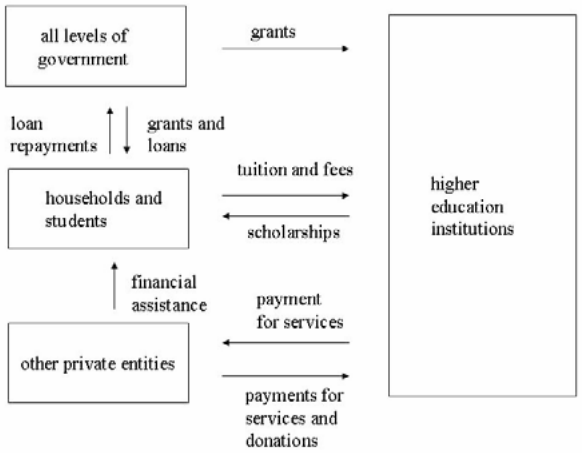


Figure 2 shows the most important resource flows to and from higher education institutions. We can identify three main sources of funding for higher education institutions: (1) governments, (2) students and households, and (3) other private entities. Government resources include operational grants (for both teaching and research), capital investment, and research grants paid directly to institutions. Student payments include tuition fees and charges for ancillary services.[1] Other private payments

1 The government may act as a financial intermediary, providing loans to students to meet some or all of the costs. Education institutions may meet the costs of the tuition by awarding scholarships.

and resources include private donations and gifts and payments for consulting, patents, and other services.

We now present some facts about the levels of tuition fees. The levels of fees (expressed in Euros) for the academic year 2000/2001 are shown in Table 1 (Jongbloed 2004). It is immediately clear that in many European countries tuition fees are either non-existent or comparatively low.

From 1977 to 1998, tuition fees for undergraduate students in the United Kingdom were paid automatically by the government – through the *Local Education Authorities*. Three fee categories (or fee bands) existed: classroom-based subjects (a fee of £750 in 1997/98), laboratory-based courses (£1,600), and medical courses (£2,800). From the academic year 1998/1999, the government implemented a flat-rate tuition charge of £1,000 per student per year, irrespective of university or subject studied. This was accompanied by an income test, which meant that students from poor backgrounds paid no fees and students from well-off backgrounds paid the entire fee. In between a lower and an upper income threshold, a tuition fee was charged on the basis of a sliding scale. Until 2006, the fee was set at £1,100 (€1,500) representing the highest level in Europe. From 2006, English universities are allowed to charge up to £3000 per year per student. Students are allowed to borrow through a state-run loan scheme and pay back their loan once they start earning an above-threshold salary. Students who cannot will not have to pay an up-front fee. Instead, the Student Loans Company will pay money into the university's bank account to pay each student's fees and it pays money into the student's account to help him/her meet living costs.

In the Netherlands, tuition fees for regular full-time students are centrally determined by Parliament (based on policy proposals by the Minister of Education) and are uniform for all subjects in the two main sectors in higher education, the universities and the *hogescholen* (universities of professional education). The rate for full-time students amounts to around €1,500, rising with inflation. However, in recent years, the Dutch parliament has allowed institutions to charge higher fees for a selective number of programs that provide a demonstrably higher added value to the students. Turning to the countries that charge low or modest fees, we first point out the cases of Belgium (the Flanders community) and France. Here uniform national fees do exist, but students receiving student support are exempted. In France, bursary holders, representing around 15% of all students in the first (two-year) and second (one- to three-year) cycle of higher education, do not pay fees. Regular students in the French public institutions are pay fees set by the ministry of Edu-

cation, ranging from €100 for general programs to €800 for specialised programs. In private institutions the fees are determined by the institutions and are much higher. In Belgium, bursary holders only pay some 15% of the tuition fee paid by non-holders. In the Scandinavian countries and Germany, the only contributions paid by students are (compulsory) student union membership fees or health services payments. In Greece (not shown in the table) there are no fees. In Italy, since 1992 universities are free to impose fees, which may vary from €400 to (in some cases) €2,500 and are levied on top of registration fees. The public universities in Spain have to charge uniform fees according to field and level of study. The fees vary between €500 and €750. Austria introduced tuition fees in 2001. The level of the fee is the same across all institutions: €726.

Table 1: Tuition fees in selected OECD countries: rates in year 2000/ 2001 (in Euro)

Country	**Type/sector of higher education**	**Public institutions**		**Private institutions**	
		Min.	**Max.**	**Min.**	**Max.**
Austria	*Fachhochschule* (Ba), *Universität* (Ba/Ma)	726	726		
Denmark	Ba/Ma	0	0		
Finland	Ba/Ma	51	86		
Flanders (Belgium)	higher vocational education (Bachelor) university (Ba/Ma)	50 80	406 660		
France	*Université* (Ba) *Université* (Ma) *Grandes Écoles*	104	 800	 1,400	 5,600
Germany	*Universität* (Ba/Ma)/*Fachhochschule* (Ba)	*Studenten-beitrag* ± 50			
Ireland	University, college	670	670		
Netherlands	*hogeschool* (higher vocational education; Ba) university (Ba/Ma) part-time and 'slow lane' students (*unis/hogeschool*) MBA programs	1,302 1,302 1,302	1,302 1,302 2,605	1,585 4,500	2,950 5,210 24,000

Country	type/sector of higher education	Public institutions		Private institutions	
		Min.	Max.	Min.	Max.
England & Wales	Bachelor (UK/EU students)	1,500	1,500		
	Bachelor (non-EU students)	4,860	12,810		
	Master: taught MA	3,000	4,500		
	(UK/EU students)	3,910	4,640		
	Master: research (UK/EU students)				
	Master (non-EU students)	7,880	12,920		
	MBA programs	average: 14,290			
Scotland	Bachelor	graduate endowment: 2,840			
Spain	university	500	770		
Sweden	Ba/Ma	Union fee: 30			
Australia	Bachelor (Australian students) humanities, social sciences, education, nursing, arts economics, natural sciences, engineering, math., IT medicine, law	HECS rates: 2,076 2,957 3,461			
	Bachelor (fee-paying Australian students) Bachelor (overseas students) Master (coursework Ma; Australian students) Master (research Ma; Australian students)	4,500 – 12,500 7,200 – 14,400 3,500 – 6,800 HECS rates			
New Zealand	university (Ba)	average: 1,720 (depending on institution)		average: 2,400 (depending on program)	

Country	type/sector of higher education	Public institutions		Private institutions	
		Min.	Max.	Min.	Max.
United States		average	Min-max	average	min-max
	university (Bachelor, 4-year)	2,890	1,260-6,930	16,650	13,620-21,870
	university (Ma)	3,500		12,030	
	university (first professional degree in Law)	6,670		18,160	
	university (first prof. degree in Medicine)	9,980		23,740	

Source: Jongbloed (2004)

Apart from the Netherlands and the UK, European governments have tried to stick to a tradition of free (or relatively inexpensive) education for all. Parliaments have been very reluctant to introduce tuition fees. Irish Parliament even decided to abolish fees in 1996, which means that as of 2003 Irish students pay an annual registration fee of €670. Previously Irish students paid substantial tuition fees (on top of the registration fee), ranging from €2,400 to €4,500, depending on the level and field of study. Many countries have some form of regulation of domestic undergraduate fees, setting the fees at modest levels. There is less regulation in the case of fees for part-time students or students in postgraduate programs (masters, e.g., MBA). The freedom of universities to levy and set fees is quite limited. Some deregulation took place in Australia, where universities can offer a limited number of unregulated fee-paying positions to domestic undergraduate students once universities have filled up their quota of Commonwealth funded positions. For students in government supported positions, tuition fees are set at three levels according to the so-called Higher Education Contribution Scheme (HECS). The HECS rates (see table 1) reflect the differing costs universities incur when delivering courses on the various disciplinary fields. However the rates also take into account the potential future earning capacity of graduates. This is the reason why law is in the highest 'fee band'. However, as in the UK, a bill was passed recently in Australia to allow universities more freedom in setting their fees. The bill has some similarities to the UK Bill accepted by the Parliament in 2004 in the sense that (from the year 2005 on) universities are free to set the fees for their undergraduate students up to a maximum that differs according to

the subject group (there are three 'bands') in which the program is categorised. The maximum is three times the HECS rate.

With Austrian and German higher education administrators and politicians slowly getting used to the idea of student fees, one can see fees and graduate contributions becoming an unavoidable ingredient of higher education systems in continental Europe. When the next step – flexible fees – will be taken is still unsure. Flexible fees can have beneficial effects. They would allow the price mechanism to work and achieve a better balance between supply and demand for higher education courses (Jongbloed 2004). Such fees would act as a rationing device in situations of scarcity and allow institutions to raise resources for high-demand programs. Another role for flexible fees is to work as a signalling device, giving prospective students information about costs and quality of the various higher education programs on offer. However, it is largely accepted that the recipe of flexible fees can work only hand in hand with a loans system that allows students to defer payment of their fees until after they graduate (Barr 2003). Allowing students the option to defer the payment of fees is an element of the Australian financing system and the British system. To prevent the fear of debt deterring enrolment of students from lower social economic groups, the government would have to tie the repayment of student debt to the graduate's income (Barr 2001). Policies aimed at increasing the private funding would have to go hand in hand with policies aimed at reducing the risks that (prospective) students face. The design of the debt collection system is an important element of the set of policies. This means that efforts would have to be undertaken in the area of providing information to students and their parents as well as designing a system of providing targeted grants to disadvantaged groups in society for whom access is fragile.

3. Funding mechanisms: a classification

We now turn to public funding and discuss the models and arrangements for the public funding of higher education. Governments provide direct financial support to universities and colleges (see top arrow in diagram 2) because higher education provides positive externalities – monetary as well as non-monetary benefits – that impact on others than the individual that takes up a higher education program. We stress here that the funding of universities is not just for economic reasons; there is no proven connection between spending on universities and economic prosperity (Wolf 2002). Because of the social benefits, subsidies are channelled to universities. The basis for the subsidies (the level and the

distribution across institutions and programs) lies in political, social, and economic criteria. Ultimately the exact criteria are determined in political debates in parliament, but influenced – to a large extent – by social and economic realities. Some parliaments would like to achieve a uniform and egalitarian higher education landscape (for instance equal subsidies for all students in all programs), or achieve specific economic objectives such as addressing shortages in key labour markets. Other policymakers would like to see a diverse and market-driven system emerge (e.g., subsidies distributed competitively). In other words, funding arrangements differ across higher education systems.

For the classification of funding arrangements two questions may be used (Jongbloed and Koelman 2000):

a. What is funded by the government?
b. How is it funded?

Question (a) concerns the *funding base* for the government allocations to higher education institutions: Are the funds tied to educational *outputs* and performance, or rather to *inputs*? Question (b) relates to the issue of the *degree of market orientation* in the funding arrangements. Whose decisions actually underlie the observed flow of government funds to higher education institutions, or: 'What drives the system?' The answer may be found by paying attention to issues such as: to what extent are funded numbers or funded (research and degree) programs regulated (or planned) by central authorities? And: do higher education institutions compete for funds (i.e. students, research programs)? Do they have the right to determine the level of tuition fees by themselves? Can they select their students?

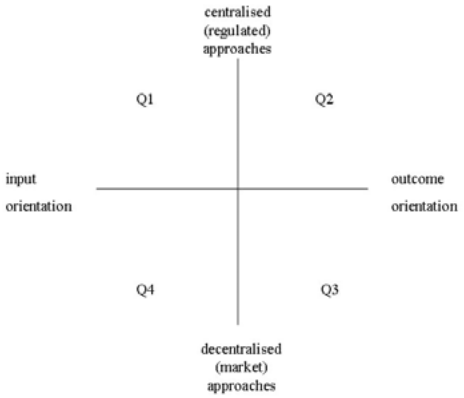
Question (a) can be rephrased as follows: What is the degree of output orientation in the public funding? When financial means are made available to institutions to cover distinct costs such as staff salaries, material means, building maintenance costs, investment, or so-called 'costs to continue' this is called *input funding*. If the budgets are driven by measures of activity such as the number of students enrolled in an institution, we also speak of input funding, because student numbers will largely determine the level of inputs spent in the instruction process. In contrast, in funding arrangements where institutional budgets are tied to specific teaching and research outcomes of the institutions' activities we speak of *output funding*. Funding on the basis of output is believed to contain more incentives for efficient behaviour than input funding. If budgets depend on performance measures, there is reason to believe that

those who receive the budgets will pay increased attention to their performance.

Question (b) relates to the issue of *market orientation* in the funding arrangements. One of the characteristics of market orientation is the degree of *competition* implied by the funding decisions. Stated differently: "Are funded student numbers or funded (research, degree) programs regulated (or planned) by central authorities or are the funding flows driven by the decisions of the clients (students, private firms, research councils/foundations)?" The answer to this question may be translated into a measure for the degree of centralisation, distinguishing a situation of intensive government oversight and regulation from a situation in which consumer and producer sovereignty is large. At the extreme end of regulation the government determines the institutions' resources centrally, for instance by prescribing the exact numbers of students in different programs. In the deregulated case, individual decisions made by students and education providers drive the system. Here, institutions have considerable latitude to operate as they see fit and institutions have a large autonomy over how funding is procured and spent. In practical situations, the degree of centralisation (or market orientation) will lie somewhere between the two extremes.

In the figure below, the vertical axis depicts the degree of (de-) centralisation and a horizontal axis expresses the degree to which governments are paying for the results (outcomes) instead of the efforts (inputs). We distinguish four quadrants (Q1, Q2, Q3, and Q4) to classify funding arrangements.

Figure 3: Four funding systems



We now provide a number of examples that relate to the four types of funding.

Q1: planned, input-based funding through providers

The top-left-hand portion of the diagram represents a centralised system of funding. It shows a more traditional type of budgeting, where allocations are based on requests (activity plans, budget proposals) submitted to budgetary authorities. This is known as *negotiated* funding. In this mechanism, the budget allocation is often based on the previous year's allocation of specific budget items. Separate budget items are then negotiated between representatives of educational institutions and the funding authorities (i.e., the ministry, or funding council). Annual changes (usually increases) in each budget item are treated individually, with discussion taking place on the basis of cost projections. In this case, budget items are likely to include categories such as staff salaries, material requirements, building maintenance costs, and investment. Funding is line item based, and shows the different expenditure items as separate lines of the budget. These *line items* are determined by referring to norms with respect to indicators such as unit costs (or unit cost rises) or capacity (e.g., funded number of students). The German and French funding systems still retain much of these characteristics.

Q2: performance-based funding of providers

Quadrant two (top right) is still a centralised system but now criteria on which funding is allocated refer to outputs rather than inputs. For example, in such a performance-based funding system a formula generates funds for institutions that are successful in terms of their students passing exams. Depending on the number of credits (i.e., weighted number of passed courses) accumulated by their students and the subject categories concerned, a budget is flowing to the higher education institution. This type of model operates in Denmark (*taximeter* model), while in Sweden a mix of enrolment numbers and credits determines the funds allocated to higher education institutions. In the Netherlands, a mix of the number of first-year students ('freshmen') and the number of Master's degrees conferred determines the funds allocated to the universities (Jongbloed and Vossensteyn 2001). Other examples can be found in the UK, where academic research is funded in proportion to a measure of research quality. Research quality is assessed and rated every five years (in Research Assessment Exercises).

Q3: purpose-specific purchasing from providers

A funding system located in quadrant 3 (lower right) is a market-oriented system. For example, higher education institutions are invited to submit *tenders* for a given supply of graduates or research activities. The tenders selected by the funding agency are the most price-

competitive. In this tendering process, higher education institutions are encouraged to compete with one another to provide education, training, and research to meet national needs. Another example is research funds awarded by *research councils*. This system makes use of *contracts* signed between the funding agency and higher education institutions, with the latter agreeing to deliver graduates for targeted labour market needs, or research outputs targeted at strengthening the innovative capacity of the country. When entering into a contract, the funding agency will make sure it obtains the services it wants for a reasonable price. In this way the cost-effectiveness of the delivery is stressed. In the contract, both parties express that they will obey certain criteria. Only if these criteria are fulfilled, will the higher education institution receive core funding. The criteria may concern the types and qualifications of students admitted to the higher education institution, the (maximum) level of tuition fees (if any) charged by the institution, and the commitment made by the higher education institution towards its students in the instruction and teaching processes.

Q4: demand-driven, input-based funding through clients

In the last quadrant (lower left) the funding system makes use of *vouchers*. The core funds of higher education institutions are supplied through the clients of higher education institutions. Students obtain vouchers, which can be traded for educational services (i.e., educational consumption), at the higher education institution of their own choice. For the higher education institution the vouchers represent a certain value; they can be cashed at the Ministry of Education. Each (prospective) student is given a limited number of vouchers, representing a value, which can be used in a flexible way (during a certain period of time and for programs supplied by a given number of accredited or recognised education providers). In this funding system it is the consumer that drives the system; the system is *demand-driven*. The client (student) decides what institution to attend and what programs to enrol in. The higher education institutions must look after the quality of their teaching and their supply of courses, because unattractive programs will not receive sufficient funding. The voucher system can be combined – like many other funding variants – with a system of differentiated course *fees*. The higher education institutions then charge the students a certain percentage of the course costs. Tuition fees may be regulated to some extent by the government, but flexible pricing is expected to make students pay attention to the quality of the service they get from the higher education institution. Combining vouchers and fees may result in a system that is responsive to individual students' demands. A *research* funding model situated in diagram Q4

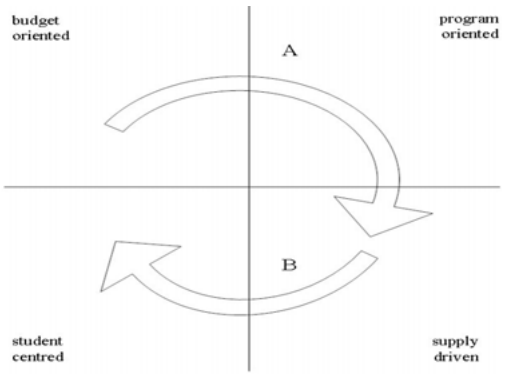
would be similar to the research council example given for quadrant three, but in this case there would be more attention paid to basic research instead of research for which the outcomes are easier to specify.

Funding system trends

Surveying the funding mechanisms in place across OECD states (e.g. Leszczensky et al. 2004), one can observe that governments in a number of countries have attempted to separate their support for teaching and research by providing *block* (i.e., lump sum) funding for each activity – covering the day-to-day running costs. There has also been a move away from negotiated line item funding (located in quadrant Q1) towards more transparent, rational – formula-based – mechanisms (quadrant Q2). Additionally, one can observe the tendency to replace block funding for research with competitive funding mechanisms (Q3), or performance-based funding mechanisms (Q2). The extent to which this has been achieved naturally varies across countries. In some countries, universities have access to additional funding for specific initiatives such as increasing the participation of certain target groups, targeting specific skills areas, postgraduate training, setting up research infrastructure, public-private research partnerships, or specific strategic research in 'areas of excellence'. In all cases, the allocation of block grants or targeted funds is tied to specific conditions in terms of quality and accountability requirements.

If we were to summarise international trends in funding mechanisms, the direction in which they are developing looks like the one shown by the upper arrow (A) in figure 4. Whether developments will lead to a more demand-driven system (a further movement along arrow B) remains to be seen. The four quadrants in the figure are characterised by means of four names that reappear in the next section.

Figure 4: Trends in funding mechanisms



4. Options for higher education financing

In debates about the funding of higher education the crucial question illustrated by figure 4 is: how to strike the 'right' balance between centralised (public) approaches and decentralised (private) approaches. For many, this debate is about the balance between public and private investments in higher education, but in reality this debate is much broader and includes the questions of to what extent funding would have to be supply-driven versus demand-driven and whether it should be input-oriented or performance-based. These questions are highly ideological and political, depending as they do on what is 'right', 'just' and 'what works'. As mentioned in our introduction, funding mechanisms need to meet multiple goals: quality, efficiency, and equity. In fact these are headings under which a large variety of sub-goals can be grouped. At the same time, the funding mechanism would have to be flexible enough to accommodate important global trends and new dynamics such as individualisation, internationalisation/globalisation, and the injection of (in particular, information and communications technology-driven) technologies.

In the Netherlands, very heated debates are occasionally held on the topic of vouchers and demand-driven funding (situated in quadrant 4 of figure 3 and 4). Demand-driven funding is often promoted as a means to inject more incentives towards increasing responsiveness and efficiency into the system. It permits student choice to drive the funding of higher education providers. The crucial aspect of the voucher idea is *freedom to choose*. This, according to Barr (1998), would require that education is not just provided by *public* institutions but also – or at least in part – by *private* institutions. Students would be allowed to redeem their vouchers also by enrolling in selected private institutions that – just like the public ones – comply with minimum quality (i.e., accreditation) standards. Thus student choice becomes the key element in a system where students 'vote with their feet' and the outcome of their search for the highest value for money determines which institutions receive public funds for teaching.

Voucher systems are only one of the options that can be brought forward for the funding of higher education. The question of what is the 'best' option will depend on the goals to be achieved and how the system in place is actually working towards those goals. To illustrate this point we present a list of goals and conditions that came up during discussions on a new funding model in the Netherlands (Jongbloed and Vossensteyn 2002). The goals were many indeed:

- The funding model should underpin an open higher education system with equal opportunities (a 'level playing field') for all providers, be they public or private;
- The system has to lead to an adequate balance between the various parties (stakeholders) involved (i.e., students, government, business) when it comes to the responsibility for resourcing and deriving benefits from the system. In other words costs and benefits need to be shared;
- Funding has to enhance (competition on the basis of) quality;
- The system will have to be able to handle the increased competition (for students, research contracts) from abroad;
- Funding will have to allow for a more diverse higher education system with varied institutions and programs that differ in terms of length, quality, and method of delivery;
- Students will have to be able to choose, be mobile, and collect their credits from a wide set of programs and providers, without barriers between institutions;
- The funding mechanism will have to encourage the generation of additional private revenues (from students, their parents, employers, and business);
- Programs that have an important social or cultural value should continue to receive support from the government and the institution;
- Funding mechanisms should not erect financial barriers for qualified students to enrol in the institution of their own choice. Financial support to students will guarantee equal access opportunities for all.

We will not discuss the details for each of the nine individual goals and conditions. Many are self-explanatory, but we would like to pay attention to the 'level playing field' condition mentioned first. A number of developments lead to the blurring of boundaries between universities and other providers of post-secondary education. One can point to various forms of co-operation between institutions. Also the distinction between private (i.e., unfunded) providers and public providers is becoming less clear. Additionally, due to the introduction of accreditation mechanisms, the focus these days is on the *degree program*, its contents, and its quality. And it is increasingly less relevant *who* supplies a particular program.

The other goal/condition we would like to mention is the seventh: the potential for increasing private contributions. The private returns from a university degree and the low price elasticity of demand are often put forward as justification for increasing private revenues in higher education. However, not all degrees are the same. A bachelor degree dif-

fers from a master's degree. A degree in economics is different from a degree in humanities; a degree from a teacher training college is different from a degree obtained in law school. In other words, classifying degree programs according to their private and their social return would seem like the proper way to start a discussion on raising fees or, looking at the other side of the coin, determining the degree to which the government should be involved in funding particular degree programs (Jongbloed 2003). In fact this issue touches on the same topics to be considered under the second condition (public and private responsibilities for higher education and research). One immediately encounters the problems surrounding the measurement of private rates of return and – even more difficult – social rates of return (Jongbloed 2004). Raising fees, or indeed, allowing them to differ across degree programs, can only be justified towards customers (students) in situations (i.e., markets) where quality differences and price differences are transparent.

Faced with these nine constraints and the underlying practical problems of measurement and implementation, the discussion (still unresolved) in the Netherlands has led to the construction of three funding options for the funding of teaching in universities and polytechnics.[2] The arrangements may be placed in the classification scheme (figures 3 and 4) shown above. They include several ingredients, some of which have been selected to make the contrasts between the options as clear as possible. The ingredients of the three financing options shown in table 2 are stated in terms of:

1. steering philosophy, that is, the actor that takes the lead in shaping the higher education programs offered to students;
2. the mechanisms adopted for allocating public funds for teaching;
3. private (i.e., fee-based) funding; and
4. the student support system.

Table 2 shows the three different arrangements. The options each proceed from a different idea about who takes the lead in shaping the higher education landscape. The leading actor is, respectively, (1) the student, (2) the higher education institution, and (3) the government. The table lays out a useful framework for thinking about financing higher education; the basic philosophy as well as how public and private financing mechanisms come to bear.

2 This exercise was carried out by CHEPS at the request of the Dutch Ministry of Education (Jongbloed and Vossensteyn 2002). The funding of research was considered in a separate exercise.

Table 2: Funding methodologies: three options

	Student centred	**Supply driven**	**Program oriented**
Steering philosophy	• Demand-driven • Freedom to choose • Open system • Customer-oriented • Conditions w.r.t. program coherence and quality • Government organises/ oversees quality control and information supply	• Supply driven • Providers take the lead • Publicly funded versus non-funded providers • Competition on the basis of prices and quality offered by providers • Selection of students	• Steering through programs • Government chooses which programs to fund and which not to fund based on macro efficiency and other criteria • Open system (level playing field) • Protection of socially relevant programs
Public Funding method	• Limited number of credits (vouchers) per student • Vouchers to be used only for accredited (parts of) programs	• Formula funding of degrees (completions/credits)	• Contract funding (tenders) • All providers (public, private) can compete for contracts
Tuition fees	• Fees partly covered by vouchers • Differentiated fees • Fees determined by provider	• Top up fees (differentiated fees) • Fee levels depend on provider strategy & competition • Fees also determined by quality, program length, etc.	• Uniform fees for publicly funded programs (government sets fees) • Other programs charge differential fees

	Student centred	**Supply driven**	**Program oriented**
Student support	• Student support distinguishes between cost of living and cost of attendance • Grant + loan for tuition • Grant + loan for cost of living • Extra entitlements (vouchers) for disadvantaged students/programs	• Providers supply student support package • Package based on merit & need of student • Support can be combined with job or family activities • Extra scholarships offered by employers • Providers offer loans through private banks	• Many options fit this scenario Option: • only grants & scholarships for publicly funded programs • for other programs only government backed loans are made available

Source: Jongbloed & Vossensteyn (2002)

The student-centered option is in fact the most demand-driven system. Here, students choose which providers receive public money (through vouchers). Any differences in costs across programs are expressed through differential fees. Institutions are competing for customers, for instance by delivering tailor-made programs; flexibility is key. The student-driven option fits somewhat roughly over quadrants four and three in figure 3.

In the second, provider-driven option, the strategy of the higher education provider is of the utmost importance. Institutions try to get their programs accredited in order to qualify for public funding and try to distinguish themselves from other providers by means of their program supply. The institution generates more resources if it is more successful in delivering graduates and setting its fees at levels acceptable for students. This supply-oriented option may be placed in the right-hand part of figure 3 in quadrants two and three.

In the program-oriented option, the degree of planning by the government is the largest. Given the supply of programs by the various pro-

viders in the higher education system[3] and in the face of criteria such as social and private rates of return, labour market needs, cultural/regional diversity, et cetera, the government decides about the number of student places to fund. Unfunded programs are left to the market. All providers can compete for contracts to deliver a specified amount of graduates. Programmes that provide a high private rate of return to the student (once they are graduated) will receive no (or hardly any) direct government funding; possibly only in the shape of student support for the students taking up that programme. This government-oriented type of funding fits in quadrants one and two of figure 3.

5. Discussion: on trade-offs, dilemmas and level playing fields

Both figure 3 and table 2 lay out useful frameworks for thinking about financing higher education. However, it will be clear that one cannot construct an ideal funding model that meets all criteria such as the ones listed in the previous section. The three options are useful as a basis for thinking about the economic tradeoffs and dilemmas that come with different financing options. The 'right' choice of funding model depends on the priorities that policy-makers have in terms of goals – what they would like to achieve on behalf of students and society in general, and what they perceive as problems in the existing model. The three options presented here (demand-driven, supply-driven, and programme-driven) all rate differently on the (nine) conditions specified by policymakers. Additionally, the success of any system will also depend heavily on the amount of funds society is prepared to invest in higher education from public and private sources. When it comes to private revenues, all three options allow for additional private income to be derived from student fees. However, this depends crucially on the government allowing institutions to set fees (either up to specified levels or without any bounds whatsoever). In the third (program-oriented) option the government keeps an eye on fees charged for students in publicly funded programs –

3 In the Dutch context the term used here is 'macro-efficiency'. Higher education institutions that have plans to start a new degree programme for which they seek government funding are obliged to submit evidence to the Education Ministry that the programme meets a real demand and does not lead to unnecessary duplications given the programmes already on offer in the Netherlands. The macro efficiency criterion therefore serves to stress the overall goal to secure a broad supply of programmes in the Netherlands while at the same time it seeks to achieve an efficient allocation of tasks across the higher education institutions.

these will be programs where the social rates of return are substantially higher than the private returns from these programmes. To give an example, programs in the bachelor phase of higher education are funded (and protected), while fees for higher degree (master's) programs in vocational subjects are deregulated. Another example is the public funding of teacher training programs. Student places in this critical area may be funded from public sources while students in fields such as economics or law receive far less public funding.

Given the diverging properties of the three funding options, the challenge is to create a mix of models or a mix of elements from all three to meet a particular set of priority goals and conditions. The advantages and disadvantages of the three options may be discussed from the perspective of the main stakeholders:

- students;
- institutions (i.e., providers of higher education);
- government/taxpayer; and
- employers of graduates.

It would go too far to discuss all options from the perspective of these four stakeholder groups. The only remarks at this point are that *students* would seem to be served best in the demand-driven option, where flexibility and opportunities for lifelong learning are the greatest. *Institutions* enjoy the most stability in the second option; they can plan on the basis of a transparent funding system and their own choice of profile and programs. They also have the freedom to choose how funding is internally allocated. However, there is a chance in both the first and second options that programs confronted with low student demand will suffer. *Employers* will be worried that in option 1, program coherence gets lost in the battle for students. In option 2, *providers* will remain autonomous and may try to seek more cooperation with private business to provide strong programs and attractive student aid packages. *Society* (as represented by *government*) would see its supply of graduates in important fields such as health, teacher training, and other public services guaranteed by means of a planned and accountable system of publicly-supported programs in the third (programme-oriented) option.

On the topic of injecting more private money into higher education we would like to state that students (and/or their parents) and private businesses are more inclined to spend money on universities when they feel their demands are met more closely. The chances for this to happen are far greater in a deregulated system that allows institutions and students, respectively institutions and businesses, to work more closely to-

gether and decide on program content or research directions without government interference. In other words, options 1 and 2 would seem candidates for a higher education funding system that generates more funding from the private sector. In option 1, private contributions can be combined with vouchers to pay for tailor-made courses. In option 2, institutions with strong teaching and research profiles seek closer collaboration with private business to enhance the quality of degree programs and research programs and offer student support packages to students that study in particular fields.

The three options, in the (intentionally, highly market-oriented) way presented here, point to several trade-offs and dilemmas that will occur in any discussion about the reform of higher education funding. But, first of all, what the options show is a development with some of the following characteristics of the higher education system emerging:

- increased competition between (private and public) providers;
- the need for differentiation and the building up of a strong institutional profile/image;
- the rise of strategic alliances (mergers) between institutions.

What also becomes clear is that some critical issues have to be dealt with:

- the need for increased transparency and reliable information about what is on offer;
- the need to increase our understanding of the public and private benefits that derive from higher education;
- the need to make a distinction between bachelor's programs and master's programs when it comes to the funding of teaching.

The dilemmas we encounter are about the lines (or borders) to be drawn – finance-wise – between, first of all, publicly funded providers/programs and non-funded (i.e., private) institutions/programs, and, secondly, initial higher education and post-initial higher education. Some of the dilemmas touch on the *level-playing field* discussion, in which it is often argued that private providers should have the same privileges and access to public funds as public providers. In other words, regulation (or re-regulation), such as the conditions attached to public funding, student support and accreditation, are at stake here.

This automatically takes us back to the (public-private) debate on demand-driven versus supply-driven funding and the conditions under which a demand-driven system with more student-centred financing of

higher education could work. The potentially negative effects of demand-driven funding have to be prevented by accompanying policy measures in the field of funding, accreditation, and protection of culturally important subjects. Table 3 gives an overview of advantages and disadvantages of demand-driven (voucher) funding.

Table 3: Advantages and disadvantages of vouchers

Advantages	**Disadvantages**
• strengthening student choice • strengthening responsiveness to customers • increase in diversity of educational services (both in delivery methods and range of programmes) • strengthening flexibility in learning routes • increase in efficiency of provision • increase in quality of provision • increase in private contribution to cost of education ('topping up' the voucher) • greater opportunities for lower income families and minorities	• inability of clients to assess information on the quality of education • geographical factors limit choice • over-subscription may require rationing (selection) and favour high-income families • high administrative complexity (and costs) • need for government regulations to protect subjects, individuals, quality, and equity • large variations in enrolment and funding may lead to under-utilisation of capital and insecure jobs for teachers • programmes with high cultural value but small enrolments will be forced to close • if used to the full, vouchers lead to additional government expenditures

Source: Jongbloed and Koelman (2000)

The table points to some of the requirements that would need to be fulfilled for student-centred funding to work. Sceptics will immediately point out the need for the increased regulation called for by the introduction of a market-driven system – something that would seem contradictory: to create a market-like higher education system the government interferes heavily in the market to protect students, subjects, and institutions.

What we can learn from the above overview of funding trends and methodologies is that, before racing to a market-based reform along the lines suggested by the *Economist* in its analysis of problems in Western European higher education, it would seem important to first address the following questions:

- What are today's problems and bottlenecks that stand in the way of the realisation of public goals; and can that public goal (say public good, or externality) actually be quantified/approximated in some way?
- To what extent can students express their demand (and do they wish to do so; do they really vote with their feet if allowed to; do they act rationally)?
- Is there sufficient room for a market to emerge? (What about freedom of entry for new providers/entrepreneurs; what if commercial providers would like to qualify for public funding?)

The effects of a policy of charging substantial fees from students and/or the effects of a policy of demand-driven funding depend crucially on accommodating policies in areas such as (the incentives to be included in) funding mechanisms, student support systems, quality assessment, availability of information, and opportunities for new education providers to enter the market for higher education. To give an example: While the demand-driven option offers individuals the greatest amount of choice and leverage in the market for higher education, information asymmetries will make it difficult for consumers and producers to contract on quality (Glaeser and Schleifer 2001; Weisbrod 1988). A strongly demand-driven scheme also runs the risk of forcing culturally important but financially weak programs to close. When it comes to the issue of fees, the setting of low or no tuition fees may help correct one form of distributional inequity (by helping to ensure that students from lower income families are not priced out of the education market) yet create another by subsidising students in expensive physical and biological sciences programs to a greater extent than those in social sciences or humanities fields (Salerno 2004).

In short, each of the financing options presented above gives rise to dilemmas and tradeoffs that suggest none are effective in isolation. A better understanding of these tradeoffs then can provide a useful guide for pursuing alternative financing schemes.

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