

Funding higher education: options, trade-offs and dilemmas

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1. Introduction

In January this year, *the Economist* ran a couple of articles on the sorry state of higher education. One of the articles was called “Pay or Decay” (*Economist*, 2004). It painted a very bleak picture of universities in Britain and elsewhere in continental Europe. The message of the article was twofold: (1) students should bear more of the costs of bringing them to a university degree, (2) universities should be freed from the burden of state planning and regulation. The model propagated by the magazine to fulfill both goals at the same time 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. This message was put across very firmly, even aggressively, and some will disagree with part of the evidence used to underpin it. However, one can not deny that there is a lot of truth in the observations that most graduates earn significantly more than non-graduates and most students are from families that may be regarded as more advantaged than others. It is also very true that while most European universities are overcrowded and underfunded, they cannot expect to get any substantial financial relief from the state. Private funding then will have to increase because governments face increasing claims on their purse from sectors like health care, security, and care for the elderly.

So private money is needed urgently, but in this paper it is argued that one cannot neglect the mechanisms through which public subsidies are being allocated to the universities. One cannot expect the solution for higher education’s problems to come only from increased student (or graduate) contributions. The mechanisms for public funding contain important incentives to achieve higher education’s three main goals, viz. quality, efficiency and equity. Bringing these incentives more closely in line with incentives to generate increased private resources for higher education would seem to be the goal to be achieved. So, the message of this paper is: it is not just the level of (public and private) funding, but it is just as much the basis and criteria according to which public funds are made available that can improve the quality and accessibility of higher education.

We will discuss funding mechanisms – funding models – and how they may be classified. Three options for the public funding of higher education will be discussed, along with their potential in realizing the goals of generating additional private funding and contributing to the goals of efficiency, quality and access.

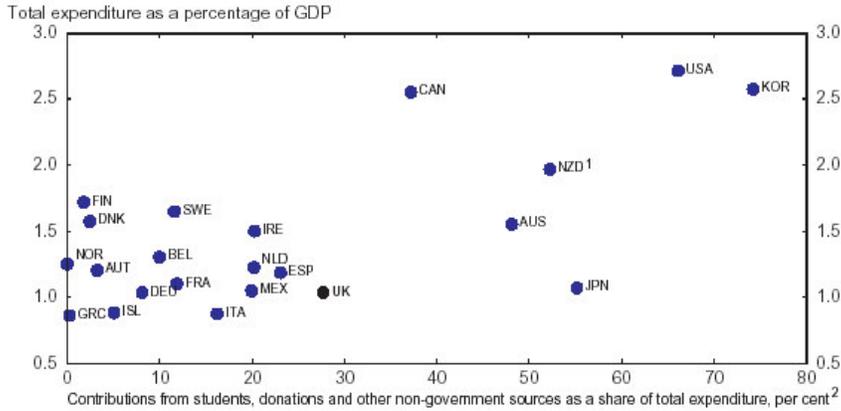
2. Public and private expenditure on higher education

Based on figures presented in the OECD’s *Education at a Glance*, Graph 1 simultaneously shows total expenditure on tertiary education institutions as a percentage of GDP (vertically) and the share of total expenditures that originates from non-public source such as students, donations and other non-government sources (horizontally). The message implied by the OECD is that those countries that have been able to channel more than 2 per cent of GDP into tertiary education – the United States, Korea, Canada, and New Zealand – all raise a substantial share of funding from these alternative sources. My own country, the Netherlands, raises one-fifth of spending from private sources, which is higher compared to many other OECD countries, but is well below the share in the countries with high (i.e. > 2% GDP) total spending on tertiary education.

The OECD suggests that there is room for increased student contributions in many OECD member states – like Germany, the UK, and the Scandinavian countries. In particular, in continental Europe often students pay no tuition fees at all. In other countries (e.g. the UK, the Netherlands) government offsets the fees by means of grants and scholarships. Graph 2 shows the most important resource flows to and from higher education institutions. From the figure above, we can identify three main sources of funding for higher education institutions: governments, students and households, and 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 and resources include private donations and gifts, and payments for consulting, patents, and other services.

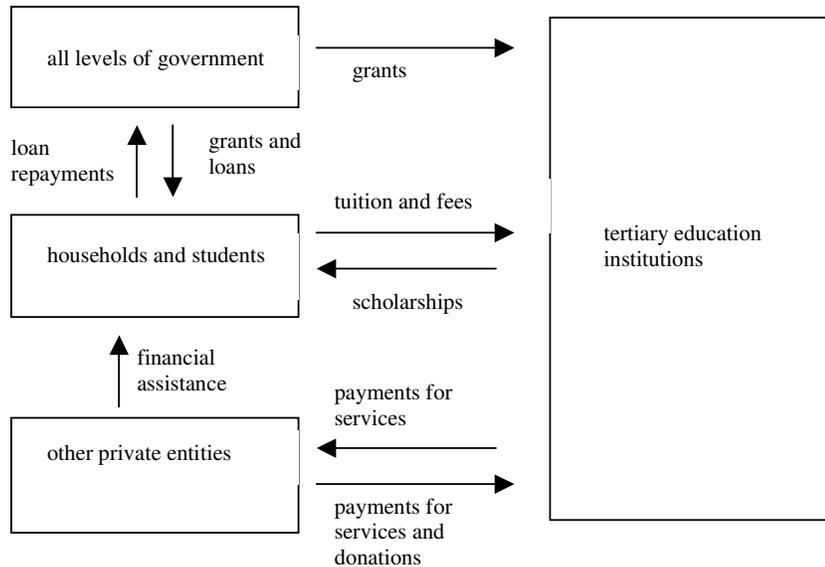
Graph 1: Expenditure on tertiary education institutions, 2000



1. For New Zealand, OECD education data only has information about public spending. Other spending components are estimated based on the Statement of Financial Performance for tertiary education institutions from the cash flow from tuition fees, revenue from services provided, investment income and other sources. Using the same data source to estimate public spending produces results that are consistent with what the New Zealand authorities report to the OECD Education data.
2. Net of tuition fees paid by government.

Source: OECD, Education Database and Statement of Financial Performance for tertiary education institutions in New Zealand.

Graph 2: Resource flows to and from tertiary education institutions



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.

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	
		Minimum	Maximum	Minimum	Maximum
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)	"Studentenbeitrag" ± 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
England & Wales	Bachelor (UK/EU students) Bachelor (non-EU students) Master: taught MA (UK/EU students) Master: research (UK/EU students) Master (non-EU students) MBA programs	1,500 4,860 3,000 3,910 7,880	1,500 12,810 4,500 4,640 12,920		
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 Bachelor (fee-paying Australian students) Bachelor (overseas students) Master (coursework Ma; Australian students) Master (research Ma; Australian students)	HECS rates: 2,076 2,957 3,461 4,500 – 12,500 7,200 – 14,400 3,500 – 6,800			
New Zealand	university (Ba)	average: 1,720 (depending on institution)		average: 2,400 (depending on program)	
United States	university (Bachelor, 4-year) university (Ma) university (first professional degree in Law) university (first prof. degree in <i>Medicine</i>)	average 2,890 3,500 6,670 9,980	min – max 1,260 – 6,930	average 16,650 12,030 18,160 23,740	min – max 13,620 – 21,870

Source: Jongbloed, B (2004)

Earlier this year, the UK government has made proposals, agreed by a vote in Parliament in January 2004, that would allow universities to charge up to £3000 per year per student (instead of the current flat-rate at £1125). The British universities themselves from the year 2006 on will be free to set the fees. Students will be allowed to borrow the money through a state-run loan scheme and pay it back once they are earning enough. The UK bill abolishes the current up-front fee. Students will not have to pay a fee, nor will parents, instead the Student Loans Company will pay money into the university's bank account to pay each student's fees and pays money into the student's account to help him/her meet living costs. A lot can be said about this graduate contributions scheme, but we will leave this for others to discuss (see e.g. Barr, 2003).

Table 1 below gives an overview of university fees for a number of OECD countries. Governments can influence the level and nature of support they provide to students by regulating the imposition and level of tuition fees. Many countries have some form of regulation of domestic undergraduate fees; postgraduate fees are more likely to be deregulated. The freedom of universities to levy and set fees varies. In Australia, universities can offer a limited number of unregulated fee-paying places to domestic students once they have met their target level of Commonwealth funded places. So far, in Australia, tuition fees for HECS-liable places are set at three levels which reflect the differing costs of delivering courses and the potential future earning capacity of graduates. However, also in Australia, a bill was passed in December last year. The bill has some similarities to the UK Bill in the sense that (from the year 2005 on) universities will be 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 categorized.

In the Netherlands, government sets domestic fee levels. The same fee applies across all institutions and programs. However, as part of a wider white paper, the Dutch parliament recently accepted plans to allow institutions to charge

higher fees for programs that provide a demonstrably higher added value to the students. 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 – is taken is still unsure. Flexible fees can have beneficial effects, but they will have to go hand in hand with a loans system that allows students to defer payment of their fees until after they graduate. And to prevent the fear of debt deterring some social economic groups to enroll, the government should target some of its efforts (communication and grants) to students from disadvantaged groups in society for whom access is fragile. In any case, uniform or flexible, fees will allow the price mechanism to work and achieve a better balance between supply and demand for higher education courses.

3. Funding mechanisms: a classification

We are now turning to the arrangements for the public funding of higher education. Governments provide direct support to universities and colleges. They do this because higher education provides social as well as economic benefits. We would like to 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. Because of the benefits, subsidies are channeled to universities on the basis of criteria that are defined in political debates, parliament and – to a large extent – dictated by social and economic realities. Where some parliaments would like to achieve a uniform and egalitarian higher education landscape, other would like to see a diverse and market-driven system emerge. In other words, funding arrangements differ across systems.

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

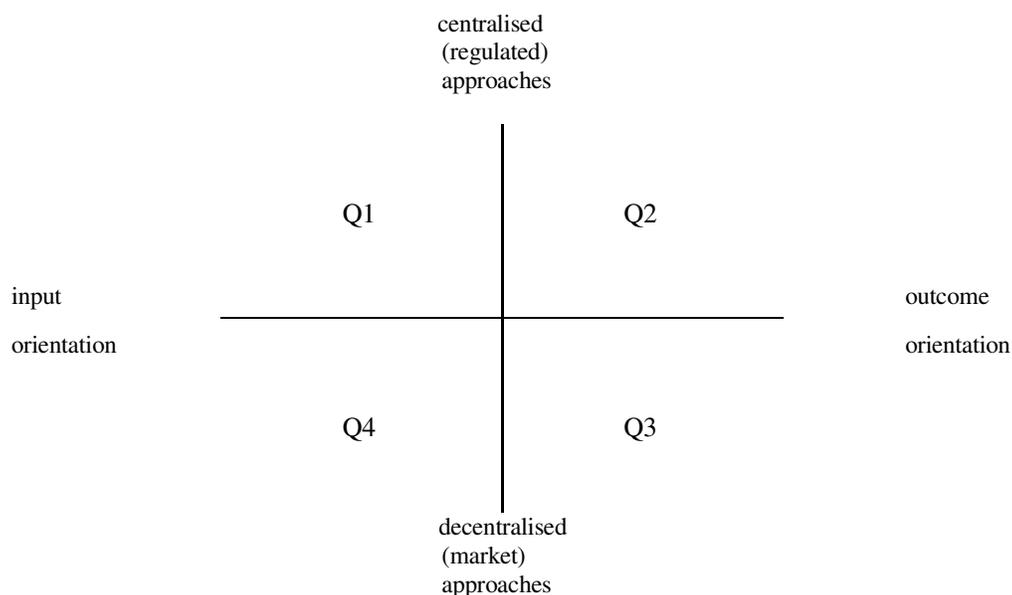
- (a) ‘what is funded by the government’ and
- (b) ‘how is it funded’?

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 to this question 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 (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. Or 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) themselves?” The answer to this question may be translated into a measure for the degree of centralisation, from a highly regulated situation in which the government determines the funding centrally (for instance by prescribing the exact numbers of students for different programs) to a situation in which consumer sovereignty (individual client decisions) drives the system. In practical situations, the degree of centralisation (or market orientation) will lie somewhere in between the two extremes.

In the graph below, the vertical axis is used for depicting the degree of (de-) centralisation and a horizontal axis for expressing the degree to which government are paying for the results (outcomes) instead of the efforts (inputs). We can distinguish four quadrants (Q1, Q2, Q3, Q4) to classify funding arrangements.

Graph 3: Four funding systems



We will now give 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 then are 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 like 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 like unit costs (or unit cost rises) or capacity (e.g. funded number of students).

Q2: performance-based funding of providers

In this example of a performance-based funding system a formula is used that 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 is operating 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 (see Jongbloed & Vossensteyn, 2002). Other examples can be found in the UK, where 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

In this example of a market-oriented funding system, higher education institutions are invited to submit *tenders* for a given supply of graduates or research activities. The tenders that are selected by the funding agency are the ones that 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*. The system will make use of *contracts* that are signed up 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, the higher education institution will 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

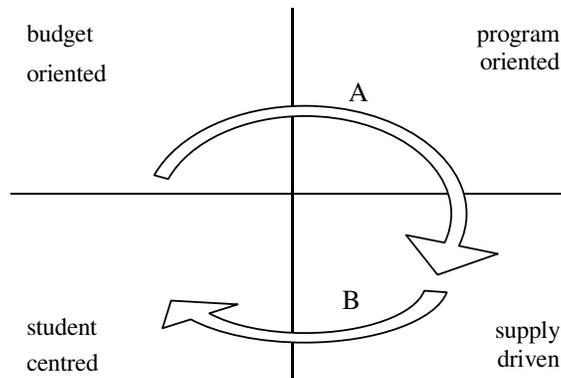
This funding system makes use of *vouchers*. The core funds of higher education institutions are supplied through the clients of higher education institutions. Students obtain vouchers, which can be traded for educational services (i.e. educational consumption), at the higher education institution of 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 up in a flexible way (during a certain period of time and for programs supplied by a given number of accredited 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 will have to 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 will charge the students a certain percentage of the course costs. Tuition fees may be regulated to some extent by the government. Charging fees will make students pay attention to the quality of the service they get from the higher education institution. So, combining vouchers and fees may result in a system which is responsive to individual students' demand.

trends

Overlooking the funding mechanisms in place across OECD states, 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 also has 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 to competitive funding mechanisms (Q3), or performance-based funding mechanisms (Q2). The extent to which this has been achieved 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 make a summary of international trends in funding mechanisms, the direction in which they are developing looks like the one shown by means of the upper arrow (A) in graph 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 graph are characterised by means of four names that will reappear in the next section.

Graph 4: Trends in funding mechanisms



4. Options for higher education financing

In debates about the funding of higher education the crucial question that can be illustrated by means of graph 4 shown above is: how to strike the 'right' balance between centralised (or: public) approaches and decentralised (say: private) approaches. For many, this debate is about the balance between public and private investments in higher education. However, this debate is broader and includes the questions 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'. Funding would have to achieve a multitude of goals, some of which were mentioned in our introduction section. At the same time the funding mechanism would have to be flexible enough to accommodate important global trends, such as individualisation, internationalisation/globalisation and the injection of (in particular, information and communications technology-driven) technologies.

In the Netherlands, very heated debates every now and then are held on the topic of vouchers and demand-driven funding (situated in quadrant 4 of graphs 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* and 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. So, students would be allowed to hand over their vouchers to private institutions that – just like the public ones – comply with minimum quality 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 'best' option will depend on the goals to be achieved and the question how the system that is in place is actually working towards those goals. The goals and conditions to be attached to a new funding model that came up in discussions on the future of the Dutch higher education funding system (see Jongbloed & Vossensteyn, 2002) were many and, indeed, impossible to achieve simultaneously. In any case, we are mentioning them here because we think they are relevant for discussions in other countries as well.

1. 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.
2. 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.
3. Funding has to enhance (competition on the basis of) quality.
4. The system will have to be prepared for increased competition (for students, research contracts) from abroad.
5. 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.
6. Students would have to be able to choose, be mobile, and collect their credits from a wide set of programs and providers, without barriers between institutions.
7. The funding mechanism would have to enable the generation of additional private revenues (from students, their parents, employers, and business).
8. Programs that have an important social or cultural value should continue to be supported.
9. 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 do 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 tertiary (i.e. not necessary higher) 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. On top of that, 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 increased revenues. However, not all degrees are the same. A bachelor degrees differs 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 from a 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 (see Jongbloed, 2003). In fact this issue touches on the same topics to be considered under condition #2 (public and private responsibilities for higher education and research). One is immediately running into the problems surrounding the measurement of private rates of return and – even more difficult – social rates of return. Raising fees, or indeed, allowing them to be different 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 led to the construction of three funding arrangements for the funding of teaching in universities and polytechnics (the funding of research was considered in a separate exercise). The arrangements may be placed in the classification scheme (graphs 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 are stated in terms of: (1) steering philosophy, (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 below shows the three different arrangements. The options each take off 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, or (3) the government.

Table 2: Funding methodologies: three options

	Student centred	Supply driven	Program oriented
Steering philosophy	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Steering through programs • Government chooses which programs to fund and which not to fund • Open system (level playing field) • Protection of socially relevant programs
Funding method	<ul style="list-style-type: none"> • Limited number of credits (vouchers) per student • Vouchers to be used only for accredited (parts of) programs 	<ul style="list-style-type: none"> • Formula funding of degrees (completions / credits) 	<ul style="list-style-type: none"> • Contract funding (tenders) • All providers (public, private) can compete for contracts
Tuition fees	<ul style="list-style-type: none"> • Fees partly covered by vouchers • Differentiated fees • Fees determined by provider 	<ul style="list-style-type: none"> • Top up fees (differentiated fees) • Fee levels depend on provider strategy & competition • Fees determined by quality, program length, etc. 	<ul style="list-style-type: none"> • Uniform fees for publicly funded programs (gov't sets fees) • Other programs charge differential fees
Student support	<ul style="list-style-type: none"> • Student support distinguishes between cost of living and program cost: • Grant + loan for program • Grant + loan for cost of living • Extra entitlements (vouchers) for disadvantaged students / programs 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Many options fit this scenario • Option: only grants for publicly funded programs • Otherwise: loans provided by gov't

Source: Jongbloed & Vossensteyn (2002)

The student-centered option is in fact the most demand-driven system; it was already discussed in the previous section. Students choose which providers receive public money. 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.

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 when it

is more successful in delivering graduates and setting its fees at levels that are acceptable for students. This supply-oriented option may be placed in the south-east part of graph 3.

In the program-oriented option the degree of planning by the government is the largest. On the basis of economic and social reasons (e.g. rates of return, labour market needs, cultural/regional diversity) 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. Programs like that provide a high private rate of return to the student (once graduated) will receive no (or hardly any) direct government funding; possible only in the shape of student support for the students in it.

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

An ideal funding system does not exist. It all depends on the goals that policy-makers would like to achieve on behalf of students and society in general. The three options presented here all score differently on the (nine) conditions specified by policymakers. On top of that, the success of any system will also depend heavily on the amount of funds invested in it 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 – these are programs where the ratio between social rates of return are substantially higher than private returns. 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 socially important area may be funded while students in fields like economics or law receive far less public funding.

It will be clear that it is possible to make a mix of elements from all three funding models in order to meet a particular set of priority goals and conditions. However, for reasons of clarity we have chosen to combine the ingredients in the way that best fits the respective steering philosophies.

The advantages and disadvantages of the three options shown here may be discussed from the perspective of the main stakeholders:

- (1) students,
- (2) institutions,
- (3) government/taxpayer,
- (4) employers of graduates.

It would go too far to discuss all options from the perspective of these four stakeholder groups. The only remarks we are making at this point are that students would seem to be served best in the first option, where flexibility and opportunities for lifelong learning are the greatest. Institutions have 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. However, both in the first and second option there is a chance 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 seek more co-operation with private business to provide strong programs and attractive student aid packages. Society would see its supply of graduates in important fields like health, teacher training, and other public services guaranteed by means of a planned and accountable system of publicly-supported programs.

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 have the feeling that 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 together 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 to offer student support packages to students that study in particular fields.

The three options, in the (intentionally, highly market-oriented) way they are presented here, point to a couple of 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:

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

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

- (1) the need for increased transparency and reliable information about what is on offer
- (2) the need to increase our understanding of the public benefits and private benefits that derive from higher education
- (3) 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/tertiary education and post-initial higher/tertiary education. Some of the dilemmas touch on the *level-playing field* discussion, in which it is often stated that private providers should have the same privileges (and access to public funds) as public providers. In other words, regulation (or rather: 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 (say, voucher) funding.

Table 3: Pros and cons of vouchers

pros	cons
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • inability of clients to assess information on the quality of education • geographical factors will limit choice • over-subscription will 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 with small enrolments will be forced to close • if used to the full, vouchers lead to additional government expenditures

source: Jongbloed & Koelman (2000)

The table points to some of the requirements that would need to be fulfilled in order 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 in order to protect students, subjects and institutions.

What we can learn from the above overview of funding trends and funding 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:

- (1) what are today's problems and bottlenecks that stand in the way of the realisation of public goals; and can that public goal (or good; externality) actually be quantified/approximated in some way?

- (2) 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)?
- (3) is there enough room for a market to emerge? (what about the freedom of entry for new providers/entrepreneurs; what if commercial providers would like to qualify for public funding?)

The success of a policy of charging substantial fees from students depends 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. Only if, in agreement with other players, governments work on reforms in these fields will policies to increase private revenues for higher education have a chance to be successful.

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