## BEN JONGBLOED

# STRENGTHENING CONSUMER CHOICE IN HIGHER EDUCATION

#### 1. INTRODUCTION

This chapter is concerned with the topic of student choice in higher education. In particular it focuses on ways of strengthening students' market power and giving more scope for students to have their interests served by the providers of higher education. This topic receives a lot of attention in many societies these days because it is felt that a system that relies heavily on central planning is unable to respond to the needs of an increasingly diverse student clientele. It is generally believed that consumers are better equipped than ever to make their own choices; increasingly consumers possess the wealth, means and skills to make choices that affect their personal wellbeing. To this end many governments have in fact liberalised a large number of the markets that were previously regulated and protected by government. Examples are public utility sectors, telecommunication, electricity, etc.

However, the higher education market in many mature economies is still characterised by a great deal of regulation. The question is whether the kind of liberalisation we see in other quasi-public good sectors can be extended to the higher education sector. To what degree does allowing student choice to be accommodated lead to improved educational outcomes? As will be argued in this chapter, the answer to this question will depend heavily on how rational students are, the degree of transparency that exists in the higher education market and the way the government has shaped the funding and framework conditions for this market.

Before addressing the effects of various initiatives to strengthen student choice in higher education we will present a model that incorporates the various factors that shape student choice. This is done in the next section. Of these factors the ones of concern will be those relating to government policy – the *institutional* factors that shape student choice.

After presenting the broader concepts and the theoretical model that ties them together, a number of specific issues that relate to student choice will be addressed, namely:

- 1. Rationality as the basis of decision making by (potential) students;
- Information provision and transparency and how it affects student choice:
- 3. How tuition fees affect student choice;
- 4. How student financial support affects student choice;

- 5. How different mechanisms for the public funding of higher education affect students' market power;
- 6. The effect of widening (or restricting) the range of educational choices for students.

The six topics all have a direct relevance for the degree of *consumer sovereignty* that is experienced in a higher education system. Strengthening consumer choice by giving consumers (i.e. students) more freedom, means and options to have their demands met is an essential ingredient in the marketisation policies alluded to above (see Jongbloed 2003; Teixeira et al. 2004). In the final section of this chapter, we will reflect on the following questions: to what extent is consumer sovereignty realistic for higher education and are markets an efficient method of organising activity in the case of higher education. The section will also present some conclusions in the shape of policy options that may be considered for strengthening consumer choice.

### 2. THEORETICAL FRAMEWORK

In many countries there has been a massive expansion in student numbers in higher education. An increasing proportion of young people go to university or another form of higher education. While it is established that educational attainment is central to entry to higher education, it is interesting to see which factors, net of educational attainment, influence young people's entry. The research literature on student choice (e.g. Hossler, Schmit and Vesper 1999) tells us that, apart from educational attainment, many issues can affect decisions to go on to higher education study. In this research literature, schooling careers are often seen as a sequence of decisions in which many factors and variables play a role. Student choice — or college choice — may be treated as a complex multistage process involving a series of successive decisions that ultimately may result in the decision to take part in higher education by choosing a particular course in a particular higher education institution. Financial factors, like the presence or absence of a tuition fee or the availability of student support in the form of grants or loans, are only some of the factors that affect higher education entry.

Elsewhere in this book, Vossensteyn gives an exposé of the various models and variables that affect students' decisions to invest time and money in higher education. Here, student choice is placed in the context of the so-called information-processing models (Hanson and Litten 1982; Hossler, Schmit and Vesper 1999). These models depict college choice in an interplay of information and incentives that in various stages of the choice process, and with varying degrees of intensity, affect the decisions that (prospective) students make with respect to educational careers. In this perspective, individuals make decisions on what steps they want to take, what information they will use and what they will exclude.

Therefore, to study student choice in higher education the schema presented in figure 1 will be used. It is not an explanatory model, but merely serves to focus attention on some of the factors that play a role in the sequence of activities in the

choice process and their outcomes. The model does not distinguish all potential determinants of student choice. It merely lists the main categories of factors that play a role without explicitly stating the stage in the process when particular variables come into play. Schooling career decisions initially are shaped to a large extent by the student's social background. Parents, peers, school teachers and 'significant others' in the environment of an individual are important sources of information in the stage where career aspirations are formed. Values and attitudes are transmitted from the socialising agents of (potential) students. In student choice models, the indicators of social background relate to parental income, parental education and occupation of father and mother. Preferences for particular types of education are also determined by an individual's personal attributes ('taste for schooling') and academic ability. Thus, in the first stage of the student choice process, preferences are shaped and translated into demand for education. The demand for education relates to issues such as how much education, what kind, what programme, which institution. This triggers a search process for where information is gathered and processed by students. The information concerns things like the range of choices available in the educational system, the expected outcomes of training programmes and labour market prospects (e.g. expected earnings). The range of educational options which students can choose from is very much determined by the student's prior education and his/her combination of examination subjects.

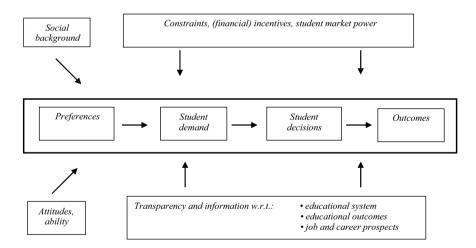


Figure 1. Student choice: The various stages and some of its determinants

The decision made by students with respect to higher education entry (the student's investment decision) is the result of the individual's demand confronted with the available educational supply. Like student demand, the result of this interaction between demand and supply can to some extent be influenced by

government's rules, regulations and incentives – the *institutional* factors, shown in the large box on top of figure 1. The institutional framework affects the decisions of students as well as the providers of education. For instance, government policy shapes the structure of the curriculum of higher education as well as that of other levels of education. Government is also trying to keep an eye on the standards and qualifications offered by educational providers, the competition in the higher education market. And, most importantly for this book, government is funding higher education providers and offering financial support to students so that the education system is accessible to students and offers sufficient capacity and variety in terms of places and quality.

With respect to the last-mentioned topic, some governments allow institutions to charge tuition fees. However, unlike in a real market situation, the interaction between supply and demand does not take place through the operation of a price mechanism. Excess demand or excess supply is not eliminated through adjustments in prices and the consequent adjustment of the quantities supplied or demanded. Government intervention in the higher education market means that the contribution students pay for their education (the tuition fee) is only a relatively small percentage of the total cost. What's more, the cost of higher education entry – at least for some students – is made more bearable through the availability of various types of student financial support, be it in the form of grants, scholarships, loans or deferred payment of tuition fees. Other (financial) incentives may also be mentioned here, such as premiums granted to students who choose science and engineering programmes, or job guarantees to persuade students to take up a particular programme. The issue to what extent government policies that fall under the heading of cost sharing can be combined with policies that guard access to higher education is discussed in several chapters in this volume. Some of these issues will be touched on later in this chapter as well.

What this chapter is most concerned about is how to strengthen student demand by increasing students' market power, enlarging the range of educational options, and/or increasing the transparency of the higher education market. The outcome of the decisions made by students in interaction with the providers of education has several dimensions, such as the student's educational achievement, the quality of the system, levels of participation, efficiency, etc. It would be interesting to see to what extent increasing students' market power leads to 'better' outcomes. However, the outcomes of students' decision making do not just depend on students, their characteristics and the policies affecting them, but also on the operation of – and policies relating to – the education providers and the labour market.

With respect to the latter, the labour market or, more generally, societal factors will exert an important influence on the programmes offered and the decisions students make. However, these are factors that fall largely outside the scope of this chapter, because the focus is mainly on the factors that can be influenced by government policies. Indirectly, though, the labour market does play a role in our conceptual model because the qualifications offered by higher education providers and the degree contents in terms of knowledge and competencies are developed by the providers in close cooperation with those making use of higher education's

services and graduates, that is, the firms and other employers of graduates. Accreditation, quality assurance and recognition procedures may be mentioned here.

With respect to educational supply, it is worth mentioning that the government is overseeing the entry of new providers in the higher education market and it is responding to the claims that providers may express for public funding or financial support for their students. The recognition, accreditation and public funding of higher education provision might be extended in order to create more room for students and institutions to cross all sorts of borders more easily. For example, a system of vouchers or learning entitlements may enable students to consume parts of their education from (recognised, accredited) private providers and thus create more competition in the higher education system. Another example is the portability of student support. This is an issue that recently showed up on the political agenda (Vossensteyn 2004). Yet another example of increasing student mobility across borders may be found in policies where the government forces higher education institutions to restructure their programmes to meet international agreements on diploma structures (bachelors, masters, PhD programmes).

Finally, the conceptual model presented in figure 1 singles out two important categories that shape student choice: (1) financial incentives and regulations; and (2) the various informational aspects surrounding the decisions made during various stages in a student's educational career. Student choice can be strengthened by changing the public (and private) funding mechanisms or by making more information available to students. However, the results these actions will have for the actual decisions made by students and the educational outcomes will depend to a large degree on how rational students are and how well the relevant markets and higher education institutions more generally operate to serve students' needs. The rationality issue is discussed next (section 3). After that, the various dimensions of market imperfections and how governments may work to overcome them are discussed in sections that pay attention to the issue of transparency (section 4), the price insensitivity of student demand (section 5), the liquidity constraints faced by students (section 6), the generally low degree of market power (say consumer sovereignty) that students possess due to the fact that public funding places more emphasis on providers than on consumers (section 7), and the various types of restrictions that students face when applying for a particular higher education programme or institution (section 8).

#### 3. RATIONALITY AND STUDENT CHOICE

Measures to strengthen student choice are carried out with the aim of giving students as much as possible the information, financial means and room to make a rational choice as to where and what to study. Transparency of the market as well as guidance and counselling clearly are requirements for a rational choice. However, before discussing these conditions it is necessary to consider the concept of rational choice and to what extent students can be expected to behave rationally.

In traditional economics, consumers are supposed to be individuals acting rationally to maximise their expected utility. This means that consumers weigh all

alternatives and choose to allocate their resources in such a way that they achieve the optimal ratio of costs and benefits. Stated differently, given their preferences, budget restraints and given product prices, consumers use the available information to evaluate all alternatives and choose the option that leads to the highest level of lifetime utility. This economic approach to human behaviour is also frequently used to explain individual action and behaviour in the field of education (Becker 1976). If the criteria for utility maximisation were known, the outcome of choices would be relatively easy to predict. However, as is argued in the chapter by Vossensteyn in this volume, there is reason to question the rationality assumption that is underlying mainstream neo-classical economics.

These days, researchers in consumer psychology have a more differentiated approach to consumer choice. In the real world, the number of alternatives is frequently too large for consumers to consider them all. Moreover, consumers lack the knowledge and information they would need to judge the alternatives in terms of consequences (costs and benefits). Further, the consumer may not even have a clear goal (or a priority of goals) on which he/she can judge which alternative is best. Research in consumer psychology has shown that consumer decisions are seldom the result of purely rational cost-benefit analysis based on a stable set of preferences. Instead, consumer decisions are highly complex and cannot be detached from the social and political context in which they take place. Individuals may select a product or service on the basis of non-rational considerations, for instance because of their desire to do what their environment expects of them. At best, such behaviour may be seen as based on the assumption of bounded rationality (Simon 1978), or partial rationality. This appears to be the case for both relatively unimportant routine decisions involving the purchase of inexpensive goods for instance, and more significant life choices concerning an individual's education or career (Menon 2004).

In other words (see Meijers 1995), an 'ideal type' consumer acting in a perfect market characterised by full information does not exist. Where individuals' choices in terms of education and career moves are concerned, Meijers argues that, due to the complexity and uncertainty surrounding choices, neo-classical assumptions do not hold. He argues that study choice may be seen as a series of successive decisions that individually are conditioned by previous decisions and frames of reference such as family and social background. Educational choice is incremental in nature and higher education candidates often only consider the programmes offered by higher education institutions in their region. In their decisions they use rule of thumb and are heavily influenced by the choices made by their peers or 'significant others' in their environment. Individuals develop strategies to handle complexity and uncertainty, for instance by engaging in information searches. From an individual point of view those strategies may be seen as rational in the sense that the individual judges alternatives on the basis of available information in such a way that the choice made has the highest chance of leading to the desired outcome. Thus, even if the individual choice does not lead to equilibrium between supply and demand in the labour market or even if it restricts the career opportunities of the individual, the choice may be regarded as rational. From the perspective of the individual, his/her

choice may be seen as rational, while from an outsider's perspective the choice may be poorly understood. Rationality, therefore, is a highly subjective and relative concept.

While in economic literature – in particular human capital theory – rationality is understood as maximising one's returns in terms of career opportunities, income and job security, Meijers (1995) argues that labour market considerations hardly enter student choice behaviour. Prior achievement in education in particular shapes the choice of programme in a consecutive phase in one's educational career (e.g. individuals choosing the subjects or direction in which they have been successful before, or taking the line of least resistance). Also self-realisation and enjoying one's youth are motives frequently quoted by individuals making educational decisions. In other words, study choice and career choices may not be rational from a narrow human capital point of view, but they may be seen as rational from a *retrospective* standpoint; individuals are seeking a justification for choices already made, for instance choosing to go where friends go, wanting to be close to home, etc., rather than selecting the best investment per se (that will actually maximise their lifetime utility).

This discussion points to the difficulty associated with the definition – let alone measurement – of the rationality concept. While rational choice may be defined in terms of the best possible action for the individual making the choice, there are different approaches to the rationality concept. As stated by Menon (2004: 272):

... attempts to define the concept differ with respect to their use of the decision maker's subjective perception of reality in their assessment of rationality. Thus one approach is to consider as rational what the decision maker chooses as the best course of action for himself/herself, while a different approach would require that rationality be assessed and measured against an objective criterion.

Whatever one's definition of rationality, a distinction needs to be made between (complete, bounded, partial or some other form of) rationality and irrationality on the one hand and (the consequences of) uncertainty on the other. Uncertainty derives from the fact that the future is unpredictable and information on the nature and prices (opportunity costs!) of products or services is imperfect. True irrationality in the economic sense of individuals not optimising expected utility subject to uncertainty and other information imperfections should be separated from individuals choosing or doing what is rational given those market imperfections. If individuals are fundamentally rational and the problems are of the latter type (i.e. uncertainty, imperfect information), the potential role for policy would be to try and address those market imperfections by helping students make the decisions they want. If, on the other hand, students are fundamentally irrational then giving them more information or eliminating market imperfections will not necessarily improve outcomes. In the latter case there may not be a need to strengthen consumer choice in higher education, and it might be better to, for example, let educational authorities offer the programmes they deem best for students rather than let student preference drive programme selection. In other words, there is a distinct set of policy implications stemming from one's judgment of the degree of rationality, with a potential role for government in terms of helping students rethink their priorities, increase their skills in making decisions in complex situations, etc., as well as

improving their information sets. The first type of policy is helping individuals to approximate rationality, while the second is about reducing uncertainty. This second topic is taken up in the next section.

## 4. TRANSPARENCY AND INFORMATION

Markets only function efficiently if consumers are in the position to make a considered (not necessarily rational) choice from the set of given alternatives. Being 'in the position' includes having sufficient information about what is on offer in the market. The degree of transparency in the market, therefore, is an important characteristic that affects individuals' ability to make an informed choice about the kind of programme that suits them and where they can enrol for such a programme. Student choice therefore can be strengthened if the education market is made more transparent. If transparency is a problem, student counselling and guidance can provide some relief. However, one first has to assess whether the market itself may offer a solution – for example, by means of private companies offering information services in the form of consumer guides or personal career advice. If problems persist, governments may intervene and guarantee transparency as part of their strategy to protect consumers in higher education and to make clear to potential employers of graduates what the programmes and degrees actually stand for. This allows all parties in the market to make better-informed choices.

A large heterogeneity in programme supply may be problematic for consumers, but it also has a potential advantage in the sense that it is an indication of a wide range of alternatives from which students may choose. Notwithstanding this, the provision of sufficient and reliable information to prospective students is seen as an essential area for government concern. The efforts of some national governments to weed out the confusion over programmes that have similar contents but different names is an example worth mentioning. In the Netherlands, institutions were required to embark on an operation intended to make the programme supply more easily surveyable for students by renaming programmes.

On a slightly different (and more contentious) note, governments sometimes try to prevent providers from offering many types of disciplinary specialisations at an early stage in a student's educational career.

Transparency in programme supply not only relates to a full and reliable overview of programme offerings but also to information on the quality of programmes and graduate career perspectives. This information may be offered in the shape of ranking systems and databases that prospective students can consult when faced with the choice of going to college or entering the labour market. Reviewing the supply of study choice information in a number of countries, Jongbloed et al. (2004) came to the conclusion that overall, the type of information available to students and the way it is distributed seem to be fairly consistent across different educational systems. Information channels regularly involve reliance on other people's guidance, such as secondary education career counsellors, family members and friends. Direct interaction with universities through college open days also seems to be a popular mode. Finally, information is channelled to prospective

students through the provision of open-source data. This includes university and government education web pages or portals and commercially provided consumer guides, rankings or databases.

These examples of information sources concern the supply side of the education market. However, for making informed choices, students will first have to define their own educational demand and preferences. This requires skills and preparedness on the part of (prospective) students. It relates to the question of whether teachers, career counsellors and other individuals in the environment have informed students during their educational career about educational and career options.

The information itself can generally be divided into objective and subjective components. Objective data can be further disaggregated into purely descriptive and evaluative information. Purely descriptive data would include such things as universities' contact information, admissions procedures, lists of programmes offered and geographical location. In contrast, evaluative information is provided to help prospective students compare higher education providers or their programmes on what are deemed to be relevant criteria. Data on student/faculty ratios, library holdings, admissions requirements, characteristics of the student population (such as the number of women, ethnic minorities or international students) and the percentage of applicants admitted would fall under this category. Unlike purely descriptive data, evaluative information is provided so that individuals can seek out providers or programmes that are more likely to fit their preferences and needs.

Higher education critics frequently argue that students learn far more from their professors and hands-on learning than they do from just reading a book. This line of reasoning also seems to prevail when it comes to prospective students and the study choice process. The available evidence reported in Jongbloed et al. (2004) suggests that individuals get far more out of on-site visits to universities and face-to-face interactions with secondary education career counsellors, parents and even their friends than they do from comparing student/faculty ratios or enrolment distributions across various undergraduate programmes.

In many respects, such a finding is not surprising. Economists have long recognised that questions like which education to buy and who to buy it from are far and wide more complex than those undertaken in the process of buying other commodities. Unlike cars or clothes, individuals cannot immediately value the education they purchase; higher education is a so-called experience good. This potentially gives education producers (higher education institutions) a great deal of incentive to maximise their own gains by offering a substandard product to the students. In other words, information asymmetries lead to market failure. In this case, the individual's only option is to estimate what an education in a particular programme or from a given institution will likely be worth. How do prospective students seek out such information? From the previous section we know that they take into account labour market information only to a small extent, and make use of highly subjective information. Examples of information taken into account are indications of the amount of work that goes into completing a study programme (or the difficulty in passing classes) and intrinsic rewards like a low-stress work environment. Subjective information like this seems to be far more important to prospective students than the average class size or the amount of student/faculty

interaction that takes place.<sup>2</sup> However, information of the latter kind does not tend to be readily available.

Information on the comparative quality of study programmes generally does not have a high profile in the publicly provided study choice information. This is not surprising in light of widespread ambiguity over what constitutes quality. To impose regulations on the content of the information that is made publicly available would not only demand consensus as to what constitutes quality, but would disturbingly put government (or some delegated body) in charge of deciding for the public what constitutes good or bad education. It is clear, based on the controversy generated by rankings and league tables, that third party estimations of who is the best or who produces the highest quality inevitably come under public fire for excluding some factors and including others. As one economist put it, public agencies have a responsibility for ensuring that restaurants maintain hygiene standards but they are not responsible for producing a guide that informs the public about which restaurant makes the tastiest food.<sup>3</sup>

Though critics argue that student/programme mismatches are largely attributable to consumers who are either under-informed or hampered by a need to sift through mountains of information, a good deal of the problem can be attributed to exogenous factors. One, cultural characteristics such as the widespread desire of students to not move far from home, drive students to immediately limit their set of feasible options and thus increase the chance that mismatches may occur. Such immobility is prevalent in many countries. Two, indecision about what type of career to pursue, largely brought on by inexperience and unfamiliarity with what options exist, coupled with the growing societal pressure to obtain a higher education, inevitably forces individuals to prematurely choose ill-fitting study programmes. Three, who bears the cost of financing a higher education also plays a critical role. Individuals in countries where students and their families bear a greater percentage of the overall costs or where the system employs selective admissions practices are naturally going to be more discriminate consumers.

It is clear that prospective students face no shortage of study choice information. Individuals have a veritable mountain of information at their disposal and even more in the way of opinion. If we are to improve the procedure of matching education consumers and producers, the pertinent question is where are breakdowns occurring in the process by which individuals sort through the available information? Factors like student immobility, cost pressures and system structures that force individuals into making premature career decisions are all promising avenues for further inquiry. In the meantime, both empirical observation and economic theory suggest that market mechanisms in some countries provide individuals with reliable signals about the relative attractiveness of getting a degree in one institution over another or in one programme over another. From this perspective, establishing public- or private-borne university/programme rankings is of dubious value when it comes to improving student choice. The evidence would seem to indicate that such rankings tend to serve higher education researchers, government funding agencies and even universities much more than they do prospective students.

So, what does this tell us about ways to strengthen consumer choice in higher education? First, that information searches among (prospective) students occur less

often than one would expect under traditional economic theory. Personal impressions coupled with the opinions of others would seem to do more to shape programme choice decisions than printed facts or statistics about university or programme characteristics. This points to a distinction between *soft* (or informal) information, obtained from people, and *hard* (or formal) information, as published in journals, prospectuses, consumer guides, databases, etc. Connor and Dewson (2001: 47) have found that, in the UK, students seem to prefer information that is more tailored to their own needs and relevant to their own personal circumstances. This is connected to the fact that information given verbally is more appreciated, partly because it can be more personal.

The second conclusion that can be drawn is that plenty of information about higher education is available to potential entrants, but it is often seen as being too general and overly complex. Therefore, efforts by higher education institutions and government need to take this into account when developing their information, recruitment and guidance strategies. The strategies need to focus not so much on publishing increasing amounts of data on particular programmes and institutions, but more on general benefits and costs of higher education study for the person in question ('what is it like to be a student?' and 'what does it bring me in terms of improved employability and finance?'). If current students or 'higher education champions' provide such information, the policies seem to have more impact – particularly on higher education candidates from families under-represented in higher education. Potential students who have little contact with people who have recently had higher education experience will probably feel more at ease with this kind of soft (or some might say *hot*) information than with impersonal ('cold') information.

#### 5. TUITION FEES AND PRICE SENSITIVITY

One might perhaps rather boldly state that the introduction of tuition fees is a means of 'empowering' consumers in higher education. The higher the fees students pay, the higher the benefits they expect to receive from the higher education provider. Fees therefore imply a direct client–producer relationship in higher education. Tuition fees also work as an incentive for students to behave efficiently, inducing them to make more conscious choices. So the fee levels and fee structures/mechanisms will, in combination with other factors, shape students' decisions (see figure 1). In this section we will look in particular at the first of the following three roles played by fees:

- Fees enter the cost-benefit analyses made by students contemplating higher education entry.
- 2. Fees affect the liquidity constraints faced by individuals enrolling in higher education.
- 3. Fees contribute to students' debt aversion.

The role of fees in determining demand may be looked at from the student's perspective and the first issue that will come up in many discussions is to what extent do fees have a negative effect on the student's decision to participate in higher education. The presence of fees, however, also has a more positive side that arises when one looks at it from the perspective of the provider of higher education. Fees are a source of revenue for higher education institutions and, if the fee mechanism is shaped in a particular way, the revenues collected may serve to increase the range of choices and the capacity in the higher education system. This role of fees will, together with some of the other functions of fees, be discussed in the second part of this section. First we will treat in particular the demand side effects of fees – role No. 1 in the list above – drawing heavily from earlier work by this author (Jongbloed 2004). The other two roles are closely connected to the topic of student support – a topic which will be explored in the next section.

Before addressing the roles of fees, we define tuition fees as charges levied upon students, or upon students and their parents, that cover some proportion of the underlying cost of higher education (Johnstone 1998). Tuition fees are related to the institutional costs of instruction and are thus distinct from charges relating to the costs of student living, or maintenance – for example, room, board, laundry and transportation – even though such maintenance charges may also be levied upon students or parents by the institution if it operates dormitories and dining halls. If the tuition fee covers a relatively large proportion of educational cost and is not compensated for by means of student subsidies or tax expenditures, the degree of *cost sharing* is relatively high – private individuals bear more of the cost of higher education.

Turning to the role of fees in students' decisions, the immediate role of fees lies in signalling to consumers the (marginal or average) cost they are incurring when enrolling in a higher education programme. This encourages an economic (i.e. efficient) use of resources by consumers.<sup>4</sup> In higher education, due to the government subsidies allocated to the sector, the tuition fee charged to students cannot be regarded as a price in the true sense of the word, but rather as a *quasiprice*. Governments are heavily subsidising the provision of higher education, sometimes even offering higher education for 'free' (e.g. in Scandinavia, Germany, and many formerly socialist nations in Central and Eastern Europe).<sup>5</sup> Clearly, fully commercial providers and private arms of public providers are the exceptions to this rule and do charge a 'real' price. In general, though, our national higher education systems primarily consist of publicly funded providers that charge a flat (i.e. uniform) fee that often times is set by the government (or, rather, parliament).

Traditional human capital theory, built on rational economic decision making by individuals, models decisions that have more than just an immediate consumption purpose in the framework of a cost-benefit analysis. In order to estimate the profitability – the *rate of return* – of higher education investments, the individual weighs the benefits against the direct and indirect costs of education. The major direct costs are tuition fees and study materials like books and computers. The indirect costs consist of foregone earnings (the opportunity costs of studying). The benefits are higher expected future earnings and other improvements in career opportunities, as well as the consumption value of going on to higher education and

any other benefit gained from the schooling. Taking this cost-benefit perspective, a rise in (or the introduction of) tuition fees can be expected to have a negative influence on the students' investment (i.e. participation) in higher education.

The question is, however, whether in this broader picture of costs and benefits students actually react to changes in tuition fees. In other words, how high is the *price elasticity* of the demand for higher education? To what extent do higher tuition fees harm access, in particular, for students from lower socio-economic groups in society? This question is especially important now that many countries have seen the implementation of increased contributions that students have to make to the cost of their higher education. Countries where fees have increased steadily are the Netherlands and the Anglo-Saxon countries (the UK, Canada, Australia, the US and New Zealand). This rise in fees was justified by referring to:

- the private benefits of higher education;
- the need for the higher education sector to find alternative (and/or additional) resources;
- the relative priorities attached to other fields/sectors (e.g. health care) compared to higher education.

Therefore, in the financing options under discussion in many countries, student contributions are becoming an increasingly important issue. On the basis of empirical evidence on private rates of return to an investment in higher education, it may be argued that, next to the government (or taxpayers), students should make a contribution towards the cost of their education. Governments continue to fund higher education because of the externalities it produces for society in general. Students might be asked to contribute because of the private returns they enjoy in the form of higher lifetime earnings and other education-related benefits. Blöndal, Field and Girouard (2002) estimated that the average male private rate of return for a number of OECD countries lies around 12 per cent. Financial returns for successful students range from 6.5% in Italy, 7.5% in Japan, to 17.3% in Britain. The returns for women were slightly lower on average. Thus, graduates receive substantial monetary benefits from their degrees. Given the fact that higher education will also deliver non-financial (e.g. cultural) benefits, the estimates reported here would most probably be an underestimation of the personal gains received from having a degree.

The fact that students do well in the labour market, combined with the fact that students are more likely to come from privileged backgrounds, implies that efficiency as well as equity reasons may be brought forward to justify student charges. A no-charge system would be regressive; it would mean that public funding is redistributed from low income taxpayers to (future) high income taxpayers.<sup>6</sup>

So then if a tuition fee is justified, what is the elasticity of demand? For the European higher education systems, there are only a limited number of studies that contain insights into the effects of the rising private cost of higher education. Most of the available research on price elasticities originates in the US, a country where paying for higher education has a much longer history and thus a much longer time period over which data have been collected and analysed. Leslie and Brinkman

(1987) provide a meta-analysis on student price responses in American higher education, updated in Heller (1997). Their major conclusion, quoted by Vossensteyn and Canton (2001), is that students are responsive to prices and that – *ceteris paribus* – for every \$100 increase in tuition price one would expect the participation rate to drop by about 0.7% point. Vossensteyn and Canton (2001) state that for an average weighted tuition fee of \$3420 and a national higher education participation rate of 0.33 in 1982–83 (cf. Leslie and Brinkman 1987), this corresponds to a price elasticity of –0.73.

Other authors (Manski and Wise 1983; McPherson and Schapiro 1991; Moore, Studenmund and Slobko 1991; Gladieux and Hauptman 1995) add that particularly low income students are more sensitive to tuition price levels than higher income students. McPherson and Schapiro (1997, 1998) stress that, though enrolment rates for all racial groups have risen, the gap between the enrolment rates of whites and other racial groups has widened. Heller (1997) also shows this variation in price sensitivity among different racial groups. In addition, Kane (1995) shows that increases in net costs over time are related to decreases in enrolment rates for lower income students in the US. In contrast to this, evidence shows that increases in net cost did not inhibit enrolment for more affluent students. However, middle income students also seem to have reached a price threshold, particularly in the private sector institutions (Breneman 1994; Campaigne and Hossler 1998).

For the Netherlands, where government imposes the level and increase in tuition fees, the scarce studies on the price sensitivity of student demand include Kodde and Ritzen (1984), Huijsman et al. (1986), De Jong et al. (1990) and Canton and De Jong (2002). Among other variables, these time series studies try to establish the impact of tuition fees on student enrolment. Oosterbeek and Webbink (1995), using micro-data on secondary school leavers, found a statistically insignificant effect from tuition fees on student enrolment. Huijsman et al. (1986) reported an elasticity with respect to tuition fees of -0.003. This would imply that demand is fairly insensitive to the tuition fee level. De Jong et al. (1990) reported that economic variables hardly affect the decision to enrol in an academic programme. Bronneman-Helmers and Kuhry (1996) reported price elasticities in the range of -0.01 to -0.1. A recent study by Felsö, Van Leeuwen and Zijl (2000) indicated that students are not likely to change their programme choice in cases where tuition fees were either increased or reduced by 454 (almost a third of the present day fee level). Finally, Canton and De Jong (2002) concluded that students are not responsive to tuition fees, but financial support, the college premium, and the foregone labour market earnings are important in the enrolment decision.

All in all, the Dutch evidence typically suggests that students hardly respond to tuition fee changes. This is in contrast to the findings in the US and UK studies. However, the Dutch studies suffer from an important drawback, namely, they do not take into account that, over time, governments have compensated for the increase in the tuition fee by a rise in the student financial support offered in the form of grants and loans. Whatever the cause, the low elasticity of student demand with respect to tuition fees makes sense from the viewpoint of the human capital model. The fees as part of direct education costs represent a very small component when considered

against the gain in lifetime income associated with an academic degree. Canton and De Jong (2002), however, do show a remarkable result in the sense that they report a positive elasticity of demand with respect to student financial support. This result may be useful in the debate on reform of the student support system. Options for reform recently proposed (CPB and CHEPS 2001) include the introduction of a student loan scheme with income contingent repayment rates, along the lines of the Australian Higher Education Contribution Scheme (HECS) and graduate taxes (Jacobs 2002).

Before turning to Australia in order to discuss the (absence of) evidence for tuition fees having an effect on student demand, we slightly change the perspective from the consumer to the provider of higher education. In doing so we stress some of the other roles of fees — roles that actually focus on ways and means of strengthening the role of consumers in higher education. Apart from the role of fees in rationing available supply across consumers and giving (quasi-) price signals to consumers, fees play a role in (see Jongbloed 2004):

- increasing income from students;
- increasing diversity in programme supply and delivery;
- increasing competition between providers;
- enhancing decision making by students on the basis of price-quality trade-offs:
- leading to a closer relationship between the student and the higher education institution:
- giving higher education institutions an outlet for expressing their circumstances, goals and opportunities.

The advocates of tuition fees stress the positive effects of fees. Some even go so far as to promote a fee system where the institutions instead of the government set fees. Fees – either regulated or deregulated – are assumed to increase efficiency, quality and – because of the extra revenues they bring in that can be used to subsidise students from under-represented groups – can even help improve access. If higher education institutions are free to set their fees (in a system of price discretion), tuition fees may bear a closer relationship to the different costs of providing different subjects, while allowing fees to reflect the different financial returns that students (once graduated) enjoy depending on the institution attended and subjects studied.

Australia is an interesting case for studying simultaneously the enrolment effects of introducing (and raising) tuition fees and the achievement of some of the positive effects listed here. There is a great deal of Australian research on the relationship between student contributions and student participation.

For regular (full-time Australian) students, the tuition fee that students pay is a charge that is levied through the HECS, introduced in 1989 (see Chapman 1997). HECS was motivated by the sheer need to attract additional resources for the Australian higher education system in order to allow for further expansion in times of fiscal pressures. Under the HECS system, students contribute approximately a

quarter of the average cost of their training programme, either by paying up-front (at the point of entry into higher education) or by taking out a loan and deferring repayment (through the tax system) until after graduation. The important condition for the HECS system was that the private contributions should not harm access to higher education, particularly not for people from disadvantaged backgrounds. In particular, the deferred payment option in HECS meant that students who could not or did not want to pay up-front were allowed to pay later (as a graduate).

HECS was introduced as part of a larger package of funding reforms. Despite the strong arguments in favour of introducing fees, parliament and public opinion were very sceptical about it, fearing a worsening of access. However, the 'package deal' tactic of the Minister that included more public funds for universities did the trick. HECS applies to Australian and New Zealand students in undergraduate programmes (bachelors degree) and masters students in so-called *masters by coursework* programmes. The level of the HECS rate is determined by the Minister for Education. The rate was indexed to the cost of living and rose to A\$2450 in 1996 (US\$1 is about A\$2). Until 1997, the HECS charge was the same across all subjects and all universities.

When paying the charge, the student has a choice of either paying up-front, attracting a discount on the HECS payment, or deferring payment until after graduation. The discount on up-front payment was originally 15% but was later raised to 25%. In 1997, about 29 per cent of students chose to pay up-front. In case students choose the deferred payment option, the Commonwealth (i.e. federal) government pays the charge for the students and the student incurs a debt that is repaid via the taxation system. The value of the outstanding loan is adjusted annually with the consumer price index to maintain the real value of the debt. Students who defer payment, therefore, receive an interest subsidy on their debt. The Australian Taxation Office administers the debt and collects repayments. The (at that time) innovative characteristic of HECS is that repayments are income contingent. Therefore, HECS sometimes is termed a system of income contingent loans. In 1989 the income threshold for repayment was A\$27,700 per annum. At this level of income, graduates had to pay 2 per cent of their taxable income each year, with payments rising to 3 or 4 per cent at higher levels of income. These proportions have since been increased.

HECS is operationally distinct compared with conventional student loan schemes in most other countries which offer what are often called 'mortgage type' loans. The obvious difference is that in the case of mortgage type loans the repayments do not depend on former students' incomes. The difference between HECS and subsidised bank loan schemes of other countries is that the latter typically offer assistance to a minority of students, with eligibility depending on a range of factors, including family income and age (Chapman and Ryan 2002: 6). HECS has no eligibility criterion – it is offered to all prospective students. The third difference between HECS and other student loans systems is that HECS is only about the repayment of deferred tuition charges and not about the repayment of loans that cover the student's living expenses.

HECS brought in significant revenues for the Australian universities. In 2001 students provided over A\$800 million in terms of up-front payments and income

contingent repayments through the tax system. This is about 20 per cent of the total recurrent cost of higher education in Australia (Chapman and Ryan 2002: 10).

When a new (conservative) government came to power in 1996, HECS was reformed. Charges were increased substantially (by about 40% on average) and their structure changed, so that they varied by subject but not by university. Three fee 'bands' were created containing disciplines that attracted low, middle and high HECS charges. This new charging scheme can be characterised as a hybrid of a teaching cost-related system and an expected future earnings (i.e. private rate of return) system (Chapman 1997). As such, the most expensive tier not only included expensive courses like medicine, but also law, which is one of the cheapest subjects in terms of teaching costs. Other inexpensive programmes, such as economics and business, attracted a medium charge.

Turning to the effect of HECS on student participation, Chapman (1997), summarising a number of studies, claims that "the introduction of HECS does not seem to have had any discernible effects on the socio-economic composition of the student body" so that "there is no evidence of HECS diminishing access to higher education of the disadvantaged" (Chapman 1997: 749). Also, the 1997 changes to HECS hardly changed the rates of return and, as such, were unlikely to reduce the attractiveness of higher education (Chapman and Salvage 1997).

Andrews (1999) measured changes in the proportion of first year higher education students from relatively poor backgrounds. While the causes for lower participation rates for low socio-economic status (SES) groups are likely to be complex and include social, cultural and attitudinal factors as well as financial, he points out that for low SES groups HECS appears to have been a minor influence on decision making. Evidence for the lack of deterrent effect is seen in the fact that participation rates for low SES groups have not worsened since the introduction of HECS. Overall the number of undergraduates doubled between 1989 and 1998. While numbers may not have dropped, the general expansion and availability of funding to participate do not appear to have improved the socio-economic composition of the student population either. Vossensteyn and Canton (2001) in their review of studies that have evaluated the effects of HECS come to the same conclusion, stressing the role of non-financial factors such as values and attitudes in determining student choice.

One of the founding fathers of HECS, Bruce Chapman, presents the following summary of findings from research looking at the effects of HECS on access for the disadvantaged (Chapman and Ryan 2002: 13):

- a) the relatively disadvantaged in Australia were less likely to attend university even when there were no student fees. This provides further support for the view that a no-charge public university system (that is financed by all taxpayers) is regressive;
- b) the introduction of HECS was associated with aggregate increases in higher education participation;
- c) HECS did not result in decreases in the participation of prospective students from relatively poor families, although the absolute increases were higher for relatively advantaged students;

d) the significant changes to HECS introduced in 1997 were associated with increases in the participation of individuals irrespective of their family wealth.

Summing up this section it can be concluded that the effects of fees are by no means only negative – there is only weak evidence for a discouraging effect on participation, while access opportunities and consumer power may in fact be strengthened.

#### 6. STUDENT FINANCIAL SUPPORT

While the previous section was somewhat supportive of tuition fees this does not take away the need for government to guard access for those who are unable to pay for higher education. As already indicated, students from disadvantaged backgrounds may in fact be deterred by fees and student debt when deciding to participate in higher education or they may be discouraged from enrolling in the institution of their first choice. The poor may not be able to pay the fees required for some of the expensive courses.

According to human capital theory, students choose to go to university if the cost-benefit calculation they make shows that the benefits outweigh the costs. However, as stated in section 3, it is unlikely that prospective students will make training and career-related choices in a strictly rational fashion. Rather, they will make an approximate estimate of the costs and benefits of schooling, given that the costs and – in particular – the benefits are hard to predict. However, once they choose to enrol in higher education they will need to have the means to pay the fees, other associated out-of-pocket expenditures as well as their living costs. This means that they will only be able to enrol in a higher education programme so long as they do not face a liquidity constraint (or credit constraint – see Chapman in this volume).

The presence of a (substantial) tuition fee will add to the liquidity constraint students face. Therefore, the income position of the student – or his/her parents – may pose a barrier to the student undertaking a higher education career. When liquidity constraints are important, one would expect that parental income would have a positive impact on the enrolment decision. However, Oosterbeek and Webbink (1995) conclude from Dutch data that the effect of parental income on enrolment is not significant. Other authors have reached similar conclusions (cf. Shea 2000). This does not imply that the government has no role in alleviating credit constraints. In fact, the observation that liquidity constraints do not seem to be very important in the current situation could indicate that government intervention *is* effective. <sup>10</sup>

A widely used government instrument to protect access for individuals from low income families is to lower the price of educational services through subsidies, which alleviates the liquidity constraints and the need to borrow. Subsidies do not just lower the financial barriers but also increase the range of educational options that students can choose from. In other words, financial support for students is a way

of strengthening consumer choice in higher education. In many countries, changes can be seen in the student support system – changes that relate to the conditions for receiving financial support in terms of grants, scholarships, loans or tax benefits for the students' parents, as well as the conditions (interest rates, repayment speed) attached to the debt students build up when taking out loans. An extensive overview of the developments in this area will not be presented here; this topic will be left for others to discuss in this volume. The picture that emerges is that systems for student support in many countries enhance access but the financial risks associated with investment in human capital in particular affect the educational choices by students from less well-off families.

A student support policy that relies heavily on subsidies may not be very efficient: rich students also benefit from the subsidies, while the poorest students may still not be able to finance their studies. Therefore, some authors in this volume argue that a more equitable and efficient type of public action is to let the government provide student loans or to stand surety for student loans provided by commercial banks. One possible objection is that students with unfavourable social backgrounds are less willing to incur debts. Making repayment of debt income contingent may alleviate this problem (but also introduce other issues like a distortion of the labour supply decision and postgraduate education). Chapman takes up the topic of income contingent loans in his contribution to this book. Finnie (2004: 8) sums up the design features of student support packages as follows:

Loans should be used when the principal problem is the need to help students overcome credit constraints – that is, to help those who want to pursue advanced schooling be able to do so, whereas grants should be used when individuals need the cost-reducing (and net benefit-increasing) incentives grants embody to make them want to engage in higher education.

The remainder of this section will briefly discuss the outcomes of some empirical studies on the relationship between educational choices and student support.

Kane (1995), in a study already cited in the previous section, uses several sources of variations in grants in the US (between states, within states, before and after the introduction of the Pell grant programme) to measure the effects of aid on student enrolment. He finds no strong evidence of an effect of means-tested financial aid (Pell grant, allocated to low income groups) on enrolment rates of low income students relative to medium and high income students. An explanation for this could lie in the lack of information of low income families with respect to application procedures for the grant. Van der Klaauw (2002) uses a regression-discontinuity approach to measure the effects of aid on college enrolment on the East Coast of the US. Specifically, students are ranked according to a measure of ability, and a threshold in this ability level determines whether students will receive a grant or not. Van der Klaauw uses this discontinuity to measure the effects of aid on enrolment. He finds enrolment elasticities of around 0.86 for students eligible for financial aid and 0.13 for the others.

Based on the earlier presented findings that the 'price sensitivity' of student demand is concentrated among low income students, McPherson and Schapiro (1997) conclude that policies that call for cross-subsidisation among students, such as the *high tuition—high aid* strategies, make sense from the viewpoint of economic efficiency (although targeted student support by the government would be a better policy instrument). The high tuition—high aid strategy comes down to a situation where richer students pay a substantial part of the costs of education. This revenue is partly used for providing tuition discounts to poorer students. Notwithstanding this practice, there have been considerable increases in net tuition for low income students, leading to a growing gap between enrolment rates for high income and low income students and to an increased concentration of low income students in the least costly institutions and programmes (Duffy and Goldberg 1998). Low income groups have become concentrated in public, low-status community colleges, contributing significantly to the growing stratification evident in the US higher education system.

McPherson and Schapiro (2000) address the substantial increase in direct costs for US students and the substitution of student grants by loans. In analysing the phenomenon of the highest enrolment figures coinciding with the highest levels of cost, McPherson and Schapiro point to the fact that the increase in enrolment is not uniform across all groups. While participation is growing for all groups in absolute terms, relative enrolment levels are changing. This is evident in the enrolment trends for both income and ethnic groups and evidence of this is presented in the study by Kane (1995). The econometric analyses by Kane (1995) and McPherson and Schapiro (2000) seem to support the conclusion that the 'price sensitivity' is concentrated among low income students.

There is growing concern in many countries about the effects of increasing levels of student debt on participation in higher education. This is where we touch on the issue of *debt aversion*, defined by Finnie (2004: 12) as "situations where individuals are unwilling to take out loans to finance their post-secondary schooling even though they know the schooling represents a good investment and it could be facilitated by the loans in question". What the US research suggests is that the disincentive effects of higher tuition costs and loan debt are linked to class position, but the relationship between the two is complex. It is not simply the case that low income students are 'debt averse' as is suggested in some literature. This view is not borne out by research data that show there is little difference in loan take-up rates between social classes once enrolled in higher education.

In research carried out for the Department for Education and Employment in Great Britain, Callender and Kemp (2000) found that levels of borrowing, rather than borrowing per se, were associated with a student's social class. Those eligible for the highest level of means-tested non-repayable government maintenance grants, that is, students from low income households, had the highest levels of borrowing. This is a not unexpected finding given their likely familial financial resources. Debt aversion was found among all students, but most frequently among students enrolled for short courses (less than one year), students living at home with their parents, and Asian students (Callender and Kemp 2000: 79). A report commissioned by the New Zealand Parliament, referring to another British research report (Connor and Dewson 2001), goes so far as to conclude that:

although the research literature alludes frequently to incurring debt as a negative factor in decisions to participate, there is little research to suggest that this actually relates specifically to lower social class groups (Connor & Dewson, 2001, p.15). Debt aversion as an explanation for lower rates of participation would appear to be somewhat out of date (Education and Science Committee of the New Zealand Parliament 2001: 57).

In addition to some students being debt averse, however, the New Zealand Committee's report states that students are effectively deterred by the up-front costs of higher education, both in terms of tuition and living costs. If this is the case, the availability of student loans to fund higher education will not have the effect of encouraging enrolment from low income students. The obstacle for these students to overcome in order to enrol is the cost of tuition and/or living expenses, not merely the prospect of incurring debt (Education and Science Committee of the New Zealand Parliament 2001: 15).

Whether such a subtle conclusion is justified cannot be answered here. More research into student choice and student attitude towards debt is needed. Recent research from the UK (Callender 2003) does indeed provide evidence that those most likely to be deterred by the financial disadvantages of student loans were from the lowest social classes, and especially students from the lowest social classes expressed concerns about borrowing, debt and repayments. However, Connor and Dewson (2001) show that concerns about the ability to afford the cost of study are only one issue in a range of factors that discourages students from entering higher education. The other factors are (1) the uncertainty about the future benefits of higher education; (2) not having enough information about the costs of higher education and the student support system; and (3) uncertainty about the likelihood of being able to earn income during term-time. What this list of issues points to is a stronger and more concerted effort by all parties concerned to communicate more effectively about the present and future costs and benefits of higher education programmes. Financial instruments are only one type of policy instrument to strengthen student choice and access to higher education. 'Educating' individuals with regard to the benefits of higher education, correcting their attitudes towards borrowing, and giving them information to prevent them from overestimating their debt burden would have to go hand-in-hand with the use of grants and loans to encourage access.

#### 7. STUDENT-CENTRED FUNDING

Strengthening consumer demand can also take place by means of introducing a demand-driven funding system for the public funding of higher education institutions. The institutions' budget would then be tied to the number of students they manage to attract. Shifting financial resources from institutions to students, for instance by means of a voucher system, would give more financial power to students and strengthen their position vis-à-vis the providers of education. The advantages of demand-driven funding are believed to be the increased responsiveness of education providers to their clients. However, there are also some risks attached to it. This section briefly discusses the advantages and disadvantages of demand-driven funding.

Increasing client orientation in higher education is based on the belief that publicly financed and heavily regulated systems such as higher education are naturally inefficient because students cannot effectively influence how the providers of higher education serve them. An important means by which students can make their demands heard is their exit strategy. By withdrawing from the higher education system or the higher education institution, or in other words by voting with their feet, students send out signals to providers about their preferences. However, it has to be acknowledged that, once students make their choice for a particular programme or institution they often will find it costly to revise that decision. Strengthening consumer choice nevertheless calls for a change from a supply-driven provision towards a demand-driven provision of higher education, implying that the customer is setting 'things in motion'. Presently, the funding of higher education in many countries takes place by means of allocating grants to higher education providers. A funding model that is based on individual learning accounts or that allocates a restricted number of vouchers to students would place more emphasis on the demand side. Demand-driven funding is based on the idea that consumer sovereignty is more useful than producer sovereignty. Consumer sovereignty, however, presupposes that consumers (students) have access to reliable information and they can understand this information. Clearly, there is a role for government here, not only through contributing to the funding of higher education and other training (lifelong learning) options, but also by regulating the degree of competition, promoting access, assuring quality and removing barriers to learning for people in disadvantaged situations. This connects closely to the topics discussed in the previous sections of this chapter.

For higher education policy a demand-driven funding model could mean that the funding of higher education is based on a voucher model (Jongbloed and Koelman 2000). Students (or prospective students) would receive a bundle of vouchers (or entitlements) from the government to buy educational services from higher education providers. Instead of the government allocating subsidies directly to the providers of education, the government would channel the subsidies through the students. To secure their funding, higher education providers therefore will have to compete for students and consequently it is believed they will shift their focus from satisfying government bureaucrats towards the needs of their customers. Thus, a voucher scheme contains incentives to strengthen student choice and competition.

The list of potential advantages and disadvantages of vouchers provided in table 1 is based on the extensive academic literature on vouchers and provides an overview of the main arguments that have been put forward.

Most of the evidence for the effects of vouchers originates from the US and refers especially to the compulsory education sector. When considering vouchers as a means of financing *higher education*, one has to be aware that different arguments apply to higher education compared to compulsory education. In compulsory education the rationale for vouchers would be to increase freedom of choice, by enabling parents to use the vouchers to obtain education for their children from a wider range of public and (recognised) private educational providers. For higher education the all-important goal is not so much increasing the freedom of choice. The challenge for higher education is to facilitate and increase the possibilities for

students to design and plan their own, custom-made programmes. This would be much less relevant in primary education, where programmes are much more prestructured and the possibility to switch schools is less acceptable for pupils. Especially in today's knowledge-based economy, higher education no longer is the last stage in a period of schooling, as specialised knowledge quickly becomes outdated. There is a growing need for lifelong learning and differentiation in education and training. Therefore, custom-built training programmes, flexible learning routes and part-time (or cooperative) training will have to be facilitated. Due to the different character of postsecondary education compared to compulsory education, more possibilities exist to let students put together their programmes in a kind of 'shopping mall' fashion. The policy goal of strengthening choice and consumer sovereignty therefore can be regarded as more relevant for post-compulsory education than for compulsory education.

Table 1. Advantages and disadvantages of vouchers

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

Source: Jongbloed and Koelman 2000: 28

Indeed, vouchers potentially would be a worthwhile way of financing higher education because they would enable students to make their own choices with respect to educational provider, programme and mode of study. However, there is hardly any practical evidence of vouchers being used in higher education<sup>11</sup> although

recent policy initiatives in Australia and the Netherlands have shown that governments are considering the introduction of learning entitlements.<sup>12</sup> For the most part, however, one has to rely on theoretical arguments when proposing to introduce vouchers. Further, as is the case in compulsory (or primary) education, it is good to clearly state the goals one has in mind when suggesting changes to the funding system. If the aim is to have institutions compete for students, one has to bear in mind that vouchers are not the only approach to competition and – because different voucher models exist - vouchers would be accompanied by different degrees of government regulation. Barr (1998) concludes that it is a huge mistake to think that a simple-minded voucher model (higher education institutions compete for students; those who attract large numbers flourish, those who fail to attract enough students do not survive) is the only approach to competition. He argues that "youchers should be thought of as a continuum, from 0 per cent constrained ('law of the jungle') to 100 per cent constrained ('pure central planning') or anywhere in between" (1998: 352). Policy makers should consider a variety of constraints in choosing their position on this continuum:

- Protecting *subjects*. Some courses (e.g. classics) need special protection, others need less protection. This can be arranged by tying some vouchers to specific subjects.
- Protecting *institutions*. For reasons of regional balance it could be necessary to tie vouchers to universities in particular parts of the country.
- Protecting *individuals*. There are good reasons to offer larger vouchers to students from low income families.
- Protecting *quality*. One of the best arguments in favour of competition is that competition creates a strong incentive for higher education institutions to offer quality to their students. Nevertheless, at the same time, it is important to protect standards, for example, by monitoring quality and publishing the results.

A large part of the regulation in these areas, however, would also be present if the funding of higher education took place in the traditional way, which is through directly allocating grants to providers. Nevertheless Barr (1998) concludes that vouchers allow governmental intervention to foster both educational and distributional objectives. The degree of competition is a political matter with different possible policy answers.

To end this section we conclude that demand-driven funding implies that institutions face a lower level of stability in their resources. While advantages are found in the degree of responsiveness to students this implies that at the same time institutions may be tempted to follow a very commercial, business-like strategy that neglects the social and cultural effects of students' and providers' choices.

## 8. WIDENING THE RANGE OF CHOICES

Access to higher education first and foremost is determined by the requirements students have to fulfil in terms of prior education (i.e. level and subjects studied). On top of that, the providers of higher education can set other conditions for entry – some select their students on the basis of grade point average or entrance examinations. Government regulation determines whether public institutions are allowed to select their students. Entrance restrictions may also come in the shape of a given quantity of available student places determined by government. Such capacity restrictions often exist for high cost programmes like medicine and performing arts. Other cases where such a 'numerus clausus' exists may be found in programmes where the government feels the future labour market can absorb only a given number of graduates.

The range of choices available to (potential) students is also an important factor determining consumer choice and access to higher education. For qualified individuals, the freedom to choose may be restricted for several reasons. Kaiser and De Weert (1994) distinguish the following types of policy-related restrictions that affect access to higher education:

- 1. entry restrictions (for students *and* providers of higher education);
- 2. structural reforms (in higher education *and* secondary education);
- incentives (financial incentives: student support and funding mechanisms).

Examples of the first type of regulation are *numerus clausus*, the setting of quota, and selection of students. These are restrictions on entry that are the outcome of government planning and centralised (as opposed to market-type) steering approaches. In countries like Australia and the UK, governments (or funding councils) are making funds available for institutions to maintain a given capacity in terms of student places. Sometimes the capacity is justified by referring to labour market needs. Institutions, on their part, select qualified candidates for the available places on the basis of selection criteria like grade point average, SAT scores or entrance examinations. Weighted lotteries are in place in the Netherlands to ration the available supply of student places for programmes like medicine and dentistry.

Structural reforms in the education system may take place either inside or outside the higher education sector. Introducing bachelors and masters degrees, or abolishing a binary divide that exists between universities and polytechnics, are examples of the first. Reforming the curriculum of secondary education, for instance to prepare individuals for taking up a higher education programme, is an example of a change taking place outside the higher education sector that affects student choice.

Incorporating financial incentives in the higher education system is a means of restricting or encouraging a particular type of behaviour on the part of higher education providers or students. This instrument is related to the topic discussed in the previous section (on funding mechanisms) and the topic of student support (section 6).

Both the first and second types of instruments lead to the question of whether government or the provider of higher education is better informed than students about the future needs of the labour market and how these would have to be translated into fixed capacities or (school and college) curricula. However, governments will try to prevent an excess or a shortage of graduates not just because of its labour market projections (which may be incorrect – as we all know, manpower planning exercises have a bad reputation), but also because it feels that public funds will have to be allocated efficiently. The justification for funding a fixed capacity or, alternatively, funding on the basis of student demand will often depend on political trade-offs and ideologies (e.g. belief in the market).

Connected to the latter argument is the goal of encouraging competition between providers in order to strengthen student choice. Injecting market forces into higher education by allowing more institutions to enter the higher education market would enlarge the choice set for students. An example of such a policy is establishing a level playing field, on which all accredited (or recognised) providers face the same conditions for providing degree programmes and enjoy equal conditions and opportunities to receive public funding. This would stimulate competition. In higher education, the supply of accredited educational programmes is characterised by extensive government intervention. The government subsidises institutions for (some of) their educational programmes, and regulates entry of institutions to the sector and behaviour of the institutions in the market (e.g. through accreditation of educational programmes). This intervention may be justified by market failures, but it also may lead to problems.

The obvious effect of restricting entry is that students would only have a limited choice between programmes — in terms of programmes with different duration, combination of working-learning or educational methods. Such a monopolistic situation limits the freedom of choice for students. Moreover, it provides higher education institutions with weak incentives to attract students, and thus to provide high quality at low prices. Stronger competition may improve the incentives for institutions to differentiate and to reveal information about the differences between programmes. On the other hand, stronger competition has some potential downsides as well. These are primarily due to the special characteristics of education. For example, the quality of education may be hard to observe by students and competition may increase the incentives to abuse this lack of knowledge. This takes us back to the availability of reliable information to enhance the transparency in the market and to enlarge the possibility for students to make their choices partly dependent on the observed differences between institutions (section 4).

The choice set of students may also be enhanced by extending the possibilities for students to attend single courses at other institutions. This may enhance the possibilities of new entrants in an educational market to attract students, and fasten the pace of innovation in the market as well as the pace at which information about new educational providers becomes available. Connected to this issue, the portability of student support is a subject that needs to be addressed when student mobility and flexible learning pathways are a policy goal. Along the same lines, a more equal playing field may be established by changing institutional funding mechanisms towards a student-driven funding system. We have already discussed

this option in the previous section. If part of the budget for institute funding is transferred to *vouchers*, targeted at students who currently enrol in publicly funded institutions, the discrimination between publicly funded and non-funded institutions would be diminished. Vouchers would then be allowed to be spent at either publicly funded or recognised private institutions.

Finally, one has to acknowledge that extending the study opportunities for students and encouraging more competition between providers do not start from a 'green fields' situation. If a more level playing field is created, the actual situation in the education market will hardly be characterised by equal conditions for all providers. Some providers have received government funding for decades and have built up a strong reputation and sound financial base, whereas new providers face high start-up costs and start from scratch. This probably calls for a careful monitoring of the effects of widening the choices for students and opening up the higher education market to new providers.

## 9. CONCLUDING OBSERVATIONS

While there are a number of ways and means available to policy makers to enhance consumer sovereignty, a lot is not known about the effectiveness of the instruments for strengthening consumer orientation in higher education. This does not prevent us from making a number of concluding observations in this section.<sup>13</sup>

Regarding the role of government we have to say that while governments would like to see students making well-informed – purely rational – choices, there is evidence that leads us to believe that students in their study choice decisions hardly make use of labour market information. Often, they will make a choice that can only be understood as being 'subjectively rational' or 'rational in retrospect'. This implies that the government will have to take this into consideration when trying to influence student choice. The government thus will have to create the conditions that allow students to make their own individual decisions, supplying potential students with information on various aspects of educational programmes, programme quality and available career options. That information will need to be provided in a way that appeals to students in the sense that students will be able to connect it to their own situation and preference. Here, the Internet would seem to be an ideal medium, allowing an interactive communication between an individual and a database that can be searched on the basis of user-defined profiles.

Rankings that show the relative position of an institution in terms of quality and available facilities would seem to be a useful instrument here. However, there is not a lot of evidence showing that students make use of rankings and league tables in their study choices. Making the rankings multidimensional might increase their value for users. Education has a multitude of aspects that relate to quality – some of them may be part of the student's preference ordering.

However, more importantly, governments may try to encourage secondary education institutions to pay attention (either in the curriculum, or the student guidance/counselling service) to the importance of critical thinking and defining one's own preferences and ambitions. Reflecting on study and career choices

nowadays is an ingredient of the programme in many a secondary school – not just in the year of graduation. Students will need to have the capacity to deal with the overload of information in society. This calls for government policy, not just in the area of information provision and student guidance, but also in the area of the curriculum and choice of subjects offered to students in secondary education.

If the evidence of students making 'less than optimal choices' is strong – and the number of students switching programmes, dropping out or taking a long time to graduate certainly point in that direction – then there may also be a reason to make adjustments to the curriculum in higher education. A possibility worth considering might be to 'broaden' undergraduate (bachelors) programmes. This amounts to offering students in a particular programme the possibility of studying topics that are not confined to narrow specialisations within a given discipline, to give them a taste of the broad spectrum of options within (or perhaps even across) disciplinary boundaries. At first glance, this policy implies a restriction of the choice options available to students. However, later on in their educational career, students would be better informed about follow-up programmes and about their own capabilities and interests.

Yet another option is to differentiate the length of the programme. This again gives students the opportunity to make up their minds as they go – taking up further study and striving for additional diplomas if they wish to do so, or giving them the possibility to enter the labour market. An issue that needs attention is the status of the various types of certificates students receive and how these are perceived in the labour market.

Offering a broader range of study modes would also create more options for students, for instance offering them the possibility to combine working and learning (the dual learning mode). This would also give 'under-informed' students a less risky taste of higher education. Governments can encourage the provision of such programmes by means of regulation (accreditation) and financial incentives (funding, student support).

Student support is another instrument that affects student choice. The income position of students (or their parents) clearly translates into the range of choices available to them and how they perceive the (financial) risks of going to college. The level, targeting and form of student support all affect student choice. The debt students build up if they take out a loan combined with the mechanism in place for repaying that debt are known to be important factors in the study choices made by students, with different effects for the different socio-economic groups in society.

On the topic of the introduction of demand-driven financing mechanisms to strengthen student choice we concluded that voucher funding is attractive from a theoretical point of view, but needs to be accompanied by a great deal of regulation if it is to be put into practice. Funding models where students receive learning entitlements or vouchers provide incentives for students to make good decisions. However, other forms of funding, with student demand – instead of governmental capacity planning – driving the budgets of institutions might be considered as well.

Institutional budgets consist not just of public resources but also of private, feebased income. And there are strong arguments that can be brought forward for introducing fees. Introducing fees in combination with a demand-driven system of funding creates a market system. Universities decide on fees and the number of places offered and students make trade-offs on the basis of information about costs (fees, foregone income) and benefits (educational experience, programme quality, future income, employment opportunities). A system like this relies only on a minimal degree of government intervention. The government decides on public funding (either per student place or for the system in total), but leaves total funding to the market (Barr 1998).

Mentioning markets immediately forces us to look at the role of government in monitoring the outcomes of the market. In the previous section attention was paid to the issue of 'regulated competition' and level playing fields. If the choice set of students is to be broadened and institutions need to be responsive to student demand, there are arguments to allow more providers to enter the education market. The role of government would be to regulate the degree of competition (e.g. through cartel agencies), guard quality and transparency (e.g. through accreditation) and facilitate information provision (e.g. through accessible web-based information) – using the motto 'competition where possible, regulation where necessary'.

All in all, several policy options for increasing choice and consumer sovereignty are available. This chapter has merely given an overview. Other chapters in this volume will shed some light on their relevance and effectiveness in a number of national higher education systems.

#### NOTES

- 1 See Gayle, Berridge and Davies (2003) for a recent overview of studies into the determinants of demand for higher education.
- 2 If that were the case then one must question why an economics student would want to pay in excess of \$30,000 per year at Harvard University in the US so that he/she could enrol in a 700-student class on 'introductory economics'. In fact, Harvard social sciences departments are known to have one of the highest average class sizes among the elite private universities in the US.
- 3 A degree of quality recognition is already present in regulations that require recognised higher education providers meet, as well as maintain, government-set regulations on who is entitled to legitimately grant academic degrees.
- 4 Although critics of fees put forward that in the presence of (substantial) fees, student choices will be increasingly driven by financial motives at the expense of intrinsic motivation.
- 5 Of course, we know that there is no such thing as a free lunch. Somebody eventually will have to pick up the bill.
- The alternative, a fully privatised higher education sector, implies that society places no value at all on the externalities generated by the sector. This position would be difficult to justify also.
- 7 The chapter by Chapman in this volume also discusses in brief the HECS system.
- 8 Masters by research students and PhD students are not part of the HECS regime and fall under the research funding system. Foreign (i.e. overseas) students have to pay a cost-covering fee.
- 9 Please note that it is not the loan that is income contingent, but the repayment. This makes the system resemble a *graduate tax* system. However, the name graduate tax is not correct. In fact, HECS is a system of fees and loans with income contingent repayments.
- 10 See the contribution by Chapman in this volume.
- 11 The exceptions being the GI Bill in the US and a facility that for some time existed in the UK for the field of vocational education and training.
- 12 We will have to wait and see what the true rationale for introducing learning entitlements will be:
  (1) a means of allowing more flexibility in a student's educational careers; or (2) a way of limiting the public funds invested in a student's training by putting a cap on the value and use of the individual entitlements.
- 13 Much of this section is based on Jongbloed et al. (2004).

#### REFERENCES

- Andrews, L. Does HECS Deter? Factors Affecting University Participation by Low SES Groups. Canberra: Department of Employment, Education, Training and Youth Affairs, 1999.
- Barr, N. The Economics of the Welfare State. 3rd edn. Oxford: Oxford University Press, 1998.
- Becker, G.S. *The Economic Approach to Human Behavior*. Chicago: The University of Chicago Press, 1976.
- Blöndal, S., S. Field and N. Girouard. "Investment in Human Capital Through Post-Compulsory Education and Training: Selected Efficiency and Equity Aspects." OECD Economics Department Working Paper No. 333. Paris: OECD, 2002.
- Breneman, D.W. Liberal Arts Colleges: Thriving, Surviving, or Endangered. Washington DC: The Brookings Institution, 1994.
- Bronneman-Helmers, H.M. and B. Kuhry. *Maatschappelijke ontwikkelingen en deelname aan het hoger onderwijs*. Rijswijk: Social Cultural Planning Bureau (SCP), 1996.
- Callender, C. Attitudes To Debt. School Leavers and Further Education Students' Attitudes to Debt and Their Impact on Participation in Higher Education. London: Universities UK, 2003.
- Callender, C. and M. Kemp. Changing Student Finances: Income, Expenditure and the Take-up of Student Loans Among Full- and Part-time Higher Education Students in 1998/9. Research Report No. RR213. London: Department for Education and Employment, 2000.
- Campaigne, D.A. and D. Hossler. "How do Loans Affect the Educational Decisions of Students? Access, Aspirations, College Choice and Persistence." In Fossey, R. and M. Bateman (eds). Condemning Students to Debt, College Loans and Public Policy. New York: Teachers College Press, 1998, 85–104.
- Canton, E. and F. de Jong. "The Demand for Higher Education in the Netherlands, 1950–99." CPB Discussion Paper 12. The Hague: CPB Netherlands Bureau for Economic Policy Analysis, 2002.
- Chapman, B. "Conceptual Issues and the Australian Experience with Income Contingent Charges for Higher Education." *Economic Journal* 107 (1997): 738–751.
- Chapman, B. and C. Ryan. "Income Contingent Financing of Student Charges for Higher Education: Assessing the Australian Innovation." Centre for Economic Policy Analysis Discussion Paper No. 449. Canberra: Australian National University, 2002.
- Chapman, B. and T. Salvage. "Changes in Costs for Australian Higher Education Students From the 1996/1997 Budget." In Sharpham, J. and G. Harman (eds). *Australia's Future Universities*. Armidale, NSW: University of New England Press, 1997, 49–74.
- Connor, H. and S. Dewson. Social Class and Higher Education: Issues Affecting Decisions on Participation by Lower Social Class Groups. Research Report No. RR267. Annesley, Nottingham: Department for Education and Employment, 2001.
- CPB and CHEPS. Higher Education Reform: Getting the Incentives Right. The Hague: SDU, 2001, http://www.cpb.nl/nl/pub/bijzonder/29/.
- De Jong, U., H. Oosterbeek, J. Roeleveld, C.N. Teulings and H.D. Webbink. Wel of Niet Verder Studeren? Beleidsgerichte Studies Hoger Onderwijs en Wetenschappelijk Onderzoek No. 26. Zoetermeer: Ministry of Education, Culture and Science, 1990.
- Duffy, E.A. and I. Goldberg. Crafting a Class: College Admissions and Financial Aid, 1955–1994. Princeton: Princeton University Press, 1998.
- Education and Science Committee of the New Zealand Parliament. *Inquiry into Student Fees, Loans, Allowances and the Overall Resourcing of Tertiary Education*. Wellington: House of Representatives, 2001, http://www.clerk.parliament.govt.nz/content/28/i2c.pdf.
- Felsö, F., M. van Leeuwen and M. Zijl. Verkenning van Stimulansen voor het Keuzegedrag van Leerlingen en Studenten. SEO Report No. 545. Amsterdam: Stichting voor Economisch Onderzoek, 2000.
- Finnie, R. "Student Financial Aid: The Whys, Whens and Hows of Loans and Grants." Working Paper. Kingston, ON: Queen's University, 2004, http://www.utoronto.ca/president/04conference/downloads/Finnie.pdf.
- Gayle, V., D. Berridge and R.B. Davies. Econometric Analysis of the Demand for Higher Education. Research Report No. 472. London: Department for Education and Skills, 2003.
- Gladieux, L.E. and A.M. Hauptman. *The College Aid Quandary: Access, Quality, and the Federal Role.* Washington, DC: The Brookings Institution, 1995.

- Hanson, K. and L. Litten. "Mapping the Road to Academia: A Review of Research on Women, Men, and the College Selection Process." *Review of Higher Education* 19 (1982): 179–198.
- Heller, D.E. "Student Price Response in Higher Education: An Update to Leslie and Brinkman." *Journal of Higher Education* 68.6 (1997): 624–659.
- Hossler, D., J. Schmit and N. Vesper. *Going to College, How Social, Economic and Educational Factors Influence the Decisions Students Make*. Baltimore: The Johns Hopkins University Press, 1999.
- Huijsman, R., T. Kloek, D.A. Kodde and J.M.M. Ritzen. "An Empirical Analysis of College Enrollment in the Netherlands." *Economist* 134.2 (1986): 181–190.
- Jacobs, B. "An Investigation of Education Finance Reform: Graduate Taxes and Income Contingent Loans in the Netherlands." CPB Discussion Paper No. 9. The Hague: CPB Netherlands Bureau for Economic Policy Analysis, 2002.
- Johnstone, D. Bruce. "Tuition fees." In Torsten, Husén, Neville Postlethwaite, Burton R. Clark and Guy Neave (eds). The Complete Encyclopedia of Education (CD-ROM). Oxford: Elsevier Science Ltd, 1998.
- Jongbloed, B. "Marketisation in Higher Education, Clark's Triangle and the Essential Ingredients of Markets." Higher Education Quarterly 57.2 (2003): 110–135.
- Jongbloed, B. "Tuition Fees in Europe and Australasia: Theory, Trends and Policies. In Smart, J.C. (ed.). Higher Education: Handbook of Theory and Research, vol. XIX. Dordrecht: Kluwer, 2004, 241–309.
- Jongbloed, B., F. Kaiser, C. Salerno and E. de Weert. Een Helpende Hand in Studiekeuze Land. Studiekeuze informatie producten vergeleken in enkele Westerse hoger onderwijssystemen. Beleidsgerichte Studies Hoger Onderwijs en Wetenschappelijk Onderzoek vol. 109, Ministry of Education. The Hague: DeltaHage by, 2004.
- Jongbloed, B. and J. Koelman. Vouchers for Higher Education? A Survey of the Literature. Enschede: CHEPS, 2000.
- Kaiser, F. and E. de Weert. "Access Policies and Mass Higher Education, A Comparative Analysis of the Use of Policy Instruments in Seven Countries." In Goedegebuure, L. and F. van Vught (eds). Comparative Policy Studies in Higher Education. Utrecht: Lemma, 1994, 165–195.
- Kane, T.J. "Rising Public College Tuition and College Entry: How Well do Public Subsidies Promote Access to College?" NBER Working Paper 5164. Cambridge, MA: National Bureau of Economic Research, July, 1995.
- Kodde, D.A. and J.M.M. Ritzen. "Integrating Investment and Consumption Motives in a Neoclassical Model of Demand for Education." *Kyklos* 37 (1984): 598–608.
- Leslie, L.L. and P.T. Brinkman. "Student Price Response in Higher Education." Journal of Higher Education 58.2 (1987): 181–204.
- Manski, C.F. and D.A. Wise. *College Choice in America*. Cambridge, MA: Harvard University Press, 1983.
- McPherson, M.S. and M.O. Schapiro. "Does Student Aid Affect College Enrolment? New Evidence on a Persistent Controversy." *American Economic Review* 81.1 (1991): 309–318.
- McPherson, M.S. and M.O. Schapiro. "Demand for American Higher Education: Prices, College Attendance, and Federal Policy." In Miller, P.W. and J.J. Pincus (eds). *Funding Higher Education: Performance and Diversity*. Canberra: Department of Employment, Education, Training and Youth Affairs, 1997, 13–23.
- McPherson, M.S. and M.O. Schapiro. *The Student Aid Game, Meeting Need and Rewarding Talent in American Higher Education*. Princeton: Princeton University Press, 1998.
- McPherson, M.S. and M.O. Schapiro. "Financing Lifelong Learning: Trends and Patterns of Participation and Financing in US Higher Education." *Higher Education Management* 12.2 (2000): 131–156.
- Meijers, F. *Arbeidsidentiteit: studie- en beroepskeuze in de post-industriele samenleving.* Alphen aan de Rijn: Samson H.D. Tjeenk Willink, 1995.
- Menon, M.E. "Information Search as an Indication of Rationality in Student Choice of Higher Education." *Education Economics* 12.3 (2004): 267–283.
- Moore, R., A. Studenmund and T. Slobko. "The Effect of the Financial Aid Package on the Choice of a Selective College." *Economics of Education Review* 10.4 (1991): 311–321.
- Oosterbeek, H. and D. Webbink. "Enrollment in Higher Education in the Netherlands." *Economist* 143.3 (1995): 367–380.
- Shea, J. "Does Parents' Money Matter?" Journal of Public Economics 77 (2000): 155-184.
- Simon, H.A. "Rationality as a Process and as a Product of Thought." *American Economic Review* 68 (1978): 1–16.

- Teixeira, P., B. Jongbloed, D. Dill and A. Amaral (eds). *Markets in Higher Education: Rhetoric or Reality?* Dordrecht: Kluwer, 2004.
- Van der Klaauw, W. "Estimating the Effect of Financial Aid Offers on College Enrollment: A Regression–Discontinuity Approach." *International Economic Review* 43.4 (2002): 1249–1288. Vossensteyn, Hans. *Portability of Student Financial Support. An Inventory in 23 European Countries. Main*
- Vossensteyn, Hans. Portability of Student Financial Support. An Inventory in 23 European Countries. Main Report. Beleidsgerichte Studies Hoger Onderwijs en Wetenschappelijk Onderzoek vol. 106. The Hague: DeltaHage by, 2004.
- Vossensteyn, Hans and E. Canton. "Tuition Fees and Accessibility: The Australian HECS." In CPB and CHEPS. *Higher Education Reform: Getting the Incentives Right.* The Hague: SDU, 2001, 53–66.