Higher education finance:
Lessons from international experience

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Contents

Executive summary

1. This paper sets out key issues and questions for Hungarian policy makers in making choices about the design of a student loan scheme within the broader context of a reformed system of higher education finance.

2. The opening section considers a range of objectives. Section 2 discusses key lessons from economic analysis and section 3 the lessons from international experience. Section 4 considers the overall lessons – for policy, for principles of policy design and for sequencing. The concluding section lists the central questions, broadly in the order in which they need to be answered.

3. The emphasis of the paper is deliberate. First, it focusses on questions rather than on giving specific answers. Second, its coverage is broader than the design of student loans, since it is desirable if choices about loan design are made within the broader context of higher education finance and with some idea of the longer-term shape of the system. For example, the design of student loans will be very different if it is contemplated that students – now or in the future – will have to pay tuition fees, and on whether or not those fees are (or might be) different at different universities. A third aspect of the paper is to be selective – about the countries discussed (the USA, the UK, the Netherlands, Sweden, Australia and New Zealand), and about the details of their systems. The intention is to give only as much detail as is needed to show the patterns.

4. The paper begins by posing a central debate between two competing views of higher education. Under the 'Anglo-American' approach, governments take the view that institutions are – and should be – heterogeneous, and therefore actively encourage diversity of institutions and explicit quality comparisons between them. Under the 'Scandinavian model', also found in other European countries, governments view institutions as homogeneous, and therefore regard all programmes as equal.

5. The paper argues that the latter approach, while historically (at least as a polite myth) the dominant model in most countries, is no longer sustainable. The key arguments can be summarised as follows:

6. *On loans*. Technological advance creates a strong case for mass tertiary education (a view now explicitly espoused by the OECD). But a mass system is too expensive to be financed entirely by the taxpayer. Thus public funds need to be supplemented by private funds. The only way to bring in private funds on the scale necessary and in an equitable way is through a system of student loans. However, and critically, loans must be properly designed. Provided institutional capacity permits, there are major advantages if loans have income-contingent repayments, i.e. repayments which take the form of *x*% of the student's subsequent earnings, collected as a payroll deduction alongside income tax or social security contributions.

7. *On market forces.* Central planning was possible for a small system. But mass tertiary education is too complex for central planning. Since it can be argued that students, employers and universities are well-informed (or, at a minimum, less badly-informed than central planners), consumer and producer choice – and hence market forces – are useful. The paper notes that the same line of argument does *not* support market forces for school education. For higher education, however, a system designed round market forces will be more responsive to changing conditions. Such a system can also be highly progressive, since market-determined tuition fees, supported by income-contingent loans, redistribute from today's middle-class (who lose some of their tuition fee subsidies) to tomorrow's least well-off (who do not repay their loans in full).

8. *The role of government* in tertiary education is not as provider. Instead government continues to contribute to funding, takes proactive measures to promote access, influences the degree of competition, and acts to ensure that quality is protected..

9. *Key questions*. The first question is 'why loans now?', when there are so many poor Hungarians (a question answered in section 5). Depending on the answer, other questions follow. What type of loan (with conventional repayments or with income-contingent repayments)? Loans for what (living costs, tuition fees, or both)? What size of loan? What regime for tuition fees (should there be tuition fees, should they be the same for all universities, should fees be set by government or by each university)? How can student loans be designed so as to bring in private money?

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1. This paper starts (section 1) with a discussion of objectives. Section 2 discusses key lessons from economic analysis and section 3 some lessons from international experience. Section 4 draws together earlier discussion by considering some overall lessons. Section 5 poses key questions for Hungarian policy makers, where possible listing them in the order in which decisions need to be taken.

2. The paper is not intended to give answers (which would be presumptuous), but to set out the issues, and to offer policy makers an analytical toolkit. Where opinions are included, they relate to countries like the UK, which I know well enough to offer an informed view. The paper makes no recommendations about Hungary, but instead lists the key questions – about which it is possible to be fairly definite.

3. The coverage of the paper is broader than the design of student loans. This is deliberate: it is highly desirable if student loans are not designed in isolation but in the context of higher education finance more broadly. Coverage is broad, second, through discussion of options with a longer-time horizon, inviting policy makers to design short-run policy in the context of the sort of system of higher education they contemplate in 25 years time. The extended coverage of lessons from economic analysis in section 2 is essential to providing this broader context.

4. In other respects, however, the coverage of the paper is limited. It is selective, first, about country coverage, restricting discussion to a number of OECD countries, specifically, the USA, Britain, the Netherlands, Sweden, Australia and New Zealand (for compendious international discussion, see Woodhall, 1990). Second, it is selective on detail, discussing only those aspects

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* This paper draws on collaboration with Iain Crawford on UK higher education finance since the late 1980s. I have also enjoyed many discussions over the years with Mark Blaug, Bruce Chapman, and Colin Ward, and with ministers, officials and members of public inquiries in the UK, Australia and New Zealand. I am grateful to Ben Jongbloed and Stefan Amér for help with sections 3.3 and 3.4, respectively Separately, I have been educated during two spells at the World Bank about the central importance of implementation.

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which directly concern the *finance* of higher education. Third, even that latter task is not covered completely, since key questions remain unanswered. The evidence of the impact of student loans on access is patchy, not least because a complete answer requires longitudinal data – a research methodology which is still in its early stages outside the USA. On that topic, however, there is at least indicative evidence. Other central questions, however, are unanswerable: as discussed in section 2.1, measurement problems rule out any scientific quantification of the optimal size of the higher education sector; for similar reasons (section 2.2), there is no definitive answer to quantifying the efficient level of public subsidy for higher education.

5. Two themes – a debate and a message – resonate throughout the paper. The central debate (see, for example, OECD, 1997*a*) is between two competing stylised models of higher education:

- Under the 'Anglo-American' system governments act on the assumption that institutions are, and should be, heterogeneous, and therefore encourage diversity of institutions, various forms of provision, and quality comparisons between them.

- Under the 'Scandinavian model', also found in other European countries, government acts on the assumption that institutions are homogeneous, and therefore treats institutions equally and regards all programmes as equal.

This paper argues that the second model, whatever its merits, is incompatible with a mass system of higher education; and that mass higher education is essential in today's world. The fact that the debate between the two models is ongoing should make it clear to readers that these issues remain controversial.

6. The central message is that successful reform rests on three ingredients:

- good strategic policy design;
- effective administration;
- a capacity to generate *continuing* political support for the reform.

In many ways the first of these is the easiest; the difficult part is implementation, both administrative and political.

1 Objectives

7. It is important to establish objectives first, and then to work out how best to achieve them. Policy often founders because it ignores this simple lesson ('Any wind is fair if you do not know the harbour' (Seneca)).

8. Ten years ago (Barr, 1989), colleagues and I argued that the objectives for UK higher education should be (a) improved access, and (b) expansion, the latter both for efficiency reasons and because, at least in a British context, expansion was a prerequisite for improved access. As discussed in section 3.2, the UK higher education system expanded rapidly over the 1990s, but with no parallel increase in funding, creating downward pressure on quality. Today, therefore, the objectives should be (a) continued improvement in access and (b) improved quality. To achieve the latter, (c) additional funding is needed.

9. These are not just UK objectives. A recent British inquiry (UK National Committee of Inquiry into Higher Education, 1997*b*, para. 6.8) endorsed the 'international consensus that higher level skills are crucial to future economic competitiveness', and went on to quote an OECD (1997*b*) study:

> 'The direction is universal participation: 100 per cent participation with fair and equal opportunities to study; in some form of tertiary education; at some stage in the life cycle and not necessarily end on to secondary education; in a wide variety of structures, forms and types of delivery; undertaken on equal terms either part-time or full-time; publicly-subsidised but with shared client contributions; closely involving partners in the community; serving multiple purposes – educational, social, cultural and economic'.

10. In the Hungarian context, the following appear to be major objectives.

11. *Improved access*, for both efficiency reasons (Hungary cannot afford to waste talent) and equity reasons. There is much confused thinking about equity – particularly in the higher education context – between social elitism and intellectual elitism. As a value judgement, the first is to be minimised, but the second is beneficial. The equity objective is that access for a gifted young Hungarian to an intellectually elite institution should not be diminished by the fact that he/she comes from a poor family.

12. *Improved efficiency*.

- External efficiency is concerned with *outcomes*, i.e. with producing the types of educational activities which equip individuals — economically, socially, politically and culturally — for the societies in which they live. In the Hungarian context, the objective is to provide a subject mix appropriate for a pluralist market economy.

- Internal efficiency is concerned with *process*, i.e. with ensuring that institutions are run efficiently. In the Hungarian context part of this objective is to have broadly the efficient number of institutions (the integration issue).

13. *Improved quality* relates to another dimension of external efficiency.

14. *Improved capacity to expand*. Notwithstanding the declining number of 18-21-year olds, higher education in Hungary almost certainly needs the capacity to expand, to address backlogs and to assist the enormous change in the desired skills mix resulting from transition. The issue is discussed more fully in section 2.1.

15. *Political sustainability* is essential. This will be forthcoming only if student loan proposals emerge from *Hungarian* discussion; and only if Hungarian politicians are prepared to campaign for the new proposals, to convince the electorate that reformed funding, if properly implemented, assists both growth and access.

16. *Administrative sustainability* is equally critical. Giving out student loans is relatively easy. Collecting repayments is much harder. Any loan scheme needs to be capable (a) of collecting repayments and (b) of doing so in a way which does not crowd out scarce administrative resources from other uses.

2 Lessons from economic analysis

17. This section contains extended discussion of the lessons from economic analysis. This approach is necessary, first, to make it clear that the lessons from international experience discussed in section 3 are no accident but, in many ways, those which the theory predicts. It is necessary also to make it clear (not least to the broader Hungarian population) that the following advocacy of market forces in higher education is based on technical arguments *not* on ideology.

18. Discussion focusses on three questions: how useful are market forces (section 2.1); who should pay (section 2.2); and how should student loans be designed (sections 2.3 and 2.4)?

2.1 Market forces in higher education: Who should make the decisions?

19. In discussing market forces, three questions, discussed in turn, are paramount: are consumers of higher education capable of making good decisions; are universities capable of making good decisions; and who should decide how large the university system should be?

2.1.1 How useful is consumer sovereignty?

20. The key question is whether students are sufficiently well-informed to make efficient choices. Consumer sovereignty is more useful (a) the better is consumer information, (b) the more cheaply and effectively it can be improved, (c) the easier it is for consumers to understand available information, (d) the lower are the costs of choosing badly, and (e) the more diverse are consumer tastes.

21. There are good reasons for optimism in applying these criteria to higher education. First, information is available, and more can be made available. There are already 'good universities guides'; and universities increasingly publish detailed information on the internet. Second, the information, for the most part, is sufficiently simple for the student to understand and evaluate. This process is easier because going to university can be anticipated (contrast finding a doctor to deal with injury after a road accident) so that the student has time to acquire the information she needs, and time to seek advice. Third, though it is true that the costs of mistaken choice can be significant, it is not clear that a central planner would make fewer mistakes; moreover, the move towards modular degrees, allowing students to change subjects and, increasingly, institutions, reduces those costs. It should be noted, fourth, that students make choices already. Though the matter is controversial, it can be argued that the assumption of well-informed (or potentially well-informed) consumers holds for higher education.[1]

22. Finally (item (e), above), consumer tastes are diverse, degrees are becoming more diverse, and change is increasingly rapid, and global. For all these reasons, it can be argued that the assumption of well-informed (or potentially well-informed) consumers holds for higher education. Students are more capable than central planners of making choices which conform with their own needs and those of the economy. In contrast, attempts at manpower planning are even more likely than in the past to be wrong, largely (though not wholly) because of the increasing complexity of industrial and post-industrial society. Given its postwar history, Hungary needs no reminding of this lesson.

23. Note that we get very different answers when we apply the same questions to school education. It is thus completely compatible to oppose excessive reliance on market forces in school education, but to favour them for postcompulsory education and training. This point is parenthetical to the student loans debate narrowly defined, but potentially of considerable significance to gaining widespread political acceptance for the proposals – politicians being able to make it clear to the electorate that a move towards student loans is not the start of a slippery slope towards radical privatisation of the entire education sector.

2.1.2 How useful is producer sovereignty?

24. One aspect — academic freedom — I take as a given. A second aspect — the *economic* freedom of universities — lies at the core of debates in a number of countries. With an elite university system of the sort existing in most countries until relatively recently, it was possible, as a polite myth, to assume that all universities were of equal quality, that degrees were worth the same whichever university conferred them, and hence that universities could, broadly, be funded equally (this is the 'Scandinavian model' described at the start of the paper). With a mass system this myth is no longer sustainable. The characteristics, the quality and the costs of different degrees at different institutions will vary much more widely than hitherto.

25. Not least to protect the quality of internationally competitive institutions, universities need to be differentially funded, taking account both of the institution's costs and the demand for places. In principle this could be done by an all-knowing central planner. The problem, however, is too complex for that to be the *sole* mechanism. A mass system — and *a fortiori* a mass system in an increasingly complex world — needs a funding regime in which institutions can charge differential prices to reflect their differential costs, i.e. the 'Anglo-American' model.

26. The conclusion this suggests is that producer sovereignty is not just *useful*; as higher education expands and the diversity of its activities increases, producer sovereignty becomes *essential* (as discussed below, this does not means unfettered markets).

2.1.3 How large should the system be?

27. Why is mass higher education necessary? Is there an investment argument for expanding higher education, i.e. would expansion increase the rate of economic growth? Second, and separately, should there be expansion for consumption reasons, i.e. would extra resources add sufficiently to the quality of life (for reasons other than output growth) to make expansion efficient? Though these questions are critically important, they are not amenable to the crisp answers, above, about the usefulness of consumer and producer sovereignty.

28. *General arguments.* From the investment viewpoint, several arguments are made for expanding tertiary education. First, international competitive pressures are increasing. To keep up with other countries, it is therefore necessary to increase the productivity of capital and labour; if higher education contributes cost-effectively to increased productivity there is an efficiency case for expansion.

29. A second argument relates to demographic prospects. An ageing population implies, other things being equal, a decline in the workforce. The efficient response to a decline in the number of workers is to increase the ratio of capital to labour. What is needed, therefore, are resources for investment in technology and in human capital, both of which increase output in the future. Expansion of education and training, it can be argued, is therefore necessary precisely *because* of demographic change (for fuller discussion, see Barr, 1998*a*, Ch. 9).

30. A third factor is technological advance, leading to rising demand for skilled people and declining demand for the unskilled. The resulting changes are a shift towards the so-called 'knowledge society'; they also underlie the debate about whether or not there is a growing underclass (see Dahrendorf, 1988, Chs 7 and 8). Though the causal links are complex and controversial, the development of sophisticated technology needs a highly educated population: it is no accident that Silicone Valley (both in California and Massachussetts) arose in an area with many universities. The use of modern technology requires skills; and its rate of change requires individuals with flexible skills which can adapt to changing technology. Separately, the rate of change requires that individuals are retrained periodically – so-called lifelong learning.

31. A fourth argument concerns the relative risks of overinvesting or underinvesting. The high risk of underinvestment in human capital was made over 100 years ago by Alfred Marshall, one of the founding fathers of English economics. He argued that:

> '[T]hey [the children of the working class] go to the grave carrying undeveloped abilities and faculties; which if they could have borne full fruit would have added to the material wealth of the country ... to say nothing of higher considerations ... many times as much as would have covered the expense of providing adequate opportunities for their development.
>
> 'But the point we have especially to insist now is that the evil is cumulative. The worse fed are the children of one generation, the less will they earn when they grow up, and the less will be their power of providing adequately for ... their children; and so on to the following generations' (Marshall, 1961, Book VI, p. 569).

32. Marshall, of course, was writing about school education. But the quote brings out a key point – the high costs of making the wrong investment decisions, given their cumulative impact. The costs of not expanding higher education when we should expand are likely to be much greater than the costs of expansion which turns out not to have been strictly necessary.

33. *Hungary-specific arguments*. The previous arguments underpin the case for mass postcompulsory education in industrialised countries (see the quote from the OECD study in section 1). For at least three reasons, the case for expansion is perhaps even stronger in Hungary than in the richer countries of western Europe, notwithstanding the declining number of 18-21 year olds.

- Expansion is necessary, first, to deal with a backlog of young people who were not able to attend university over the past ten years because of the output decline and fiscal stringency which accompanied the early transition, and given the fact that only now is Hungary returning to its pre-transition level of income (one of only four transition countries yet to have done so).[2]

- Expansion is necessary also to assist in the adjustment of the skills mix in the Hungarian labour force, given the dramatic change in the country's output mix resulting from transition. Hungarians need no reminding of the scale of this change: from goods towards services; from CMEA countries towards western Europe; from goods and services demanded by the central planner towards those demanded by the market.

- The trend to lifelong learning was mentioned earlier. This point accentuates the previous one. Even if Hungary had not inherited a distorted output mix, there would still be a case for expansion of higher education.

34. *Policy implications*. These arguments create a strong presumption for increasing the resources devoted to higher education. Definitive quantification, however, is not possible. As discussed more fully in section 2.2, the overriding problem is that we cannot quantify the effect of higher education on individual productivity because we cannot measure all the relevant variables. The determinants of individual productivity include measurable attributes like sex, race and educational qualifications; they also include vital but unmeasurable factors like natural ability and the influence of family background. Statistical analysis which attempts to quantify the effects of the former without including the latter faces serious technical problems.

35. Thus the case for mass higher education is strong; but it is strong only in presumptive terms. We cannot say how much additional investment there should be in total, nor (the subject of section 2.2) how the costs of that investment should be divided between the individual and the state. This suggests the following stylised facts:

(a) consumers of higher education are generally well-informed;
(b) producers of higher education are generally well-informed;
(c) the optimal size of the higher education sector cannot be quantified in any scientifically valid way.

36. Let us accept (a) and (b), at least in the weak sense that consumers and producers, if not perfectly-informed, will at least be better-informed than central planners (not least because higher education has consumption as well as investment benefits). This suggests that the way to deal with (c) is to divide responsibility into two separate decisions:

- Consumers and producers decide on the size of the sector: students apply to universities; universities decide how many students to accept, and what fees to charge; employers decide which graduates they want to employ. These are decisions properly made by the citizenry and by universities.

- Government decides how much it proposes to spend on higher education. This decision is properly the province of government. If government spending falls short of that necessary to meet the choices of citizens and universities, the difference has to be made up with private spending.

37. In short, the market decides on *total* spending on higher education, the government on *public* spending.

2.2 Who should pay?

38. Two questions are relevant: where *can* resources come from; and where *should* they come from?

2.2.1 WHERE *CAN* RESOURCES COME FROM?

39. Resources for higher education can (and should) come from public sources, notably taxation, either in the form of explicit public spending or through tax advantages for universities or for students and their families. In a high-quality mass system, however, resources cannot *only* come from public sources. Funding from taxation faces limits for at least two reasons. First, high taxation creates adverse incentives, particularly in the face of international competition. Second, and completely separately, tax funding tends to be regressive. The argument is simple. If taxation is used to fund a commodity consumed only (or mainly) by the poor (in some countries, brown bread), the policy is pro-poor, i.e. progressive. But if taxation is used to fund a commodity consumed only by the rich (e.g. mink coats), the policy is pro-rich, i.e. regressive. Since higher education is disproportionately consumed by people from better off backgrounds, the system benefits the best-off most (the classic articles, discussing the publicly-funded University of California, are by Hansen and Weisbrod, 1969, 1978).

40. For reasons both of macroeconomic reality and distributional goals, a large system of higher education requires public funding to be supplemented on a significant scale by private funding. Note that this conclusion is *not* based on ideology, but on the deeply practical reasons that (a) large-scale higher education is vital, but (b) a mass system is too expensive to rely entirely on public funding.

41. Private funding can derive from six potential sources:

(a) family resources;
(b) a student's earnings while a student;
(c) a student's future earnings (i.e. loans)
(d) employers;
(e) entrepreneurial activities by universities; and/or
(f) gifts (charitable foundations, bequests in people's wills, etc.).

42. Looking at these sources in turn, family resources (a) are not bad in themselves, but do nothing to promote access. Student earnings (b) are generally small (the USA, with relatively high wages, flexible labour markets and a tradition of student earning opportunities, is an

outlier). In addition, earning activities compete with study time and leisure. Contrary to popular belief, employer contributions (d) are also likely to be small. Note that, though it is in the interests of employers *as a whole* to want highly-trained workers, it is in the interest of each *individual* employer to leave it to other employers to pay for training – and then to poach the resulting student. This problem did not arise in former times when employment tended to be for life, but creates the familiar problem of externalities with today's flexible labour markets. Entrepreneurial activities (e) by universities are not only likely to yield little net revenue, but are actively dangerous because they risk diverting scarce institutional capacity to lower-priority activities. Nor are gifts (f) more than a marginal contribution, even in countries like the UK, and *a fortiori* in Hungary.

43. Having ruled out all the others as a *major* source of private funds, we are left with loans as the only way forward which yields resources on a large scale and in an equitable way. As discussed below, however, two points are critical:

- policy design: loans have to be designed properly so as jointly to achieve efficiency and equity;
- implementation: organising loans in countries with stretched administrative capacity and large informal sectors is a *major* challenge.

2.2.2 WHERE *SHOULD* RESOURCES COME FROM?

44. This is the question of who should pay, i.e. how much subsidy should higher education receive? The conventional theoretical argument is that higher education creates external benefits, i.e. there are benefits to society over and above the benefits to the individual. In those circumstances it is efficient if the student pays for her private benefit and taxpayer contributes a subsidy equal to the external benefit.[3]

45. This argument commands almost universal acceptance in qualitative terms. However, for well-known reasons, there is no scientifically valid way of measuring the relative sizes of the private and external benefits.

- Valuation problems. The benefits of education include not only higher productivity but also (and all but impossible to measure) direct utility benefits to the recipient and increased social cohesion.

- Causality. The investment case for higher education rests on the (usually unstated) assumption that it increases productivity. The screening hypothesis argues that education

is *associated* with higher productivity, but does not *cause* it (the large literature on this and other aspects of the education literature is surveyed by Blaug, 1976, 1985).

46. In what follows I shall take it as read that there *is* a case for continuing subsidy, but leave open the size of the subsidy (a) because there is no definitive way of measuring it, and (b) because — whatever the scientific arguments — the matter is ultimately one to be decided by politicians and the electorate (for fuller discussion, see Barr, 1998*a*, pp. 321-7).

47. Whatever the size of the external benefit, however, there is one strong result – that higher education creates a private benefit, i.e. the typical student benefits personally from a degree, through higher earnings, greater job satisfaction and/or greater enjoyment of leisure. Thus the theory argues unambiguously that some of the costs should be borne by the student.

48. As a parenthetical point, consider the often-heard argument, 'Access to higher education is a basic right; higher education should therefore be free.' The assertion that access to higher education is a basic right is a value judgement, though one with which (I assume) everyone agrees. However, *it does not follow that because something is a basic right, it must be provided free*. We all agree that access to food is a basic right; yet the provision of food by competitive suppliers at market prices is uncontentious throughout the industrialised world. The objective is *not* free higher education; the objective is a system in which no bright Hungarian is denied a place at university because her parents are poor or unwilling to support her.

2.3 How should student loan repayments be organised?

49. It is useful to distinguish three ways of organising loans:

- *Mortgage-type loans* have repayments organised like a mortgage or bank overdraft. Thus the student faces repayments of (say) $100 per month for (say) 5 years. Repayments and the duration of the loan are predetermined; the endogenous variable is the fraction of the student's income absorbed by loan repayments.

- *Income-contingent loans* have repayments calculated as (say) 5 per cent of the student's subsequent earnings until such time as she has repaid the loan. Thus the fraction of the student's income absorbed by repayments is predetermined; the endogenous variable is the length of time it takes the student to repay. It is desirable if repayments are collected by the tax or social security authorities.

- *A graduate tax* is similar to an income-contingent loan in that repayments are (say) 5 per cent of the student's subsequent earnings, but fundamentally different in that repayment continues for life (or till retirement). Unlike the previous two cases, therefore, repayments do not cease when the student has fully repaid the loan.

50. The rest of this section argues that a well-designed loan system has three characteristics.

- Provided that they can be implemented effectively, loans should have income-contingent repayments collected as a payroll deduction (i.e. alongside income tax or social security contributions). This topic occupies the rest of section 2.3

- Loans should attract a market or near-market interest rate.

- The loan scheme should have the capacity to bring in private money.

The latter two topics are taken up in section 2.4. Note that at this stage the arguments are still based on economic analysis; no country yet has a system with all three elements.

2.3.1 MORTGAGE LOANS

51. The major advantages of mortgage loans are:

- The cost of the loan is transparent to the student
- Mortgage repayments do not depend on a good tax collection mechanism.
- Mortgage repayments might discourage work effort less than income-contingent loans.[4]

52. Mortgage-type repayments, however, face significant problems.

- They put access at risk, particularly for disadvantaged groups. This point is explained in the discussion of income-contingent loans in section 2.3.2.

- They do not solve the need for sophisticated administration. The following discussion amplifies this point.

53. *Mortgage repayments require a fairly sophisticated collection mechanism.* Mortgage repayments are not collected by the tax authorities, but they still have to be collected by someone. Banks have expertise in collecting repayments for loans which are (a) short term and (b) secured on some tangible asset. On (a), however, there are good reasons for wanting student loans to

have a fairly long duration: it is efficient if the duration of a loan bears a rational relationship to the lifetime of the asset being financed by the loans – hence we have 25-year home loans but 3-year car loans; in addition, a longer repayment period makes possible smaller repayments and/or larger loans. Turning to (b), there is no security for borrowing to finance human capital. For both reasons, collection by banks is likely to be administratively demanding and hence to require some sort of government guarantee. However:

54. *Government guarantees to private lenders create problems*.

- Incentives. If the guarantee the government offers is not generous enough, banks will decline to get involved. But if the guarantee is sufficiently generous, banks have no incentive to pursue repayments vigorously (not least because they have no desire to alienate potentially their best customers), leading to ineffective collection, and hence to high default rates.

- The classification problem. A second problem with government guarantees is the classification problem (Box 1). If government guarantees are too generous, there is no genuine risk-transfer and, under international statistical guidelines, the resulting loans, *in their entirety*, count as public spending.

55. *A public collection agency?* One way to get round these problems is to abandon the idea of private collection of loan repayments and instead to have a public collection mechanism. To be effective, however, any such agency will need investigative and enforcement powers which match those of the tax authorities. A further prerequisite is a legal structure capable of enforcing compliance, a process which is helped if each person has a unique identification number. Even where those prerequisites are met, the public sector ends up running a student loan collection agency *and* a tax collection system, raising the question of whether resources devoted to collection of mortgage-type student loan repayments would not be used better to bolster the effectiveness of the tax system.

56. *Mortgage repayments require a capacity to implement an income test*. Whether repayments are collected by a public or a private agency, a system of mortgage repayments requires an income test. The argument is simple. If repayments (say $100 per month) bear no relation to a person's income, a mechanism is needed to protect people with low or no earnings. Under the 1990 UK loan scheme, for example, loan repayments are deferred for anyone whose earnings are below a threshold. This is necessary both for equity reasons and to ensure that the scheme is politically sustainable. But the corollary is that the agency organising repayments has to administer an income test. This is a difficult task of measurement and enforcement even in a

country like the UK. In Hungary it is considerably more difficult – for precisely the reasons that implementing an effective income tax is difficult – stretched administrative capacity and a large grey economy. An income test, in short, will be administratively demanding and costly. With a mortgage scheme, these costs will be *in addition* to those of the tax system.

57. Thus, in conclusion, mortgage-type schemes do not get round the need for effective administration.

Box 1: The expenditure classification problem

The IMF publishes guidelines on national income accounting, including detailed definitions of the dividing line between public and private spending. To simplify a complex issue, four factors are relevant when deciding whether a loan scheme is public or private:

- Who designs the scheme?
- Who decides whether a particular student is eligible?
- Who bears the risk of default?
- Where does the money come from?

If a student takes out a conventional loan from a bank, it is the bank's scheme (e.g. the bank can decide what interest rate to charge); the bank decides whether or not it wishes to lend to the student; the bank bears the risk that he/she will fail to repay; and the money he/she borrows comes from the bank. Clearly this is a private scheme.

In contrast, if the government designs a loan scheme, decrees that all students are eligible (even those with a criminal conviction for fraud), bears the risk of default itself, and provides the money the students borrow, the scheme is public.

The problem arises where a scheme meets some of the criteria to be classified as private, but not all. Specifically, if a student borrows from a bank but the government gives the bank a full guarantee, then, under IMF rules, lending to the student counts as *public* spending, the logic being that since the government guarantees repayment, the student is acting as an agent of government, and hence the loan is government borrowing. Thus, even though students nominally borrow from a private bank, the scheme is classified as public. For a good, non-technical summary of the issues see UK Department for Education and Employment (1998), and for an attempt to grapple with them in a UK context, Barr, 1997).

The issue is important. The skills to address it lie in the Ministry of Finance, the Office of National Statistics and/or the National Bank of Hungary.

2.3.2 THE PRINCIPLE OF INCOME-CONTINGENT LOANS

58. There are two strategic sets of arguments for income-contingent loans: they address important capital market imperfections; and they have philosophical advantages.

Addressing capital market imperfections

59. Conventional (i.e. mortgage-type) loans, when used as an instrument to finance investment in human capital, face the capital market imperfections described in Box 2. As a result of those problems, risk for both borrower and lender is inefficiently high and, in consequence, borrowing and lending for human capital formation inefficiently low.

60. Income-contingent loans directly address these capital market imperfections.

- They protect the student from excessive risk. In terms of current earnings, students with low current earnings make low (or no) repayments. From a lifetime perspective, students who do well repay in full, and students with low lifetime earnings do not.

- By thus protecting borrowers, income-contingent loans help to bring about a level of lending which supports the efficient amount of higher education; and by making it easier for students from poorer backgrounds to participate, they also contribute to equity.

- Income-contingent loans, if properly designed, also protect lenders, and thus enhance the long-run possibility of private finance.

Philosophical arguments

61. Another approach to demonstrating that income-contingent loans are both efficient and equitable is through a realisation, during earlier research (Barr, 1991), that income-contingent loans are compatible with the benefit principle (he who benefits should pay), with the ability-to-pay principle, *and* with the social insurance principle.

62. *The benefit principle*. In his classic book, *Capitalism and Freedom* (1962), Milton Friedman considered the government's role in postcompulsory education and training. He accepted the capital market imperfections just discussed, especially the riskiness of student loans, for example the lack of any security. He pointed out that

'[t]he device adopted to meet the corresponding problem for other risky investments is equity investment plus limited liability on the part of shareholders. The counter-part for education would be to "buy" a share in an individual's earning prospects; to advance him the funds needed to finance his training on condition that he agree to pay the lender a specified fraction of his future earnings' (1962, p. 103).

Box 2: Capital market imperfections for student loans

Consider conventional, voluntary, private loans with mortgage-type repayments, for example for buying a house. For house purchase, the following is generally true:

(a) A person who buy a house knows what he is buying, having lived in a house all his life.
(b) The house is unlikely to fall down.
(c) The house will generally appreciate in value.
(d) If his income falls, making repayments burdensome, he has the option to sell the house
(e) Because the house acts as security for the loan, he can get a loan on good terms.

Contrast the case of lending to buy a degree:

(a) Applicants to university may not know the benefits of getting a degree. This potential problem is all the more relevant for students from poor backgrounds – the very people for whom access is the most fragile, and the very people whose participation the Hungarian government wants actively to foster.

(b) A degree can 'fall down', in the sense that there is a high risk (or at least a perceived high risk) of failing exams.

(c) Though the *average* private return to a degree is positive (UK National Committee of Inquiry into Higher Education, 1997*d*), there is considerable variance around it. Thus there is uncertainty to the individual student about the benefits of a degree.

(d) If a student who has borrowed to pay for a degree subsequently has low earnings and high loan repayments, he or she does not have the option to sell the degree (because slavery is illegal).

(e) Because of (d), there is no security for the loan. Thus mortgage-type loans for human capital formation, as well as being risky for the student are also risky for the lender. As a result, loans will have a substantial risk premium, further discouraging student borrowing.

For all five reasons, borrowing to finance human capital is more risky than borrowing to buy a house. Conventional loans therefore lead to an inefficiently low level of borrowing. Separately, the risks are likely to be greater for people from poorer backgrounds and for women. Thus conventional loans are inefficient because they waste talent, and inequitable because they bear most heavily on the least well-off.

On that basis he advocated loans from government, in return for which,

> '[t]he individual ... would agree to pay to the government in each future year a specified percentage of his earnings in excess of a specified sum for each $1000 that he received .... The payment could easily be combined with payment of income tax and so involve a minimum of additional administrative expense' (p. 105).

63. *The ability-to-pay principle.* A different approach starts from a predisposition towards free, tax-financed education, abandoning that model only because of its regressiveness when applied to higher education. My LSE colleague, Howard Glennerster, writing over 30 years ago (Glennerster, Merrett and Wilson, 1968, p. 26) pointed out that:

> 'in the United Kingdom, higher education is now financed as a social service. Nearly all the costs are borne out of general taxation.... But it differs radically from other social services. It is reserved for a small and highly selected group.... It is exceptionally expensive.... [And] education confers benefits which reveal themselves in the form of higher earnings. A graduate tax would enable the community to recover the value of the resources devoted to higher education from those who have themselves derived such substantial benefit from it.'

64. *The social insurance principle*. An important function of social insurance is to give people a mechanism for redistributing to themselves over their life cycle. Pensions are a device for redistributing from one's middle years to one's post-retirement years. Student loans are *precisely* the same thing – a device for redistributing from one's middle years to one's early years.

65. A final point in thinking about repayment models is to note that conventional loans (on which mortgage-type student loans are modelled) and student loans are intended to operate in very different circumstances. Loans for house purchase are normally made to people *after* they know their income and assets. Student loans, in contrast, are given *before* people know their income and assets; indeed, their entire purpose is to increase them. Of necessity the latter situation is much more uncertain than the former, hence the case for income-contingent arrangements.

2.3.3 Design aspects of income-contingent loans

66. The previous paragraphs discussed the *why* of income-contingent loans. This section briefly discusses some issues of *how*.

67. *The starting threshold*. At what level of income should a student start to make repayments? The case for a relatively high threshold (e.g. average earnings) is mainly political; people think that such a system is fairer. That argument, though widely believed, is false. Income-contingency is *automatically* fair. If the repayment rate is 5 per cent of earnings and the starting threshold is low, then repayments will be low. If a beginner kindergarten teacher earns HUF 30,000 per month, her monthly repayment would be HUF 1500. The case for a low threshold is that it makes for a much stronger repayment flow, i.e. it makes the loan scheme more effective. A key issue for policy makers is to assess the balance between these economic and political advantages which pull in different directions.

68. *Implementation*. To have their desired effect, it is important that loan repayments track a person's earnings on a *current* basis, i.e. week by week or month by month, rather than being assessed retrospectively on the basis of income in a previous year. The only cost-effective method of implementing repayments on a current basis is as a payroll deduction alongside income tax or social security contributions.

69. Earlier discussion of mortgage-type loans stressed the practical problems of collecting repayments. Analogous problems arise with income-contingent loans, whose effectiveness is heavily dependent on the effectiveness of the tax system. This raises problems in countries where income tax collection is leaky and where a large fraction of the population is outside the formal income tax net. A central issue for Hungarian policy makers is the need to ensure that income tax collection is sufficiently robust to support a student loan system if this line of policy development is to be pursued. Note that an effective tax system is a significant precursor to EU accession.

70. To sum up, the major advantages of income-contingent loans are:

- They address important capital market imperfections;
- They assist access;
- They have philosophical advantages, being compatible with the benefit principle, the ability-to-pay principle *and* the social insurance principle;
- They offer synergy with strengthening the tax system.

71. The disadvantages of income-contingent loans are:

- They require robust tax collection;
- They may be perceived as a tax, with potential disincentive effects.

2.4 Other design features of student loans

2.4.1 MARKET INTEREST RATES

72. This section sketches out briefly why market interest rates are desirable. Market – or near-market – interest rates have efficiency advantages. The interest rate is a price which, like other prices, gives signals which induce economic agents to act efficiently. In this case, the signals concern the efficient allocation of income over a person's lifetime. That efficiency function depends on a number of conditions, well-informed consumers being one of the most important. To justify an interest subsidy for efficiency reasons requires a demonstration that information problems would lead systematically to underinvestment in education.

73. In practice, interest subsidies create incentives to *inefficient* behaviour: they give students the incentive to borrow as much as possible and to repay as slowly as possible. Even if a student does not need to borrow the money she would, if rational, borrow her entire loan entitlement, put the money into a bank (or government bonds) and profit from the interest rate differential.

74. Market or near-market interest rates also have equity advantages. An interest subsidy is untargeted. It benefits most those who borrow most. Since it is the middle-class who disproportionately go to university, the interest subsidy benefits the middle-class most. Instead of spreading interest subsidies thinly across *all* students, a more equitable approach is to charge a market or near-market interest rate and to use the savings for *some* students, specifically those for whom access is most fragile, and those whose subsequent earnings are low. In short, market interest rates make it possible to replace an untargeted subsidy by a targeted one.

2.4.2 PRIVATE MONEY

75. As argued earlier, the logic of expansion of higher education makes it inevitable that public funding will need to be supplemented on a significant scale by private funding, an imperative which is all the more acute if higher education is to maintain its quality.

76. As also argued earlier, the only large-scale and equitable source of private funds is through student loans. However, if students borrow from the taxpayer, there is a net saving in public spending only when the loan scheme is mature, i.e. only when the flow of repayments from former graduates exceeds this year's disbursement to current students *and* has done so for enough years for the loan scheme to be in steady state. Since one of the key objectives of a well-designed loan scheme is to allow the student to spread repayment of borrowing for a long-lived

asset over an extended period, it follows that the loan scheme, even if well-designed, will not reach maturity for at least 20 years.

77. If a way can be found to allow students to borrow from private sources, the upfront costs of the loan scheme no longer fall on the public budget. This may not be a major advantage in a country like New Zealand (where students borrow taxpayer money) but is an issue of obvious and acute relevance to Hungary.

78. At this stage, however, the classification problem, discussed in Box 1, comes into play. If students borrow from banks, but the banks receive what, in practice, is a complete guarantee from government (so that there is little or no risk-transfer), the scheme will be classed under IMF rules as being publicly funded. This is a highly technical area, involving professional expertise found in the Office for National Statistics, or equivalent. Colleagues there, in the Ministry of Finance and at the National Bank of Hungary should be alerted at an early stage to the need to start thinking about this problem.

2.5 The resulting system

79. Four propositions emerge from economy analysis:

- Consumer sovereignty is useful for postcompulsory education and training, *but much less so for school education*;
- Producer sovereignty is essential;
- Students should contribute to the costs of their qualification;
- Student loans should, if they are implementable, have income-contingent repayments.

80. In policy terms, this suggests the following system:[5]

- Universities set fees.
- Fees and living expenses are covered by loans.
- Loans are income contingent, with repayments collected by the tax or social security authorities.
- Loans carry a market or near-market interest rate.
- Loans should be sensibly treated in the public accounts.

2.5.1 EFFICIENCY

81. The system is efficient because stakeholders are well-informed, and because all the relevant stakeholders have an influence on outcomes.

82. *Students*. If students pay a significant fraction of the costs of their degree, their behaviour will change and that, in turn, will create demands for greater variation in what universities provide. Students will make choices about which course they attend, and will make demands about the type of course and about the structure of the degree.

83. *Employers* can influence outcomes indirectly through their choice of employees. They can also have a direct influence through negotiation with universities about course content (in the UK, for example, professional bodies such as accountants and social workers give partial exemption from professional examinations to students graduating from courses whose content takes account of the needs of those professional bodies).

84. *Universities*. Such changes in demand will require universities to respond in ways which are wholly impossible within a centrally-planned funding mechanism. Universities have to be free to determine *price* (i.e. the level of tuition fees they charge), *quantity* (i.e. the number of students they accept), and *quality*, i.e. the types of courses they offer.

85. *Government* retains a major influence – not by *planning* the system but in other ways. Government has several key tasks:

- It contributes to funding (as discussed earlier, the costs of higher education should be shared between the taxpayer and the student).

- It takes action to promote access in the ways discussed shortly.

- It influences the degree of competition.

- It takes action to protect quality, including ensuring that regulation is in place *and enforced*. As discussed later, however, an important dimension of quality control is through incentives, for example funding more generously those universities which produce better outcomes (as discussed in section 3, several countries are moving in that direction).

86. The resulting system, it can be argued, is efficient, because outcomes are determined not by a single, dominant – and often badly-informed and ineffective – central government, but by the interacting decisions of students, universities and employers, subject to transparent influence by government. Particularly with complex mass systems of higher education, this approach is much more likely than central planning to achieve individual and national objectives.

2.5.2 Equity

87. The system is also more equitable. First, a move from tax funding towards loans reduces the subsidy to the best-off. A move towards market prices (i.e. fees set by universities within a regulatory framework) fully supported by income-contingent loans makes it possible to take the millions of forints currently spent on *general* subsidies and use them instead on *specific* subsidies carefully targeted on groups for whom access is most fragile. Such a move is unambiguously progressive — it benefits tomorrow's less well off at the expense of today's middle class. For precisely that reasons, care is needed to make sure that reform remains politically palatable to the middle class.

88. The system is more equitable, second, because the resources saved from withdrawing untargeted subsidies can be used to improve access much more effectively through targeted interventions. Proactive intervention to improve access should take a variety of forms.

89. *Money* can improve access through various mechanisms. Scholarships for bright disadvantaged people will means that they need a smaller loan (or no loan). Work is needed on the best way to identify such people. Low parental income can be used as a proxy, but it can be a blunt instrument. Targeting might also be by geographical region. In addition some access money could be channelled through schools in disadvantaged areas and via universities (who could be given financial incentives to recruit students from disadvantaged backgrounds). Another source of money is the universities themselves, who will want to use some of their fee income for scholarships. Note that universities' direct interest is not in *rich* students but in *bright* students – thus all universities have an incentive to gather resources for scholarships. Money can improve access also by making loans available to *all* students, full-time and part-time, undergraduate and postgraduate.

90. *Information* is also critical. Many people do not apply to university because they have never thought of doing so, having never visited a university. Thus mentoring of school children by current university students, preferably from similar backgrounds, is important; so are visits by schoolchildren to universities. Action to improve information is vital for access precisely

because students from socially-excluded backgrounds will systematically be badly-informed. Such information activities need to happen early enough to prevent high school drop out.

91. *Extra teaching*/tutoring is another ingredient.

92. *More resources earlier in the system*. Finally, since the problems of access to higher education cannot be solved entirely within the higher education sector, resources should be used to promote access earlier in the education system.

3 Lessons from international experience[6]

93. A relatively recent World Bank (1994) study divides discussion into experience with mortgage-type loans and with income-contingent loans.[7] This section, by and large, follows this classification, discussing in turn, the USA, the UK, the Netherlands, Sweden, Australia and New Zealand. As mentioned earlier, discussion of each country is deliberately brief, so ensure that the strategic pattern emerges clearly.

3.1 The USA[8]

3.1.1 BRIEF DESCRIPTION

94. The US higher education system is arguably the largest and most diverse of any country. In the broadest terms, it can be described as follows:

- Multiple providers: in the mid-1990s there were over 3600 higher education institutions, over 1600 of them public and over 2000 private.[9]

- High participation rates: in 1994, 62 per cent of high school graduates went on to some sort of tertiary education, 22 per cent to a 2- year college, 40 per cent to a 4-year college.[10]

- Mixed funding: 60 per cent of funding in the mid-1990s came from sources other than government.[11]

- Tuition fees in the mid-1990s accounted for 27 per cent of the income of universities (41 per cent of the income of private universities, 18 per cent of the income of public universities). Over the 1990s tuition fees rose rapidly, not least to offset declining public spending on higher education. Tuition fees are generally set by the university concerned, though state universities are subject to some control by state legislatures for in-state students.

- Multiple funding sources for students: these include loans at federal and state levels, scholarships at federal, state and university levels, and part-time student employment

3.1.2 ADVANTAGES

95. *Flexible tuition fees*. The discussion in section 2 suggests that the US gets things broadly right on tuition fees in the sense that, at least for private universities, each university can make its own decision about fees.

96. *Diversity is considerable*. This is the 'Anglo-American' model described at the start of the paper.

97. *Access* is good, at least in aggregate terms, as measured by the participation rate. Part of the reason for this outcome is the multiplicity and diversity of institutions. Thus a student from a poor background can do a few courses at her local community college and, being successful and enthused, can then transfer to a four-year institution.[12]

98. *Academic freedom* is real.

99. *Research capacity* is good, and in many areas world class.

3.1.3 CRITICISMS

100. Given the suggested lessons from economic analysis, the US, it can be argued, gets its funding of *universities* broadly right, for example the freedom of universities to set their own fees. The problems are largely to do with the way *students* are funded.

101. *Complexity*. There is no real *system*, but lots of disparate bits, making it difficult for students to understand what is on offer.[13]

102. *Mortgage-type repayments*. Loans have mortgage-type repayments, notwithstanding that the US has ample capacity to administer an income-contingent system effectively.

103. *Subsidised interest rates*. Loans attract an interest subsidy. As discussed earlier, this tends to benefit the better off, and is also inefficient.

104. *The default rate* on the loan scheme is uncomfortably high, particularly for students at vocational institutions. This 'leakiness' has two causes: a high default rate, and the fact that students borrow at subsidised interest rates. As a joint result, a significant fraction of lending to students is not repaid, the shortfall being a cost to the taxpayer. This outcome is predictable, and offers an important lesson in policy design. Students till recently got their money from banks;

and banks were supposed to collect repayments. However, the loan was guaranteed by the federal government; and banks therefore had little incentive to enforce repayment. Thus loans in the US bring in much less private money than is at first sight apparent – a problem in which the USA is far from unique.

105. *Technical violation of IMF rules*. The classification problem was discussed in Box 1. Under IMF guidelines, if students borrow from banks, but banks receive a complete guarantee from government, loans count as *public* spending, since the public sector bears the risk of default. The US system of government guarantees to private lenders may or may not violate these rules: the US can get away with such things; countries like Hungary have less freedom of manoeuvre.

106. There is an apparent conflict between (a) the argument in section 2.3 that mortgage loans deter access, and the facts that the US (b) has mortgage-type loans but (c) a high participation rate. There are a number of reasons why mortgage-type loans are likely to have less of a disincentive effect in the USA than elsewhere.

- Income is different, the US being a rich country.

- History is different, the US having no tradition of free higher education.

- Attitudes are different: people in the USA are less risk-averse and hence less debt-averse than is typical in Europe; and there is less of an elitist attitude towards higher education in the USA, it being a common aspiration for blue-collar workers to send their children to college.

- Social values are different: arguably, the Americas (North and South) have a more individualistic culture than is typical in Europe, and so give equity a somewhat lower weight.

107. Though many of these points are debatable, they suggest, at a minimum, that the US experience cannot automatically be transferred to countries with lower incomes and different attitudes. They also illustrate, more generally, the importance of designing policy with due regard for differences in initial conditions.

3.2 The UK[14]

3.2.1 PRE-1998: MORTGAGE LOANS

The system

108. The British system of higher education, in very sharp contrast with the USA, continues to be centrally planned. The UK story is patchy and complicated, offering examples of how *not* to do things, though also – ultimately – showing that redemption is possible.

109. The central fact of British higher education is the increase in its participation rate, from a 5 per cent elite system in 1960, to a medium-sized system (14 per cent participation rate) by the late 1980s, to a mass system with a participation rate of over 30 per cent by 1998. Expansion over the first half of the 1990s was particularly sharp, but with no parallel increase in university funding-per-student, creating serious worries about quality.

110. Prior to 1990, tuition for UK students was free. Living expenses were paid via a tax-funded grant (i.e. a present from the taxpayer), based on a parental income test, i.e. students with rich parents received little or no grant, it being assumed that the parent would pay the student an equivalent amount (the so-called 'parental contribution'). A student whose parents were poor received a full grant. Historically the grant was enough to live on, but it fell in real terms by about 25 per cent between 1962 and the late 1980s, by which time, on its own, it was no longer adequate fully to support a student's living costs.

111. In 1990 a loan scheme was introduced, in part to address this problem. Under the new system, tuition for UK students remained free. Half of living costs were covered by a tax-funded grant, based on a parental income test, the other half from a loan.

Criticisms

112. The principle of student loans was right, but the scheme which was introduced was heavily criticised. The argument against the scheme was simple — it failed to achieve a single desirable objective. Most particularly, the scheme saved little or no money, and risked harming access.

113. *No saving in public spending*. Expansion (which was the objective in 1990) and quality (which increasingly became the problem) were both put at risk. Both require more resources. But the loan scheme was hugely and unnecessarily costly in public expenditure terms for at least

two reasons: first, students borrowed public money; second, since students paid a zero real rate of interest on loans (i.e. an interest rate equal to the inflation rate), the loans carried an interest subsidy. On the government's own estimates (*Hansard* (Commons), Written Answers, 24 July 1989, col. 441), the scheme will not break even on a cumulative basis until it has been running for 25 years; my own estimate placed the figure closer to 100 years (*Financial Times*, 29 June 1989, p. 8). It would have been cheaper to give the money away. As a result, loans brought in no extra money for universities; indeed, increasing student numbers meant that student support crowded out resources for universities, leading to a decline in real funding per student of about 30 per cent between 1990 and 1995 (UK Committee of Vice-Chancellors and Principals, 1996, para. 8). Thus worries about the quantity of students were converted into worries about the quality of what they were receiving.

114. The public expense of the scheme was subsequently confirmed by a microsimulation exercise. Barr and Falkingham (1993, 1996) found that the government scheme was 'leaky': in the long run, under the 1990 scheme only about 50 per cent of lending to students would be repaid. In contrast, under a well-designed income-contingent system, some 80 per cent of lending would be repaid.

115. *Little assistance to access.* Mortgage repayments had no directly measurable effect on access, given that (a) there was heavy excess demand for entry to what was still an elite system and (b) loans were small. However, the continued high taxpayer cost of the system meant that loans could not, for fiscal reasons, be extended to part-time or to postgraduate students, nor for other desirable reforms such as abolishing parental contributions.[15]

116. Given the unpopularity of loans and the fact that they did nothing to improve university funding, the British Vice-Chancellors got restive, and in early 1996 threatened unilaterally to bring in a tuition charge. These problems were both predictable and predicted ((Barr, 1989, 1991; Barr and Crawford, 1998*a*). Against this backdrop the government established a National Committee of Inquiry (the Dearing Committee) with a broad-ranging remit, to report by summer 1997 (two months after the last possible date for an election, thus getting fees and student loans off the election agenda). This leads us to:

3.2.2 From 1998: income-contingent loans

117. The Dearing Report was published in July 1997 (UK National Committee of Inquiry into Higher Education,1997*a*, *b*). The government did not accept its recommendations in their entirety, but instead implemented a modified version of Dearing, discussed in this section, which

forms the basis for the current UK system. The government's response to Dearing had four elements (for fuller discussion, see Barr, 1998*b*; Barr and Crawford, 1998*b*).

- Income-contingent loans. The Dearing Report unambiguously recommended a move to income-contingent loans, and the government endorsed this conclusion. The loan repayments of students starting university in or after October 1998 will be collected alongside their income tax.[16]

- Abolition of the grant. Under the previous arrangements, students received a maintenance grant, i.e. a tax-funded scholarship to pay up to half of their living costs. The Dearing Report advocated keeping this arrangement. The government, instead, replaced the grant by an income-tested loan entitlement.

- Tuition fees. The Dearing Report recommended a flat-rate tuition fee of £1000 (25 per cent of average teaching costs) per student per year, irrespective of university or subject studied. The government accepted this recommendation for the most part, but on an income-tested basis, i.e. students from poor backgrounds pay no tuition fee; students from well-off backgrounds pay the entire fee; and in between the fee is on a sliding scale.

- A lack of enthusiasm for variable fees, i.e. fees set by universities. The government has repeatedly stated its opposition to variable fees.

Advantages

118. *Income contingent loans*. One great and good aspect of these changes stands out, which demonstrate the earlier claim about redemption: income-contingent loans, collected alongside income tax. This represents unambiguous progress.

119. *The principle of tuition fees*. A second form of progress (albeit more controversially) is the establishment of the principle of tuition fees paid by the student. These had always existed for part-time students, postgraduate students and many students in sub-degree tertiary education; it was only full-time university undergraduates who had been exempted.

Criticisms

120. *Continued reliance on central planning*. The worst feature of the post-Dearing arrangements is continued central planning. In respect of their UK/EU undergraduate students, UK universities are told (a) how many they may accept and (b) what price they may charge. This

is a 'market' in which both price and quantity are determined by the central planner. There are draconian financial penalties for universities who undershoot or overshoot their student number targets; and the government has attempted to make it illegal for universities to charge fees additional to the centrally-ordained fee.

121. *Complexity*. The arrangements are complex.[17] A student from a poor background pays no tuition fee and is entitled to an income-contingent loan intended to be large enough to cover his/her living costs. Parental (or spouse) income has two effects: first, as income rises, the tuition fee rises; once the fee has reached its maximum (£1000), the effect of additional parental income is to reduce the size of the loan to which the student is entitled. All students, however rich their parents, are entitled to a loan equal to about 75 per cent of the maximum loan *except* that scholarship and similar income, if high enough can reduce loan entitlement to zero. Such complexity has two ill-effects: students, prospective students and their parents cannot understand the system; and it is a nightmare for government to administer.[18]

122. *No more resources*. Since loans continue to be funded from public revenues, they bring in no more resources in the short run. It is true that loans *will* bring in private funds on a significant scale once the system is mature, i.e. once enough repayments by multiple cohorts of former students exceeds outgoings on loans for new students. That, however, will take at least 20 years.

123. *Potential adverse effects on access*. The Government's fee proposals pursue an equity objective through a *price* subsidy (i.e. reduced fees for poorer students) rather than an *income* subsidy through income-contingent loans (for the analytics, see Barr, 1998*a*, Ch. 4). The problem with this approach is that it can frequently hurt the very people it is intended to help. Access is harmed in several ways. Student living standards are inadequate because the total of loan and parental contribution remains too low to support an adequate standard of living. Second, the fee contribution is deemed to be paid through the parental contribution, in effect introducing up-front fees which create an enhanced reliance on parental contribution. No government committed to access should contemplate such a policy. Finally, all these problems are regressive with respect to gender.

124. *Other inequities*. Impediments to access are one source of inequity. There are other ways in which the proposals are inherently unfair. First, they focus on starting point rather than outcomes. Lucky the shopworker's son who becomes a successful barrister, who pays no fees, unlucky the managing director's daughter who becomes a social worker. What matters is not where people start but where they end. Second, price does not vary with quality. It is unfair (and

will soon be seen to be unfair and hence politically unpopular) to expect students to pay the same flat fee at Oxford as at a little-known technical college.

Political aspects

125. Events in the UK between 1997 and 1999 illustrate at least two important political lessons.

126. *Poor sequencing*. Tuition fees were announced first, the details of income-contingent loans only later. As a result, political debate, media concern and parental worries all focussed on tuition fees and on the large debts which students might incur. By the time, a few months later, that the government announced that loan repayments would be collected alongside income tax, it was too late to turn public perceptions round. The clear lesson is that for political acceptability (as well as for equity reasons) loans should come first, then fees. Hungary, having suspended the imposition of its tuition fees, should bear in mind that sequencing has a political aspect of co-equal importance to its economic aspect.

127. *Poor communication*. A second problem was that the income-contingent principle was initially publicised very badly, focussing on the overall size of student debt and on repayment in pounds per month, rather than hammering away at the core principle, that a student repays *x* per cent of his/her earnings and, in that sense, the student is taking no more risk that any citizen faces over the future income tax rates the Minister of Finance might impose. The obvious lesson is that communication is crucial.

3.3 The Netherlands[19]

128. *Student support* is generous. There are three components: the basic grant, the supplementary grant, and a student loan.

129. All students receive a basic grant (i.e. a present from the taxpayer), at a lower rate if living with his/her parents and at a higher rate otherwise.[20] This grant is awarded independent of parental income. Students are also eligible for a supplementary grant[21] based on a parental income test (where a student is not eligible for the full supplementary grant, parents are supposed to make up the difference, i.e. there is an implicit parental contribution). Interestingly, these grants are made initially as a loan, which is converted to a grant if students meet necessary performance criteria, the most important being that they obtain their qualification within the normal duration plus two years.

130. Students are eligible, in addition, for a loan, available without an income test.[22] Since parents cannot be forced to make the parental contribution implicit in the supplementary grant, the loan entitlement covers the parental contribution. The interest rate on student loans is the rate on long-term government bonds plus 2.15 per cent.

131. *Loan repayments*. There are two mechanisms. Under the default mechanism, interest is charged on loan *and* the basic and supplementary grants from the time that they are disbursed (i.e. from the first monthly payment in the student's first year). Repayments begin two years after the student leaves higher education. At that time the student's debt is totalled, and monthly repayments calculated such that the loan is repaid over 15 years – on the face of it a straightforward mortgage-type loan.

132. These repayment terms, however, are imposed only where the person has an income above some threshold. A person with an income below the threshold can request to make lower repayments, which will be calculated on the basis of an income test. If income is below a threshold,[23] repayment is zero. This process has to be repeated each year. Thus people with income below the threshold make income-contingent repayments.[24] Any loan not repaid after 15 years is forgiven under either repayment method.

133. Thus student loans in the Netherlands can be thought of in either of two ways: as a mortgage-type system, with abatement of repayment for low earners; or as a system with income-contingent repayments, subject to a ceiling on annual repayments. Viewed from the latter perspective, a number of criticisms can be made:

- the means test is administratively cumbersome;
- there is no obvious rationale for the ceiling on repayment;
- 15 years is rather short for loan forgiveness (at the other extreme, there could be no forgiveness, with any unpaid student debt being a charge on a person's estate at death).

134. *Funding universities*. One interesting feature of higher education funding in the Netherlands has already been mentioned – the fact that student funding is performance related, in that the grant is treated as a loan unless the student completes his/her qualification within a pre-ordained time. Universities, similarly, face an element of performance-based funding: from 2000 50 per cent of a university's teaching budget will be based on performance measured in terms of completion rates within a specified time period. On the plus side, these mechanisms clearly create incentives both for students and universities to ensure timely completion. On the minus side, they create adverse incentives for universities in two ways: to skew enrolments

towards school leavers (who generally study full time and are more likely to graduate quickly), and to dilute standards at the margin to keep completion rates high.

135. Universities also receive income via a centrally-determined, flat-rate tuition fee,[25] irrespective of subject or university.

3.4 Sweden

136. *Student support* is generous. There is a system of student grants[26] which meet about 28 per cent of living costs. Students are entitled to a loan[27] for the remainder of living costs. A student is entitled to this package of support for up to six years, but only if he/she maintains at least a minimum level of achievement. Both grant and loan are subject to an income test of the student's income (but *not* that of his/her parents or spouse).[28] These grants and loans are also available to part-time students, and to students in upper secondary school.[29]

137. Loan repayments are income contingent, taking the form of 4 per cent of the total annual income of borrowers, provided that that income exceeds a minimum threshold. Specifically, the student loans agency collects repayments monthly or quarterly, based on the borrower's income two years previously.[30] Interest is computed from the date the first loan is taken out. The interest rate is set by government annually (4.1 per cent in 1999). Unpaid debt is written off when a person reaches the age of 65.

138. These arrangements suggest a number of strategic questions. The first issue is whether such generous funding is fiscally compatible with Sweden's avowed objective of expanding higher education. Second, the 4 per cent repayment rate is proving to be too low for the size of student borrowing (not least because students can borrow for up to six years of study), hence on present projections many students will not repay by the time they reach 65. For both reasons, reform is on the agenda. One option is to increase the grant element. This approach, it is argued, will not add much to public spending; all that is happening is that an implicit grant (i.e. a loan which is typically not repaid) is being converted into an explicit grant. Another option under consideration is to increase repayments by moving towards arrangements – similar to those in the Netherlands – whereby borrowers repay one twenty-fifth of their total debt annually, but no more than 5-6 per cent of their income.

139. *Funding universities*. Higher education in Sweden is free for all students. Tuition fees are not allowed.[31] University funding is therefore determined almost wholly by government. Expansion has been associated with a drive for greater efficiency. As a result, like the Netherlands (and also Denmark) there is a performance-related element to the amount which

each institution gets, based mainly on completion rates.[32] The potential adverse incentives this can create were noted above.

3.5 Australia[33]

3.5.1 THE 1989 SCHEME

The higher education contributions scheme (HECS)

140. The Australian Higher Education Contributions System, introduced in 1989, advanced Australian higher education funding in important ways:

- It introduced an effective income-contingent loan scheme with repayment collected by the income tax authorities, thus being the first large-scale such scheme to be implemented;

- It established the principle of tuition fees, by introducing charges around A$2000 per student per year, irrespective of subject or university, intended to represent about 25 per cent of the average cost of teaching across all subjects and all universities.

- Students could pay upfront (at a discount) or they could attend university free, and repay the tuition charge later through their income-contingent loan. As in the UK, students pay a zero real rate of interest on their loans. In contrast with the UK, loans in the Australian system are intended to pay for tuition fees, not living costs.

- Those fees brought in some extra resources for universities, so that the Australian funding problem is not as acute as the British one.

Advantages

141. The Australian scheme has been subject to more research than most other systems (for a (useful summary, see Chapman 1997, and the references therein).

142. *Revenue*. Chapman (1997) reports that the revenue potential of income-contingent loans is considerable. In 1995, when the scheme had been running for 6 years, HECS revenues amounted to 10 per cent of total spending on higher education, a percentage that was rising rapidly. If 80 per cent of all lending is repaid, the additional revenue from a charge of 25 per cent of teaching costs could eventually add some 20 per cent to university income.

143. *Administration*. The 'cacophony of complaints ... related to the alleged administrative burden ... in retrospect ... were seriously exaggerated' (*ibid*. p. 746). In the mid-1990s (i.e. at a time when the new scheme had bedded down) the Australian Tax Office estimated that collection costs were 1 per cent of current annual HECS revenues.[34] As Chapman points out, however, this optimistic conclusion depends critically on the fact that Australia has an efficient tax system. Its potential message for Hungary is that income-contingent loans have the potential to be administratively cheaper than any other collection mechanism, but that this conclusion depends critically on the efficiency of the income tax system.

144. *Access*. Third, and critical, is the impact of HECS on access to higher education. Here Chapman is unequivocal. '[T]he 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 ...' (*ibid*. p. 749) This outcome, he concludes, illustrates that 'even a radical movement away from a no-charge system can be instituted without jeopardising the participation of disadvantaged potential students' (*ibid*. pp. 749-50).

145. *Political effects*. Largely consequential on the previous point, the political disquiet (including student demonstrations) which accompanied the introduction of HECS in 1989 have completely faded away, the system (at least in its 1989 variant) being generally regarded as fair. Student loans in Australia, as in the UK, have largely become part of the political landscape.

146. The only criticism that might be made of the 1989 scheme is the fact that students pay a zero real interest rate on their loans. As discussed in section 2.4, such an arrangement is untargeted and hence (a) is costly, and (b) the resources involved could do more for access if used in a more targeted way.

3.5.2 THE 1996 REFORMS

147. Reforms in 1996, in my view, took a number of wrong turns. A new fee structure was introduced, as follows (1997 figures): Group 1 (arts and social science), A$3330 per student per year irrespective of university; Group 2 (science and engineering), A$4700 per year; Group 3 (medicine, veterinary, law), A5500 per year. As a result of these increases, the student contribution increased from 25 per cent of average teaching costs to 37 per cent, ranging from 26 per cent for agriculture to 80 per cent for law. A second part of the reforms allowed institutions which had filled their quotas of publicly-funded students (who were entitled to income-contingent loans under HECS), to recruit an additional 25 per cent of students who

would be free-market in the sense (a) that they would receive no public subsidy for tuition fees, (b) universities could charge whatever fees they wished, but (c) such students were not entitled to HECS loans.

148. *Inefficiency*. These reforms are inefficient in several ways. One principle is to base charges on costs; another is to base charges on what the market will bear, in which case fees might be higher for subjects leading to more lucrative occupations. The 1996 fee structure is inefficient, first, because it mixes the two principles: the three groups are based mainly on cost, but the presence of law in group 3 was explained by the then minister as explicitly related to lawyer's high earnings. The arrangements can be argued to be inefficient, second, because they retain central planning. As discussed in section 2.1, this is feasible in a small system, but creates greater inefficiency the larger and more diverse the system of higher education. Third, the dual system of HECS students, paying an average of 37 per cent of teaching costs and private students paying closer to 100 per cent is distortionary.

149. *Inequity*. The introduction of private students, paying full fees but with no loan entitlement, was argued by some to be inequitable, by allowing less-bright students from wealthy families to get into top universities on the basis of wealth rather than ability.

3.5.3 THE WEST REVIEW AND RECENT REFORM DISCUSSION

150. HECS was undoubtedly the right scheme for 1989, when the Australian system was relatively small (a 14 per cent participation rate). However, this centrally-planned solution became problematic over the 1990s for two reasons. First the system became larger, more diverse and more complex. Second, as in the UK, student numbers in Australia increased rapidly over the 1990s, leading to funding problems. Faced with similar problems to the UK, the Australian government adopted a similar solution – it established a Review of Higher Education Financing and Policy (the West Committee) (Commonwealth of Australia (1997, 1998).[35]

151. The interim (1997) West Report in some ways faced a simpler task than the UK Dearing Report. Australia already had a well-established system of income-contingent loans; and, having introduced tuition charges in 1989, faced a less acute funding problem than the UK. It was therefore perhaps not surprising that the interim (1997) West Report was more radical than the Dearing Report.

- *Fees*. 'Institutions should have the freedom to set tuition fees.... Institutions must have the ability to provide a range of courses and delivery options, and to decide the level of

resources that are devoted to them. Fee flexibility is also essential to encourage competition ...' (Commonwealth of Australia, 1997, p.31).

- *Loans*. 'No student undertaking a first qualification should be required to face the upfront payment of tuition fees.... Students should have access to income contingent loans for the payment of any contribution' (Commonwealth of Australia, 1997, pp. 29-30).

These views were carried through to the Final Report (Commonwealth of Australia, 1998, p. 25).

152. The analysis of section 2.5 suggests that these were the right recommendations at the right time.

- A move towards market prices fully supported by income-contingent loans makes it possible to take the millions of dollars spent on *general* subsidies and use them instead on *specific* subsidies targeted on groups for whom access is most fragile.

- The move is progressive — it benefits tomorrow's less well off (who do not repay their loans in full) at the expense of today's middle class.[36]

153. For the latter reason, however, the recommendations were (and remain) politically highly sensitive. To date the government has taken no action.[37]

3.6 New Zealand[38]

154. The current system in New Zealand can be summarised as follows:

- Universities set fees.
- Fees and living expenses are covered by loans.
- Loans fully income contingent, with repayments collected by tax authorities.
- Loans carry a market or near-market interest rate.
- Loans are sensibly treated in the public accounts.

155. When the system was first introduced, student charges covered about 25 per cent of tuition costs. The taxpayer subsidy has since fallen below 75 per cent, but remains considerable. There is also a system of income-tested grants for students from poor backgrounds.

156. This is precisely the scheme to which the lessons of economic analysis point, as set out in the introductory part of section 2.5. It is also the scheme Iain Crawford and I advocated to the Dearing Committee in the UK (see Barr and Crawford, 1998*a*). At the time we made our proposals, we knew that New Zealand had income-contingent loans, but not about the rest of the system; equally, when the New Zealand government brought in its reforms in the early 1990s, it was aware of my early writing (Barr, 1989) and knew about the 1989 Australian reforms, but obviously knew nothing about subsequent UK writing. Thus the New Zealand arrangements and the proposals in Barr and Crawford (1998*a*), apart from the analysis of income-contingent loans, were completely independent pieces of analysis, reaching strategically identical conclusions.

157. New Zealand, however, is not stopping there. A White Paper published in late 1998 suggests reform along two lines, in the New Zealand context both entirely desirable. First, it was suggested that all postcompulsory education and training should be treated as an integrated whole. As part of that move, second, there should be a move towards voucher-type funding throughout postcompulsory education and training, i.e. public funding would, for the most part, be given to *students* rather than to *institutions*, thus forcing institutions to compete for students. The following quotations (all from New Zealand, Ministry of Education, 1998) illustrate the strategy.

158. *Postcompulsory education and training as a whole*. 'Through the Universal Tertiary Tuition Allowance, the Government will subsidise all domestic students who enrol in approved courses' (p. 15). 'Students studying for approved courses will be subsidised on the same basis, no matter where they are studying' (p. 16).

159. *Voucher-type funding*. 'The number of students subsidised at each provider will be based on actual enrolments' (p. 15).

160. *Information and regulation*, as discussed in section 2.1, play a critical role in the strategy.

> 'The "contract" between the student and the provider is important. It is up to students to choose wisely and to providers to deliver what they have promised. The Government can support this contract by ensuring that:
>
> - students have access to a diverse range of courses and reliable information about the opportunities open to them, and
>
> - providers have certainty about the rules governing their operation ... and are accountable for their performance' (p. 55).

161. How relevant is this advanced system for Hungary? It is useful first as a longer term vision of the sort of system Hungary might want to move towards as fiscal and political realities and institutional capacity allow. Second, it illustrates that radical reform is possible within the right political environment. New Zealand is a small country; and it went through major strategic reform of its entire economy in the decade after the mid-1980s. With radical reform all around, radical reform of higher education was politically feasible. In a UK context I have advocated the same strategy, but moving towards it in a more phased way than the 'big bang' move from central planning to market forces in New Zealand.

3.7 Summary of country experience

162. Table 1 gives a brief overview of the arrangements in different countries, mainly to show the different ways in which the pieces in the jigsaw are put together.

163. To summarise country experience, it can be argued that:

- The USA has a useful model on tuition fees, but still lacks a good loan scheme;
- The UK, after a bad start with mortgage-type loans now has an effective loan scheme, but major reform is still needed on fees;
- The Netherlands and Sweden, not dissimilarly to the UK, have loans which (implicitly or explicitly) are income contingent, but both have flat-rate tuition fees fixed by government (in Sweden fixed at zero).
- Australia has a good model of loans, but has got into a muddle on fees;
- New Zealand offers useful lessons on loans *and* fees.

164. The experience of these, and other countries, points to a number of problems to watch out for and to avoid:

(a) Fiscally unsustainable public spending;
(b) Most public spending hijacked by the middle class;
(c) Loans schemes absent, or badly-designed so that they bring in little, if any, extra money;
(d) Economic constraints on education providers which reduce incentives to efficiency,

These occur in all the countries listed above, though (b) and (d) are less of a problem in the USA and NZ, both of which have variable fees. They also occur elsewhere: a recent account of Latin America reported that:

'Most of the public institutions ... have argued that low or no tuition fees have provided greater equality of educational opportunity by providing greater access.... Such reasoning is simply incorrect, as ... the overwhelming public subsidy has been and continues to accrue to students from middle and high-income families' (Darrel R. Lewis, 'Latin America must raise fees to help poor', *Times Higher Education Supplement*, No. 1388, 11 June 1999, p. 16).

Table 1: Higher education funding in different countries

	USA	UK (1990)	UK (1998+)	Netherlands	Sweden	Australia	New Zealand
Fees set by							
Government		Zero	Flat rate[b]	Flat rate	Zero	Multiple flat rate[c]	
Universities	✓[a]						✓
Grants	No	Partial	No	Partial	Partial	Partial, on basis of income test	Partial, on basis of income test
Loans cover							
Tuition fees	Partly or fully	n/a		Yes	n/a	Yes	Yes
Living costs	Partly or fully	50%	Partly or fully	Yes	Yes		Yes
Loan repayments							
Mortgage	✓	✓		✓ with income-contingent safeguard			
Income contingent			✓		✓	✓	✓
Interest rate	Subsidised	Zero real	Zero real	Approx. market	Approx. market	Zero real	Approx. market

Notes: [a] Private universities set their own fees; so do public state universities for out-of-state students.

[b] Fees are flat rate across universities and subject, but are assessed through an income test; thus students from poor backgrounds pay no fee.

[c] Fees vary by subject, but not across universities.

4 What lessons?

4.1 What lessons: policy

165. On loans:

(a) The case for mass tertiary education is strong (section 2.1).

(b) But a mass system is too expensive to be financed entirely by the taxpayer. Thus public funds have to be supplemented on a significant scale by private funds (section 2.2).

(c) The only way to bring in private funds on a large scale and in a social equitable way is through a system of student loans (section 2.2).

(d) Student loans, however, must be properly designed. As soon as institutional capacity allows, income-contingent repayments have major advantages (section 2.3). Recent reforms in the industrialised countries have followed this path (section 4).

166. On market forces:

(e) Mass tertiary education is too complex to be centrally planned; market forces are both necessary and useful. This implies variable tuition fees. These will be politically controversial because the middle-class will try to defend its perks.[39]

(f) Countries where education providers have more freedom, have systems which are more responsive to changing conditions

(g) The resulting system can be highly progressive.

- Market-determined fees supported by income-contingent loans redistribute from today's middle-class (who lose some of their tuition fee subsidies) to tomorrow's least well-off (who do not repay their loans in full).

- Moreover, resources previously used for subsidies to middle-class families can be used to finance *targeted* measures to promote access.

(h) Since the problems of access to tertiary education cannot be solved by the tertiary sector alone, measures to improve access should also include action much earlier in the system.

167. The role of government: the proper role for government in tertiary education is not as provider. Instead government:

- Contributes to funding;
- Takes proactive measures to promote access;
- Influences the degree of competition;
- Acts to protect quality, including ensuring that regulation is in place and enforced.

4.2 What lessons: principles of design

168. A number of strategic design features help to ensure that higher education finance fosters efficiency, promotes access and is administratively feasible.

169. *Use incentives rather than regulation*, where possible, to encourage efficient behaviour by all actors – students, universities, employers and government. Enforcing regulation can be costly and administratively demanding. Where an appropriate mechanism can be put into place, incentives are likely to be cheaper and more effective.

170. *Avoid price subsidies*, which are costly and tend to be regressive. One implication is a move towards market-determined fees; another is a move towards near-market interest rates for student loans (though any such moves have a major political dimension).

171. *Avoid income testing* where possible, not least because it creates a major administrative burden and risks creating adverse incentives.

172. *Create flexible systems* which can evolve. Put another way, do not bring in a new system and then have to change it drastically (as for example with the UK loan system). Any change of system is costly and disruptive. Much better, therefore, since major reform in higher education in Hungary is inescapable, to create a flexible system. Hungary – like all other countries – does not know in what world its higher education system will be operating in the future. What we do know is that it will be very different from now. In the face of uncertainty, a rational strategy is to design a system which encourages diversity and is capable of evolving, pointing towards a strategy of market forces plus regulation, rather than one of central planning, which is better suited to a predictable and more static world. The system should therefore include loan schemes which are able to grow, to have their parameters (e.g. the interest rate charged to borrowers) changed, and to be extended to further groups of students. Tuition fees should be able to vary – across subject and across institution. The amount of public subsidy for higher education should

also be capable of varying. University governance should make it possible for course content and degree structures to evolve as circumstances change.

173. *Ensure that sequencing is politically apt* (see below).

174. *Design a system that can be implemented*. Allow sufficient time for any new system to be implemented effectively. Design a system which is administratively as simple as possible (e.g. minimising reliance on income testing). Make sure that the legal system is sufficiently robust for enforcement (this is equally the case with mortgage loans and income-contingent loans).

4.3 What lessons: sequencing

175. Introduce loans first if possible. The advantages of income-contingent loans, properly explained to the public, contribute to the political acceptability of reform.

176. Tuition fees should not be introduced until loans are in place. Initially fees should probably be within a band which widens over time as people get used to the idea of tuition fees and realise that, properly supported by loans, they are not draconian.

177. Integration in the Hungarian context, is assisted by market forces. A sequencing of (a) loans, then (b) fees plus market forces, leads to integration through market forces rather than political forces. This is an example of the point made earlier, that incentives can often have advantages over regulation.

178. Later options include:

- Income-contingent loans (if not adopted initially);
- Larger loans, and loans for broader categories of student (e.g. part-time, postgraduate);
- Near-market interest rates (if not implemented initially);
- Loans from private sources;
- Greater freedom to universities to set their own fee levels.

5 Strategic questions for Hungary

179. As stated at the start, this paper is not intended to give answers, but to offer an analytical toolkit. This concluding section, therefore, deliberately makes no attempt to suggest solutions, but instead lists the questions which Hungarian policy makers should be asking. It is possible to be fairly definite about specifying those questions. To the extent possible, they are listed in the order in which they will need to be answered.

180. *What objectives*? Reform should be directed towards explicit objectives. UK reform over the 1990s shows how things can go wrong when objectives are not clear. As discussed earlier, the broad objectives for Hungarian higher education include:

- Efficiency: internal efficiency relates to the efficient running of institutions; external efficiency relates to quantity, quality and mix such that the higher education system contributes to economic growth and to Hungarian social and cultural values.

- Equity is concerned with improving access for students from disadvantaged backgrounds. There are also important objectives concerning access by gender and ethnicity.

- Capacity to expand to meet growing demand.

- Political sustainability.

- Does not crowd out scarce administrative resources

181. Beyond those general objectives, thought probably needs to be given to more specific ones. Once objectives have been established, the following questions need to be addressed, for the most part in the sequence in which they are listed below.

- Why loans now?
- What type of loan?
- Loans for what?
- What size loans?
- What regime for tuition fees?
- How can the system bring in private resources?

Why loans now?

182. The first question is why Hungary should introduce loans now, when there are so many poor Hungarians? There are at least three reasons why loans are a progressive way forward.

183. *Mass higher education is unaffordable*. This issue was discussed in section 4.1. Mass tertiary education cannot be entirely tax funded, not least because the resulting high tax rates create incentives inimical to economic growth. One possible solution – returning to a small, elite university system – is no longer on offer for both economic and social reasons. Thus public funding has to be supplemented by private funding and, as discussed earlier, student loans are the only method of doing so which is (a) equitable and (b) capable of generating resources on a significant scale.

184. *Tax funding is unfair*. Tax funding is not only inefficient in terms of its potential incentive effects, but also inequitable because – in the case of higher education – it is regressive. Equity includes the question: who would pay if the student did not? If the people who predominantly go to university are students from backgrounds with higher-than-average income, the people who pay if the students do not are, by definition, less well-off than the students' families.

185. *Income-contingent loans are equitable*. Alongside the case against tax funding is the positive case in favour of income-contingent loans. As discussed earlier, they are compatible both with the benefit principle (addressing the regressivity issue) and with the ability-to-pay principle. As an example of the latter, income-contingent loans, by their very nature, automatically protect low earners. Nurses, with low earnings, will make low repayments, or no repayments. Unemployed people will make no repayments while unemployed. A woman who leaves the labour force to have a baby will make no repayments unless and until she returns to paid employment.

186. Income-contingent loans are fair also in another way. By basing repayment on a students' subsequent earnings, they base student support not on where a person starts, but on where he/she ends up. This, it can be argued, is fair. If a person from a poor background gets a degree and subsequently does very well (which, after all, is one of the whole purposes of encouraging access to higher education) it is fair that he/she makes repayments.

187. *The way forward*. It is true that many Hungarians are poor. But one of the central purposes of the transition is to make them less poor, and to restore Hungary to its historical situation of living standards comparable with those in Western Europe. Thus Hungarians will

not remain poor. This has two implications. First, with income-contingency, repayments automatically track success (or failure). Second, low incomes now are not per se a case against loans; more plausibly, they are an argument against excessively large loans. For these reasons, the introduction of loans can be argued to be a progressive move, putting into place now a system of (possibly small) loans, which will mature and grow, and contribute to private funding in the future.

What type of loan?

188. *Mortgage repayments or income-contingent repayments?*

- Could mortgage loans be implemented more quickly than income-contingent loans?
- Could mortgage loans be implemented more cost-effectively than income-contingent loans?
- Would any advantages of speed or cost-effectiveness outweigh the potential educational disadvantages?

189. *If mortgage-type loans*:

- Who will collect repayments, and how?
- Where will the money come from?
- What interest rate will borrowers pay?
- If money comes from a private lender, what form of government guarantee will there be?
- Will such a guarantee be compatible with IMF rules?

190. *If income-contingent repayments*:

- How will collection be organised, e.g. how will the loan system be linked to the tax system?

- What will be the threshold at which loan repayments start, e.g. will a student start to make repayments only when his/her earnings reach average earnings, or will repayments start earlier?

- What interest rate will students pay on their loans, e.g. a zero real interest rate, or a near-market rate?

- What will be the repayment rate, i.e. will loan repayments be 2 per cent of a student's subsequent earnings, 5 per cent, 10 per cent?

Surrounding questions

191. *Loans for what?* Should loans cover tuition fees (Australia), living expenses (UK) or both (New Zealand)?

192. *What size loans?*

- Should coverage of tuition fees/living costs be partial or total, e.g. if a university charges a high tuition fee, should the loan cover the whole fee?

- Separately, should there be a ceiling on the amount a student can borrow (a) in any one year, (b) over a lifetime?

193. *What regime for tuition fees?*

- When should fees be introduced (earlier discussion confirms the wisdom of putting fees on hold until a good loan scheme is in place)?

- How large?

- Set by whom, the Ministry of Education or universities?

- If universities set fees, what regulatory regime, if any, will there be concerning fee levels?

- Payable by whom, e.g. all students in higher education, all students in postcompulsory education?

194. *How can the system bring in private money?* The issue is how to bring in private money in a way which simultaneously (a) achieves educational objectives such as improved access, and does do so on terms which (b) are attractive to private lenders and (c) do not fall foul of the classification problem discussed in Box 1.

Notes

1. Anecdotally, I was Departmental Tutor in the Economics Department at LSE for five years. As such I met large numbers of students and was very impressed by the quality of their information — they were a savvy, streetwise consumer group.

2. Projected GDP in 1999 relative to 1989 is 121% in Poland, 107% in Slovenia, 101% in Slovakia, and 99% in Hungary (European Bank for Reconstruction and Development, 1999, Table 1.1).

3. This is a standard proposition in economic theory which can be found in any economics textbook – see, for example Begg, Fischer and Dornbusch (1997, pp. 248-51)

4. The argument is that with mortgage repayments the income effect works in favour of labour supply and (in contrast with income-contingent repayments) there is no substitution effect working in the opposite direction.

5. This is the system Iain Crawford and I proposed to the UK Dearing Committee (subsequently published as Barr and Crawford, 1998*a*).

6. On international experience, see Barr (1991), World Bank (1994), Woodhall (1990), UK National Committee of Inquiry into Higher Education (the Dearing Committee) (1997*c*).

7. See, for example, World Bank (1994, Table 3.1).

8. For further detail on the USA, see King (1999) and McPherson and Schapiro (1998).

9. UK National Committee of Inquiry into Higher Education (1997*c*, Table 7.1).

10. UK National Committee of Inquiry into Higher Education (1997*c*, , para. 7.16).

11. UK National Committee of Inquiry into Higher Education (1997*c*, , para. 7.23).

12. A colleague on a recent World Bank mission started out by taking a course in hairdressing at her local community college, and ended up as a professor at the prestigious University of California, Los Angeles.

13. To study the complexity close up, see http://www.finaid.org.

14. For further detail on the UK, see Barr (1989, 1997), Barr and Crawford (1997, 1998*a*, *b*), UK Committee of Vice-Chancellors and Principals (1996), and UK National Committee of Inquiry into Higher Education (the Dearing Committee) (1997*a*, *b*).

15. For discussion of why parental contributions are bad social policy, see Barr and Crawford (1997).

16. Repayments are10 per cent of a student's marginal income above of a threshold of £10,000 per year.

17. For a simple introduction see Barr and Crawford (1998*b*).

18. As an example of the complexity from an administrative point of view, see the guidance from the central UK Department for Education and Employment to the Local Education Authorities, who administer the income test (SSIN 28/99, Part 5, on http://www.dfee.gov.uk/ssin/index.htm).

19. All data in this section are taken from Jongbloed (1999).

20. The maximum basic grant is Dfl. 435 per month (1998/99).

21. The maximum supplementary grant, where the family is poor, is Dfl. 449 per month (1998/99).

22. The maximum loan is Dfl. 383 per month (1998/99).

23. About Dfl. 18,000 per year (1998/99).

24. This should be contrasted with the 1990 UK scheme, which had binary repayment rates: below the deferment threshold repayment was zero; above the threshold, students made the full mortgage repayment. This obviously created adverse incentive effects for people with income close to the threshold.

25. Dfl. 2750 in 1998/99.

26. SKr 1973 per month (1998/99).

27. SKr 5125 per month (1998/99).

28. For full-time students, both grant and loan are reduced by one-ninth of the amount by which the student's income exceeds SKr 54,600 (1998/99).

29. And also for students in folk high school and municipal adult education.

30. Swedish citizens living abroad repay one-twentieth of their total debt annually.

31. There is a small change paid to the student union for social services, etc.

32. In Denmark the so-called 'taximeter' funds universities not only on the basis of outcome (i.e. graduation) , but also of process, in that funding depends to a significant extent on the number of 'active' students, i.e. students who are passing their exams and actively pursuing their studies.

33. For further detail, see Chapman (1997), Commonwealth of Australia (1997, 1998).

34. The Australian tax authorities initially resisted the idea of collecting loan repayments. Once that task had been mandated upon them, they ended up rapidly taking ownership of the scheme, publicising it and going round high schools to tell schoolchildren about it.

35. The two Chairman Lord (Ron) Dearing, a distinguished retired public servant, and Roderick West, a distinguished retired educator, both men of great charm and integrity, became firm friends over the course of their respective inquiries.

36. I was invited by the West Committee to take part in a round table in Sydney in January 1998 to assist the Committee in finalising its conclusions. This point – that market determined fees supported by income-contingent loans are deeply progressive – was one I made forcibly and which, it turned out, was pivotal to the Committee's decision not to dilute its recommendations.

37. A further explanation of inaction to date on the West Committee recommendations is that legislation introducing a General Sales Tax in Australia became something of a political black hole between mid-1998 and mid-1999.

38. For further detail, see New Zealand, Ministry of Education (1998).

39. For ongoing UK debate, see http://www.netnexus.org.

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