

Higher education finance: Lessons from international experience

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August 1999

Paper for
Republic of Hungary: Higher Education Reform Project:
Consulting Services for Student Loan Programme

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Executive summary

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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

* 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.

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*

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

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

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, 1998a, 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 Massachusetts) 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:

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

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, 1998a, 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*

suppliers in a market price system is uncontroversial throughout the world. The objective is *not* free higher education; the objective is a system in which no individual is denied a place at university because her parents cannot support her.

2.3 How should student loan repayment

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

- *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

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

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.

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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

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

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

2.5.1 EFFICIENCY

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 mean 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 experience⁶

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 USA⁸

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:

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.
-

3.2 The UK¹⁴

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

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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

3: Lessons from international experience

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

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

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

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 grants²⁶ which meet about 28 per cent of living costs. Students are entitled to a loan²⁷ 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 Australia³³

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

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 Zealand³⁸

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

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							

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.

4: What lessons?

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

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.

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

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 charge 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 autht(1993(e)11(A)1 (ho n33.total deaoer^SS9(un (19a)11(519(ount by)13(wht st34. nt sd0hT)-7

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