

LIFELONG LEARNING AS AN AFFORDABLE INVESTMENT
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FINANCING LIFELONG LEARNING IN TERTIARY EDUCATION

BACKGROUND PAPER

This report was prepared by the Organisation for Economic Co-operation and Development (OECD).

(Note by the Secretariat)

1. Under the current mandate of the Education Committee, the Secretariat has undertaken a number of analyses of issues and evidence concerning resources for and financing of lifelong learning. Results of this work have been published in *Education Policy Analysis* (OECD 1998 and 1999) and in *Redefining Tertiary Education* (OECD 1998). Additional material is available at the OECD web site: (<http://www.oecd.org/els/edu/fl/index.htm> and http://www.oecd.org/els/edu/first_years/index.htm)

2. The attached report has been prepared to examine in depth the resource and financing issues that arise in connection with tertiary education. Increased demand for learning at the tertiary level places great pressure on available resources, requiring their different and often creative use and leading to non-marginal changes in existing financing approaches as well as the introduction of innovative strategies to secure needed resources and encourage their effective use. The analysis focuses on students pursuing courses provided through tertiary education institutions that lead to recognised degrees or diplomas. In a context of large volume and diverse patterns of participation, issues of mobilising resources, financing through and by learners, efficiency in resource use, equity and financing, and financing for lifelong participation are examined with reference to country experience and new financing approaches. The document draws on related work of the Secretariat (including the thematic review of the first years of tertiary education); material submitted by national authorities in response to a request for information circulated in December 1998; and other relevant literature. An earlier draft of this document was discussed by the Education Committee at its meeting in November 1999; the report has been revised in view of comments made by delegates.

3. The document is intended to serve as background to the policy conference, “Lifelong Learning as an Affordable Investment” being organised by the OECD and Human Resources Development Canada, that will take place in Ottawa, 6-8 December 2000.

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Summary

1. The policy experience examined in this study of financing lifelong learning in tertiary education reveals already considerable innovation and evolution in funding strategies and approaches. The measures have been adopted for a variety of reasons, but can be viewed against a broader lifelong learning perspective which fosters participation, and recognises and supports learning, through a variety of options at this level.

2. Five issues, some of long-standing but now recast in a lifelong learning perspective, are examined with reference to selected policy approaches adopted or under consideration. The issues are: mobilising the resources; facilitating investment through and by students; limiting expenditure growth and improving effectiveness; financing for equity; fostering a lifelong pattern of participation.

3. New financing approaches introduce incentives and means to address these issues. Public policies will need to find ways to best secure a wider sharing of financing and resourcing of tertiary education while advancing public interests and harnessing to the benefit of learning and institutions the market-based influences and incentives found in the new approaches. The financing options implemented or considered, are listed in the “Policy Menu” below.

4. Among the most promising directions in financing policies to advance lifelong learning in tertiary education are:

- Exploiting the interfaces and interactions among diverse sources of funding and resources. The boundaries between taxpayer-financed and learner-financed contributions are likely to blur;
- Creating conditions for private provision as well as private source financing;
- Developing more effective ways to spread the learner’s costs for tertiary education over a lifetime, through means of earmarked savings and extended payment arrangements;
- Shaping responses of institutions, students (and their families) and third parties to incentives in new funding arrangements, through information (quality assurance, indicators, qualifications frameworks) and targeted funding to promote public interests (programme quality, inter-programme co-operation, equity) and to develop leadership capacities at provider and programme levels to ensure effective and efficient responses.

Financing Lifelong Learning in Tertiary Education

A Policy Menu

Marshalling the resources

- | | |
|-----------------------------------|---|
| Government | <ul style="list-style-type: none">- Other portfolios (including treasury, through tax expenditure)- Regional and local levels- Other levels of education |
| Students and families | <ul style="list-style-type: none">- Tuition fees in public institutions (domestic, foreign); fee-supported private institutions- Education-related and maintenance costs (shifted from public support) |
| Institutions | <ul style="list-style-type: none">- Cross-subsidy and resourcing, through contract teaching and research, sponsored programmes |
| Third-parties (donors, employers) | <ul style="list-style-type: none">- gifts- in-kind resources, through co-operative teaching- other education systems (for “outbound” free-movers) |

Facilitating investment through and by students

- | | |
|-----------------------|---|
| Students and families | <ul style="list-style-type: none">- loans, deferred contributions, income-contingent arrangements- earmarked savings, pre-paid tuition plans- parents or relatives contributions, in excess of required or expected amounts |
| Institutions | <ul style="list-style-type: none">- loans |

Limiting expenditure growth and improving effectiveness: Two sides of efficiency

- | | |
|-----------------------|---|
| Students and families | <ul style="list-style-type: none">- tuition fees- time-limited or performance-based financial aid- guidance on programme contents and career prospects |
| Institutions | <ul style="list-style-type: none">- rationalisation or consolidation of programmes and segments- caps on grants to institutions- output-based funding, including performance criteria- short-cycle programmes or institutions- targeted funding for:<ul style="list-style-type: none">co-operation in teaching and learning within and across sectorsuse of information and communications technologymeasures to reduce failure and facilitate progress within and between study programmes- recognition of prior learning, via advanced placement, articulation, qualifications framework |

Financing for equity

Students and Families	- means-tested financial aid - low tuition fees
Institutions	- targeted funding, to provide incentives for recruitment and support from under-represented groups
Third parties groups	- tax-leveraged earmarked private source finance for students from under-represented groups

Fostering a lifelong pattern of participation

Students and families	- extended or targeted financial support for mature age students (including tax breaks, earmarked savings plans, work experience requirements) - voucher or drawing right arrangements - more flexible and diverse learning options - qualifications frameworks
Institutions	- targeted funding to support diverse arrangements for recognition of learning, articulation
Third parties	- targeted financial incentives for employers' support of studies

I. Introduction: Tertiary Education in the Perspective of Lifelong Learning

1. Growth to large volume participation at all levels of formal education has led to sustained pressures on available resources, not least in tertiary education where in a number of OECD countries growth has been recent and rapid. Participation on a large scale in tertiary education also implies greater diversity in the backgrounds and motives of students. These developments -- growth and diversity in participation -- stand as two of the most important factors giving rise to current policy reflection and innovation in tertiary education finance. They give new weight to conventional, long-standing concerns about how to secure needed resources (financial, human and other in-kind) and how best to promote their effective, efficient use to meet the demand.

2. A *lifelong learning* perspective situates these concerns about tertiary education costs and financing more broadly. Following OECD education ministers, lifelong learning stresses learning at all ages, and for all. Lifelong learning thus implies an inclusive orientation, an interest in learning wherever it takes place and a concern about success (not just participation). At the level beyond secondary education, such an emphasis calls for recognising and supporting learning through a variety of options at this stage (not for a hierarchy of institutions and impermeable "boundaries") and fostering articulation, linkages, networks and partnerships. These directions correspond with the broad vision advanced through the term "tertiary education", as used in the Education Committee's thematic review and in the publication *Redefining Tertiary Education* (OECD 1998).

3. This study focuses primarily on learners in formal tertiary education programmes. New learning options, within and outside the borders of regular tertiary education degree programmes, open up study possibilities for both younger and older adults. Several of these possibilities have been noted, from the

perspective of older adults, in the study of financing lifelong learning for adults (Part One)¹. The growth of such options notwithstanding, it is still the case that much of tertiary education is delivered in the form of study programmes offered through established tertiary education institutions. So, although attention may be drawn where appropriate to experience with specific policy initiatives which take a wider aim, this study looks most closely at resourcing and financing regular study programmes, teaching and learning in tertiary education institutions.

4. The report has four sections. The next section contains a survey of recent trends in tertiary education, illustrated by reference to comparative data and specific country experiences. The third section, the core of the report, examines the salient financing issues, identifies selected policy approaches adopted or under consideration and assesses their actual or likely effects. There is a rich body of policy statements, descriptions and analyses concerned with tertiary education finance on which to draw. Reference will be made to some of this information.² The volume and coverage of these materials reflect a high interest and substantial policy action in the field, for reasons already mentioned; they also reveal common tendencies and some divergence in policy thinking and analysis. The final section provides a brief listing of main policy directions.

II. Key Trends and Developments

5. A set of data displays from the OECD publications *Education at a Glance* and *Education Policy Analysis* set out the main trends and patterns. Over the 1990s, enrolment at the tertiary level has increased by 50 per cent in twenty-four countries for which comparative data are available. That growth seems to have been accounted for by rising participation rates rather than demographic evolution. In the United States, enrolment growth from already high levels followed earlier increases in participation rates. Only in Mexico, Turkey, Poland, Ireland, Hungary and the Czech Republic did growth the size of successive youth cohorts partly track the trend in headcount enrolment, but even in these two countries there were implied increases in the participation rate. For all twenty-four countries taken together, had tertiary-level enrolment followed only the evolution in the size of youth cohorts, there would have been almost no enrolment growth. (Table 1)

6. Rising levels of secondary school completion imply that further growth will continue to be driven, in part, by demands from a larger proportion of the young adult age group. Policies put in place in Australia, Denmark, France, Spain, Portugal and the Netherlands (among others) to boost rates of completion of a full cycle of secondary education or to build up the levels of knowledge, skills and dispositions of young people completing secondary education have already contributed to increased demand for and enrolment in tertiary education. (Table 2)

¹ For example, funds accumulated in the U.K.'s Individual Learning Accounts can be used to pay for course modules offered by tertiary education institutions as well as other public and private providers. In France, a pool of public funds has been established to provide, on a competitive basis, support for universities that develop and offer course modules directed primarily at adults, are interdisciplinary in nature and lead to recognition outside the formal national qualifications structure.

² The principal sources of information and analyses come from the Education Committee's thematic review of the first years of tertiary education, with findings and conclusions reported in *Redefining Tertiary Education* (OECD 1998) and *Education Policy Analysis* (OECD 1997, 1998 and 1999); country-based information submitted to seminars and conferences organised within the framework of that thematic review; commissioned papers; country reports prepared for the Education Committee's activity on Financing Lifelong Learning; comparative data assembled and reported in *Education at a Glance: OECD Indicators 1998* (OECD 1998); and published reports and articles. While the canvas of materials and experience is broad, this sector study is not a comprehensive survey of national policies or of the literature.

7. To some extent, policies already provide flexibility in pathways into and through tertiary education. Significant proportions of new entrants in tertiary education programmes come with qualifications and backgrounds other than solely general secondary school diplomas; those entering with such academic qualifications now choose tertiary-level options outside the university as well as university-based programmes. (Tables 3 and 4). In several countries, among which Japan, France and the U.K., qualifications to mark the completion of the secondary level of education have been broadened in the course of reforms over the last 10 years. In the case of the U.K., one analysis projects that National Vocational Qualifications (NVQs) and General National Vocational Qualifications (GNVQs) will overtake the standard A-levels to account for the larger share of access qualifications in the young adult population.³ Notwithstanding the development of a wider range of tertiary education options, most OECD countries witnessed growth in the first half of the 1990s in degree or diploma enrolment in universities as well as other tertiary education institutions and programmes (Table 5). But, the balance may be altered in the coming years as a result of deliberate policies adopted in some countries, Finland, Switzerland, Austria and the Czech Republic among them. In Finland, the relatively new vocationally-oriented AMK now account for about one-quarter of all tertiary-level enrolments; by 2000, the share will be about 40%, on the way to an eventual share of two-thirds. For their part, university programmes are now even more diverse in terms of intake, organisation and methods (in the French case, for example, the vocationally-oriented university institutes, *IUP*, established within universities).

8. Such diversity in provision has been accompanied, if not encouraged and enabled, by new arrangements for governance and management. Countries which had relied on highly centralised controls over study programmes, staffing and resource use moved in the 1990s to establish greater scope for decision-making on these matters at the establishment level. Legislative reforms and/or targeted measures in Austria, Belgium, Denmark, Finland, France, Italy, Japan and New Zealand reflect this tendency. Note that measures taken in several of these countries -- France, through the organisation of its contract policy, evaluation system via the *Comité national d'évaluation*, *Observatoire des coûts* and *Agence de Modernisation*, is a good example -- seek to reinforce decision-making capacities and powers at the level of the institution.⁴ Other countries, such as the United Kingdom and the United States (at federal and state levels), have taken steps to provide a framework of regulations and financial incentives to encourage tertiary education institutions with a high degree of academic and managerial autonomy to respond to publicly-determined objectives. In all countries, decisions on programmes and resources now directly reflect institution-level choices and considerations (to varying degrees, depending on the matters concerned, and shaped by if not shared with national and regional authorities, institutional staff, students and various third-parties such as employers, representatives from the wider community and donors).

9. These trends and patterns point to one difficulty in developing policies aimed at costs, resourcing and financing of tertiary education -- even concerning programmes organised primarily for learners undertaking studies toward a formal tertiary-level qualification. The flexibility and diversity introduced along with educational growth means that a financing strategy aimed at one type of programme or enrolment pattern may have different consequences for other programmes and enrolment patterns. Put more positively, financing strategies need to be mindful of the diversity of provision and participation, of pathways and linkages in a much more varied and complex web of tertiary education learning opportunities for young adults.

³ Alan Smithers and Pamela Robinson (1995), *Post-18 Education: Growth, Change and Prospect*, CIHE Executive Briefing, Council for Industry and Higher Education, London. The Council for Industry and Higher Education, a leading group bringing together business and tertiary education representatives, favours the further development and use of GNVQs as a new form of "applied advanced education", neither purely academic nor purely vocational in nature.

⁴ OECD (1998), *Redefining Tertiary Education*, Paris; OECD (1999), *OECD/Federal Republic of Germany International Conference, Redefining Tertiary Education: Report of the Conference*, Paris.

III. Costs and Financing in the Spotlight: Issues and Policy Responses from a Lifelong Learning Perspective

10. Against this background, countries have recourse to a variety of means to generate resources and to encourage their effective and efficient use. While the options have not always been considered against a broadly defined lifelong learning framework, they can be identified and assessed in the light of the issues raised in such a framework. Five issues for examining tertiary education costs and financing in a lifelong learning perspective have been identified: marshalling the resources; facilitating investment through and by learners and their families; promoting efficiency in resource use and the effectiveness of programmes; teaching and learning; financing for equity and fostering a lifelong pattern of participation.

Marshalling the Resources

11. High and in many cases growing levels of investment in tertiary education may be seen to follow from high returns arising from increased demand for advanced skills and knowledge, their productive uses in work and life, and increased likelihood of employment and higher earnings. The evidence provided in Part One of this report (Part One, Tables 10 and 11), as well as additional OECD research⁵, shows that tertiary education pays as an investment for individuals who undertake and complete studies as well as for societies and third-parties that provide financing and resources. In part because of these incentives, demand for tertiary education continues to grow. At the same time, growth to large volume participation has led to calls for qualitative development and improvement in a sector responding to diverse demand and undergoing considerable change. Together, these pressures combine in demands for a sustained if not greater volume of resources devoted to tertiary education.

12. A position underlying new financing approaches is that public expenditures from education ministry budgets are to be distinguished from overall levels of investment in tertiary education. New incentives and arrangements are being used to leverage additional funding from other sources, both through other public channels and from students, their families, employers and other third parties. In this perspective, the costs to be met are now seen more clearly to extend beyond the costs of *instructional resources* (staff, facilities, materials, equipment and the like). The tertiary education investment to be financed includes the costs of *education-related resources* (textbooks, computers, etc. and transportation) as well as the *indirect costs of student time* (usually measured by the earnings foregone during the period of study, a part of which is represented by basic living costs). These costs are incurred by the student, although often partly financed through public as well as other private sources.

13. In most countries, increased education expenditure on tertiary institutions (i.e. on instructional resources) in the 1990s has been financed through (a) increased public funding, either directly to institutions or indirectly through students to the institutions or programmes in which they enrol; and (b) increased private funding (Table 6). The importance of the two elements differs among countries, although generally private source funding accounts for a larger share of expenditure in 1996 than in 1990 (Table 7). More detailed data obtained for Japan, Portugal and the U.S. which, in different ways, impose charges on students permit a further analysis of different funding channels. (Table 8) For the countries shown, public funding for expenditures on tertiary education institutions through financial aid has increased more rapidly than direct institution funding (although financial aid still accounts for a small share of overall public funding).

⁵ OECD (1998), *Human Capital Investment: An International Comparison*, Paris; OECD (1998), *Education at a Glance: OECD Indicators 1998*, Paris: Table F8.1.

14. How have the resources for education expenditures on tertiary institutions been secured? As reported in *Financing Higher Education: Current Trends* (OECD 1990), a key policy direction observed at the beginning of this decade was a widening diversity in funding sources. That direction has been pursued through the 1990s, with innovation in approach and a broader concept of costs, financing and resources.

15. First, increased public funding has come from education budgets, but also through other Ministerial portfolios. Funding provided under research, agriculture and defence portfolios among others tends to be highly targeted, usually directed at more advanced levels and not necessarily at teaching and learning.⁶

16. Further, students or their families, and in some cases third parties, benefit from tax benefits and family allowances provided on the basis of student status. In the U.S., Canada, Hungary, Ireland and Portugal, reductions in income taxes bear some relation with tuition fees or other charges actually paid. This provides an indirect, public channel of funds to tertiary education institutions via tax expenditure. The volume of such tax expenditures -- i.e. the amount by which tax receipts have been reduced, and so the public budget has implicitly "shared" the costs of the fees and charges -- is not easy to determine. The new package of tax provisions for education expenses in the U.S. are projected to provide about US\$10 billion per year in reduced taxes.⁷ To put that figure in perspective, educational expenditures by tertiary education institutions amounted to US\$126 billion in 1996.⁸

17. A comprehensive survey of financial support for students in European countries, undertaken by the European Commission, distinguishes between two main types of public financial benefits: tax allowances, tax exemption and tax credits; and family allowances.⁹ The survey notes that, as far as students in higher education are concerned, "[most] European Union and EFTA/EEA countries have in common that they either operate both systems of cash support -- i.e. family allowances and tax relief -- or neither." For those countries offering either form of public financial benefit, families with two students could expect to realise from US\$300 to over US\$700 in tax savings and under US\$500 (Greece) to over US\$4000 (Luxembourg) in family allowances.¹⁰

18. In addition to providing a distinct channel of public funding in support of tertiary education, these benefits should provide an incentive for participation in tertiary education, and so indirectly serve to "leverage" student and family spending to meet costs not otherwise covered. Evidence on the extent to which they do induce participation and "leverage" additional student and family spending is not available. Experience with the new U.S. tax credits, while very limited, is uneven. As the tax benefit is separated in time from the moment when the enrolment decision is taken, its impact may be less than public financial

⁶ In principle, OECD statistics include funding from all ministerial portfolios for education expenditures at tertiary institutions.

⁷ The estimate refers to Hope and Lifetime Learning tax credits, aimed at helping students (or their families) meet tuition fees and charges. In the U.S. as well as other countries, other tax credits and allowances also are available to meet tuition fees, related education expenses and maintenance costs as discussed below.

⁸ Data refer to education and general expenditures, less expenditures on organised research and sponsored programmes. National Center for Education Statistics (1998), *Digest of Education Statistics*, U.S. Department of Education, Washington, D.C. EData refer to

⁹ Eurydice (1999), *Financial Support for Students in Higher Education in Europe*. Trends and Debates, Luxembourg.

¹⁰ These ranges are obtained for countries which provide benefits regardless of levels of family income; in other countries, amounts will vary according to family income.

support provided when fees and other costs need to be paid. On the other hand, systems or institutions may themselves begin to offer financing packages which take into account (and “market”) the available tax credits. North Carolina, for example, has raised tuition at its community colleges by one-third to increase students’ eligibility for the tax credits. It is estimated that about \$5 million of the new tuition revenue paid by North Carolina community college students (who subsequently benefit through lower taxes) will be used to help students who remained ineligible. More generally, it is expected that middle class students attending private colleges and universities, out-of-state students at public colleges and universities and adults returning to tertiary education are most likely to benefit. Among those who appear least likely to benefit are students in community colleges (because tuition is too low), self-supporting first-degree students (because they do not earn enough to owe federal income taxes) and students with generous financial aid packages (whose eligibility for tax breaks is offset by the amount of federal aid awarded).¹¹

19. Second, in several countries, regional and local levels of government are also participating in funding tertiary education institutions. For the OECD area taken together, regional and local sources account for, respectively, about 17 per cent and 2 per cent of public resources provided for tertiary education. Funding originating at the regional and local levels is most important in federal countries, but also of some significance in Finland, France and Japan. (Table 9). In the French case, a “contracting” policy has as one of its features a requirement that public funds from the Ministry’s budget will be provided for certain activities if universities secure part of the needed resources from regional authorities or private interests as well as through inter-institutional co-operation.

20. But, resources provided by regional and local authorities can also be the main influence to define the eventual levels and shares of funding as well as the geographic and programmatic patterns of provision in tertiary education. In the United States, there are marked differences among individual states in the levels of funding per student and, by extension, the share of the costs of instructional resources to be met by students, their families and other sources (public and private). Such variation could be extended to the U.K., where a committee of inquiry into student finance in Scotland called for abolishing for Scotland’s students the means-tested tuition fees that had been introduced in the UK in 1998. Students normally resident in Scotland and attending Scottish higher education institutions will be obliged to make contributions contingent on income after graduation. France provides another example. Under the programme *Université 2000*, which had as its aim to build up provision for tertiary education outside of Paris, regional authorities in France made initial investments to establish new tertiary education institutions. The large share of recurrent expenditures (principally, staffing) is now being met by the national government. As pointed out by one analyst, “some have argued that financial devolution is a European counterpart to privatisation”, as used in other systems to introduce greater differentiation in programme and learning options.¹²

21. Third, within the overall public education budget, resources also can be made available for tertiary education from other levels in the system. In New Zealand and the United States among other countries, secondary schools offer to upper secondary students tertiary-level course modules that can be recognised for credit toward a tertiary education qualification. There are no direct financial incentives for students to follow these courses (in some cases, there are additional course or examination fees). The implicit incentive for students is to have an opportunity to commence part of their tertiary study programmes beyond the first year course modules and, also, possibly to shorten the time to degree completion. Apart from system-wide policies in some U.S. states which may require advanced placement, there are no direct financial incentives favouring flexible placement policies in tertiary education

¹¹ Sara Hebel (1999), “Dashed Hopes for Increasing Access to Higher Education”, *The Chronicle of Higher Education*, 21 October.

¹² Guy Neave (1994).

institutions. However, such policies can be a factor in attracting students and new approaches to output funding (e.g., based in part on numbers of graduates) may introduce further incentives for institutions to take initiative in this area. By some estimates, the number of U.S. high school graduates having participated and completed course modules at the tertiary level prior to commencing their studies represents more than 20 per cent of those entering a bachelor's granting four-year colleges and universities. Not all of these students will shorten their study programmes. One U.S. study of bachelor's degree recipients within an age cohort found that those who received any credit by examination had completed on average 8 fewer credits (about one-fourth of a year's course work) at tertiary education institutions in which they enrolled than those who had no such credit.¹³

22. Fourth, resources are being made available through new or increased tuition fees or charges, paid by students, their families or third parties. Fees have featured in public tertiary education in Japan, Korea, Canada and the United States. In various forms, at different levels and offset to some degree by public student financial aid and tax breaks, tuition fees are found in public tertiary education in Australia, Italy, the Netherlands, New Zealand, Spain Portugal and the United Kingdom.¹⁴ In these latter countries, the typical amounts range from about US\$500 or less in Italy, Portugal and Spain to US\$1 000 to US\$1 500 in the Netherlands and the United Kingdom to more than US\$2 000 in Australia and New Zealand. Australia's Higher Education Contribution Scheme, introduced in the early 1990s, obliges each student to pay about one-fourth of the costs of their education. In addition, Australian tertiary education institutions enrol foreign students at full-cost fees¹⁵, and they can admit additional domestic students (beyond those admitted on publicly-funded places) on a full-cost fee basis. Available data show that for 1996, HECS revenues (net of subsidy) provided 8.7 per cent of all university revenues (including revenues from research and contract work), while other fees and charges accounted for 13.4 per cent.¹⁶

23. Private source funding through tuition fees has also been generated through system-level policies which recognise the programmes and qualifications of private, fee-based tertiary education institutions. Japan, Korea and the United States have long had relatively large provision in private sectors (both non-profit and profit-making), but private providers in New Zealand, Mexico and Portugal now account for, respectively, about 5 per cent, 25 per cent and 35 per cent of all tertiary-level enrolments. In Japan, Korea and Portugal (and to a lesser extent, Mexico), enrolments in private institutions increased in response to volume demand which exceeded the capacity of public tertiary education institutions. However, in all of these countries, private institutions have provided qualitatively different tertiary education options (covering social sciences, business and information technology fields, or offering different teaching methods, course structures and contexts for learning and student life). The effect of growth in private tertiary education enrolments on the volume of private source funding in tertiary education can be seen most clearly in the case of Portugal. For the period 1990 to 1996, the volume of tuition fees paid primarily

¹³ The data come from an analysis of transcripts of a cohort of 1980 high school sophomores who were followed up over a period of twelve years. The analysis sample included students who expected at least a bachelor's degree. The credits refer to those earned at recognised 2- and 4-year institutions and some specialised institutions which offer bachelor's degrees or courses creditable toward a bachelor's degree. National Center for Education Statistics (1998), *Credit Production among Bachelor's Degree Completers*, Washington, D.C.

¹⁴ See, for example, Eurydice (1999), *Financial support to students in higher education in Europe. Trends and debates*, Luxembourg.

¹⁵ This policy applies also in the United Kingdom, for students from countries outside the European Union. In the United States, public tertiary education institutions typically charge near full-cost tuition fees to out-of-state and foreign students.

¹⁶ Tom Karmel (1999), *Financing Higher Education in Australia*, Occasional Paper Series 99-D, Department of Education, Training and Youth Affairs, Canberra.

to private tertiary education (net of student financial aid) increased at an estimated average annual rate of 29% per year (Table 8).

24. In most OECD countries, policies concerning fee-supported private tertiary education are in a period of development or evolution. Positions vary, from relatively little policy interest in many countries to:

- highly targeted policy interest, through, for example, recognition of and very limited public funding to specialised private institutions in some German *Länder*;
- relatively benign policy interest, for example in Mexico and Portugal where private tertiary education institutions are expected to seek approval for curricula, resources are available for upgrading staff qualifications, and in Portugal, students in private tertiary education institutions are eligible for student financial aid (recently increased);
- more strategic policy interest, for example in New Zealand where recognised private training establishments are now eligible for some public funding for the students they enrol and their students have access to financial aid, or in the U.S., where students enrolled in programmes offered by profit-making private tertiary education institutions (some now in close competition with long-standing public and private, non-profit institutions) are eligible for federal financial aid, including those following studies through new private, technology-based provision at a distance.

25. Whatever the present policy stance, countries may wish to give further attention to how private providers and provision of tertiary education could be used to harness resources in support of tertiary-level learning.

26. Fifth, other sources of private funding for education expenditures at tertiary-level institutions are also used, and in some cases favoured by public policies. Publicly-supported tertiary education institutions in many countries -- Belgium, Finland, the Netherlands, the U.K., Australia, New Zealand and France being only some examples -- now have the scope and increased capacities to enter into contracts with private entities for research, contract teaching and specialised services. Such arrangements generate funds which support shared overhead costs (administration, facilities, libraries), but also can be exploited to more directly support the instruction function (as when course contents and learning aids developed for contract teaching can be drawn upon for regular study programmes).

27. External resources can also be secured “in-kind”, as is the case when study programmes are organised to better take account of learning through structured work experience. While such approaches are not new, the volume and variety are growing: France’s *Instituts universitaires professionnalisés*, the U.K. Enterprise in Higher Education initiative, Virginia’s (U.S.) inter-institution/inter-sectoral co-operation in the Jefferson Labs particle-beam accelerator facility and Germany’s possible further development of a kind of dual-system option within higher education and of increased use of co-operative education programmes are some examples. Public funding is used in some countries to encourage tertiary education institutions and their partners to develop such initiatives. Commonly, the funding does not cover the full cost of resources provided by the business, industry or agency partner. While the numbers of students already participating through formal arrangements has grown, the possible scope for leveraging “in-kind” resources is in principle even larger if tertiary education institutions took steps to provide more opportunities for all students who work to learn in the “environment” of the workplace as part of their study programmes,

28. Sixth, countries can exploit resources available outside national boundaries. “Outbound” free-mover students, facilitated in their mobility in Sweden and some other countries by financial aid which supports travel as well as living costs overseas, draw upon instructional resources provided at the host

institution in the receiving country. Countries which send more students than they receive have access, on balance, to additional resources (to the extent these are not paid for through tuition fees or charges).

29. These varied means to secure resources for tertiary education are not new. What is new is a much greater sharing of financial and resource flows through the different means and channels; the incentives introduced through public policies to encourage that sharing; and a view of resources that extends beyond institution finances alone. Opening up thinking about resourcing in these ways introduces both benefits and risks. In its evolving policy concerned with the resourcing of universities, the Ministry of Education in Finland recognises the benefits and has taken some steps to minimise the risks: “In a time of dwindling public finances, the narrowness of the financial base is a liability. The aim is to widen this base by increasing private funding and other financing not channelled through the Ministry of Education. ... Although Ministry of Education steering covers only activities financed from the State budget, it has been agreed with the universities that external funding, too, should promote objectives set for them.”¹⁷ In one country participating in the Education Committee’s thematic review of tertiary education, the approach was described as “working with the grain and harnessing employers ...” That is a more strategic view of the use of public finance, moving in the direction of a wider partnership in mobilising resources for tertiary education.

Facilitating investment through and by students

30. In nearly all countries, there is growing interest in and experience with ways to assist students, their families and third parties finance the *learner’s costs*, i.e. tuition fees and charges, costs for education-related resources and student maintenance. With the introduction or increase of tuition fees in some countries and a leveling or reduction of public grants, allowances or in-kind support, a greater share of these costs must be covered out of students’ own earnings, savings or other family or non-family sources or through loans. Measures exist in most countries to encourage and enable students and their families in financing these costs over time.

31. Countries enter this policy field from different starting points on several dimensions. First, countries differ in the extent to which students (or their families) should be expected to cover the costs of instructional resources (via tuition fees and charges). In the Nordic countries in particular, these costs are to be met out of the public budget and, essentially, each generation finances through taxes the costs of tuition for the generation which follows. Second, students and their families in nearly all countries are expected to cover all or part of the costs of education-related resources and maintenance (with grants or allowances to offset part of those costs, in some measure related to student and/or family income and wealth). So, even in the Nordic countries which aim to provide sufficient financial support to permit each student to undertake and complete tertiary-level studies under satisfactory conditions, part of this financial support is provided in the form of a student loan. Third, countries differ in the share of these costs that are expected to be covered by students or by parents and third parties. In the U.S., students who are judged dependent are assumed to receive a contribution from their parents toward tuition fees, living costs and education-related expenses. In the Nordic countries, in contrast, students are considered independent of their parents. Contributions toward tertiary education expenses are not expected from parents, nor are they provided with family allowances or tax benefits arising from the student status of their sons or daughters.

¹⁷

Ministry of Education (1996, 1998), *Higher Education Policy in Finland*, Helsinki.

32. Means to enable students (or parents) to spread the learner's costs into the future have been established or expanded in nearly all OECD countries. The forms and terms are varied, and the listing that follows does not cover all details concerning the programmes mentioned:¹⁸

- mortgage-type loans, on or near market terms, in Finland;
- mortgage-type loans, with interest subsidies or deferments during the in-school period, guarantees for private lenders against the risk of default, forgiveness of principal and interest due for entry into certain jobs or in the event of death and tax breaks for those in repayment, in the United States and Canada;
- income-contingent repayment arrangements (threshold for payment, payments linked to income, etc.), at various rates of interest in Australia, Germany, Italy, the Netherlands, New Zealand, Sweden and United Kingdom;
- mortgage-type loans, on or near market terms, undertaken by parents in Japan and the United States.

33. A dilemma concerning the amount of private source funds generated through student (or parent) loan options is how to make the terms sufficiently attractive to bring students and their families (and, in some countries, private financial institutions) into the programme. Those inducements, in the form of preferential interest rates, forgiveness and guarantees, shift some of the actual costs of the loan programme onto the public budget. Estimates of the implicit subsidies in student loan programmes range from 10 per cent to 50 per cent of the volume of loans originated, in New Zealand and the United States, respectively.¹⁹ However, owing to the limited experience with and varied features of the different loan options, it is not easy to evaluate implicit subsidies (especially those related to income-contingency provisions).²⁰ This is an area where further information and analysis are needed.

34. A related issue is whether students incur obligations that will be difficult for them to repay, and so affect subsequent lifecycle choices. In New Zealand, the Ministry of Education, Treasury and Internal Revenue Department used a micro-simulation model to gauge impact of its income-contingent student loan programme, and found that some graduates would enter a “flat-spot” when their repayments were insufficient to reduce the loan principal. In Canada and the United States, concerns about graduates being unable to repay large debts motivated changes to make repayment more manageable (among which, a tax credit on interest payments and in the Canada Student Loans programme, interest write-off, extended repayment and partial debt reduction for those with relatively low income). One recent analysis of the Canadian experience and policy changes finds that, historically, student loan repayment problems have not been widespread, and indeed that there is evidence that some students had capacity to manage even higher debts. The authors go on to caution, however, that the conclusions are based on experience with borrowing

¹⁸ Eurydice (1999), *Financial Support for Students in Higher Education in Europe*. Trends and Debates, Luxembourg; OECD (1998), *Education Policy Analysis 1998*, Paris.

¹⁹ See, also, Douglas Albrecht and Adrian Ziderman (1992), *Deferred Cost-Recovery for Higher Education: Student Loan Programs in Developing Countries*, World Bank paper no. 137, Washington, D.C.

²⁰ One problem, in at least some forms of loan or deferred payment arrangements with income-contingency provisions, is to ascertain the value of the overall portfolio (including its risk). See D. Bruce Johnstone, Alka Arora and William Experton (1998). *The Financing and Management of Higher Education: A Status Report on Worldwide Reforms*, The World Bank, Washington, D.C.

and repayment under lower limits and other conditions of the decade to the mid-1990s. The effects of higher limits and accumulated debt would need to be monitored.²¹

35. Policy measures have been introduced to encourage parents and others to save for or contribute to tertiary education expenses. The United States has probably gone the farthest in developing means to encourage earmarked savings. Surveys indicate that fewer than half of families with young children (under twelve years old) have saved for tertiary education expenses, and of those who do save, about one-third do so in regular savings accounts or mutual funds.²² Relatively new pre-paid tuition plans operate much like life insurance: for a contract price, the pre-paid plan guarantees to pay the cost of tuition fees of the student beneficiary at the moment he or she enrolls in tertiary education. The plan can be initiated by the parents, grandparents or third-parties such as employers. New earmarked savings vehicles (so-called Education IRAs) allow parents to contribute to a plan in which the sums accumulate tax-free, and tax is not due on distribution of the proceeds provided that they are used to cover tertiary education expenses. Although there has already been some take-up of the opportunities afforded in these plans, it is too early to judge whether they have stimulated (or will stimulate) additional savings or foster increased access or wider choice (as opposed to simply a new sharing of costs between students, parents, employers and government).

36. Experience with Australia's Higher Education Contribution Scheme and postgraduate fees provides some indication of how these specific obligations are being shared. Under the HEC scheme, a student may elect to pay the annual contribution up-front (at a 25 per cent discount). More than one-fourth of students with a HECS obligation pay up-front. About half of the volume of up-front payments were covered by students' own savings; family members and employers provided about one-third and one-eighth of the volume, respectively. About two-thirds of the funds for payment of postgraduate fees came from students' savings, with employers and family members accounting for one-sixth and one-twentieth of the total. An important conclusion to be drawn from the findings of the study is that, for about one-fourth of students, financing this charge up-front does not pose a major problem: students and their families appear willing to do this to avoid re-paying higher amounts later on. Indeed, the decision to finance up-front HECS payments appears to be highly sensitive to the discount rate applied to such payments and to the real interest rate.²³ What is not known, however, is how the shares (and levels) of student and family spending for all learner's costs, including maintenance and education-related costs, are affected by up-front HECS payments. Specifically, the data do not show whether such up-front payments encouraged more financial support from parents (or third parties) or whether they simply shifted support by parents from other components of the learner's costs to the Higher Education Contribution.

²¹ Ross Finnie and Saul Schwartz (1996), *Student Loans in Canada: Past, Present and Future*, C.D. Howe Institute, Toronto.

²² A study carried out by the Institute for Higher Education Policy found that parents in the U.S. are covering a smaller share of their children's tertiary education costs than in the 1980s. Given relatively high levels of student debt and pressures on public budgets, contributions from parents (as well as grandparents, other relatives and employers) may be one of the few sources left to be tapped. Such increases would represent a return to a balance in financing which existed in the 1980s between parent, student, public sources and private, third-party private sources. See D. Bruce Johnstone (1986), *Sharing the Costs of Higher Education*, The College Board, New York.

²³ Simon Smith, Carey Ramm and Rebecca Archbold (1998), "Investigation of the Source of Funds for Up Front Higher Education Contribution Scheme (HECS) Contributions and Postgraduate Fees Paid by Australian Students", *EIP Report* No. 98/12, Department of Employment, Education and Youth Affairs, Canberra.

37. The extent to which students may cover expenses out of current resources rather than through debt is also shown in results of a survey in Sweden.²⁴ Most Swedish students are eligible for study support, provided partly in the form of a grant and partly in the form of a loan repayable as a percentage of income but with the outstanding principal increased to reflect the cost of the funds advanced (interest rate). Students can choose whether to accept all or part of the loan. In 1994/95, about one-quarter of students receiving grants chose not to borrow through the programme.

38. The Australian and Swedish survey data also show that, even where the financing arrangements exclude parents, relatives and other third parties from a formal obligation to meet part of the learner's costs, a good share do help to cover those costs. In Sweden, where students are considered to be independent of their parents, about one-sixth of students reported receiving support from parents. In contrast, parent and family support is expected in some countries. This is implicitly the case where the amounts of grants, loans (or more favourable terms on loans) or tax breaks take into account family as well as student income and/or wealth. In this connection, the Dutch government has changed its policy. The role of parents in the financing of their children's study costs is explicitly acknowledged. The policy does not oblige parents to cover the student's share of study costs in any specific way; rather it calls for providing information to parents about the system of study grants and loans and seeks to assist parents to make financial arrangements for study costs with their children. The obligation for those who benefit (the graduates) to pay already applies to a greater or lesser extent in a number of countries, through progressive taxation of income. That obligation can be strengthened through a graduate tax, which is applied to those who have participated or completed studies and cannot be avoided.

39. The lending and savings initiatives developed to facilitate financing through and by students leads into new territory, where the effects of different programme design features and the greatly increased scale of borrowing/payment obligation will call for close monitoring.

- The income contingent repayment (and forgiveness) provisions would seem to encourage, relative to other debt finance arrangements, an incentive for older adults lacking resources to participate as they need not rely on certain earnings returns over many years to repay the funds advanced.
- Income contingency also appears to reduce the strong incentives in mortgage-type loan arrangements to choose fields which offer prospects of high earnings returns. On the other hand, there is some indication that students (and their families) choosing these fields may “opt out” of a deferred income-contingent financing arrangement because the likely stream of payments would be relatively high (the problem of adverse selection). Much depends on terms.
- When a large share of an age group pass into and through adult life with large education debt burdens, there are questions about the wider impact on lifecycle consumption and investment decisions (including investment in learning throughout adulthood, and in the learning of other family members).
- Questions also arise about the actual public budget costs of the subsidies associated with various repayment arrangements, including the costs associated with the involvement of commercial lenders.²⁵

²⁴ National Agency for Higher Education (1998), *Costs of Study, Student Income and Study Behaviour in Sweden*, Stockholm.

²⁵ See, e.g., Ross Finnie and Saul Schwartz (1996), *Student Loans in Canada: Past, Present and Future*, C.D. Howe Institute, Toronto; also, Michael S. McPherson and Morton Owen Schapiro (1991), *Keeping College Affordable: Government and Educational Opportunity*, The Brookings Institution, Washington, D.C..

40. These questions notwithstanding, paying for tertiary education over the life cycle may well be a key future development, in which options for earmarked savings in advance of, and repaying costs in periods after, participation will be more fully explored and implemented. The elements already exist, in various forms, in several countries.

Limiting Expenditure Growth and Improving Effectiveness: Two Sides of Efficiency

41. In many OECD countries, new financing approaches have been adopted specifically with the intent to encourage improvements in efficiency. The most direct approach is to introduce means to drive down expenditure per student or expenditure per earned qualification. But, some countries have viewed resource issues in tertiary education more as a question of effectiveness, in which measures need to be taken to improve student choices and to provide more appropriate contents, methods and contexts for teaching so as to improve learning. The Swedish country report submitted to the Education Committee's activity on Financing Lifelong Learning makes a general argument about resource requirements and use in lifelong learning, noting that "the purpose should be to raise the quality and accessibility of education and to adapt tuition to the needs of the student. ... It is not a question of insufficient places." The Finnish country report makes a similar point: "... enrolment rates in education and training are very high already. The political commitments, therefore, focus on improving the quality and structure of education and training rather than expanding enrolment [with specific exceptions]."

42. Both views -- to drive down unit costs variously defined and to improve the effectiveness of programmes and teaching -- already are reflected in new financing approaches. In some cases, measures intended to improve effectiveness may have as a consequence a reduction in unit costs within the tertiary education sector (e.g., in the case of reduced rates of failure and delayed drop-out). In OECD countries for which data on education expenditures at tertiary-level institutions and tertiary-level enrolment are available over the first half of the 1990s, the trend has been a dampened rate of increase (or even decrease) in expenditure per student. The overall increase in tertiary education expenditure, from public and private sources combined, lagged enrolment growth so that per student expenditure grew less rapidly than did student numbers. (Table 10)

43. These figures do not refer to public support for students. In Denmark, Finland and the United States, among other countries, steps have been taken to rationalise funding provided through diverse channels (social welfare, student financial, and tax breaks), so that the available funds together promote policy aims.

44. What financing measures have been used to promote improvements in efficiency and effectiveness? Again, approaches and experience vary among countries.

45. First, countries have moved to consolidate or rationalise provision at the tertiary level. Australia and Belgium (Flemish Community) encouraged this direction through institution funding criteria which required a minimum scale. In the Flemish case, restructuring in the colleges of higher education sector led through mergers to a reduction in the number of institutions from 160 to 29.

46. Second, a few countries adopted policies that required tertiary education institutions to hold down or reduce educational expenditure per student. For several years, the annual grants to U.K. institutions (after taking into account general price increases) incorporated reductions corresponding to "efficiency improvements" of 1.5 per cent. A similar requirement was imposed out of necessity in Finland, when overall public revenues decreased dramatically in the midst of a severe recession in the early 1990s. The funding approach used in New Zealand had the same effect, even if its origins were different. In a period of rapid expansion in enrolment, public funding per student decreased as a share of the established unit

cost (EFTS). While the new financing policy permitted institutions to fill the gap with tuition fees, some institutions chose not to charge fees or to impose fees at a level below that needed to make up the difference. In all of these countries, it is the intention of policies to leave to each institution the decision of how to organise teaching and learning with a lower average unit resource (in real terms).

47. Third, in a number of OECD countries a larger share of public funding is now allocated on the basis of “throughput”- or output-based criteria. The most common shift is to provide funds on a per student basis, often taking into account differences in costs among fields, levels and modes of study. Where such approaches have been implemented, institutions are afforded considerable discretion in how funds are to be allocated and how resources are to be deployed.²⁶ The forms and criteria vary among countries, and depart from simple per student funding allocations. For most of the 1990s, New Zealand has used a partial bidding process for funded places. The overall unit resource was established in advance. However, those institutions with enrolments that increased or exceeded the volume agreed for the prior year fared better in the allocation of places for the current year. That approach has now been replaced by an enrolment-driven formula (with no cap). Funding for colleges of higher education in Belgium (Flemish Community) is moving toward a primarily enrolment-driven formula, in principle provided within a fixed budget envelope (adjusted annually in line with prices). As enrolments shift among institutions, so too will the resources; if enrolments in the sector increase, the unit resource provided out of the public budget would fall. However, in the initial period of implementation of the financing reform, special allocations have been made to colleges experiencing particular difficulties in adjusting to sweeping consolidation in the sector and shifts in student enrolments.

48. Some countries rely on ever more detailed output or performance criteria. Under Denmark’s “taximeter” principle, for example, funds are allocated to tertiary education institutions according to the volume of *passed* examinations. Institutions are not funded for students who, even though they may have followed a study programme over the course of the year, fail their end-of-year examinations. Sweden combines funding of student enrolment with funding of credit points earned. Other countries have introduced performance criteria into formula funding, most typically in the form of a share of revenues based on the number of earned degrees in Finland, Norway and also Sweden. All of these countries back up performance-based funding with quality assessments of various types. One comparative study of system-wide performance-based formula funding provides details on the types of approaches used in seven countries (Table 11), and identifies issues to be considered in evaluating and extending such approaches: possible distortions or unintended consequences; what standard or standards are to be used; how value added is to be taken into account; and how diversity in programmes is to be recognised and promoted.²⁷ These issues are to some extent addressed in a more flexible process of budget negotiation or contracting, as used in Finland, France and Sweden. Under this approach, expected outputs are specified and agreed, funding is committed over a 3 or 4 year period, and performance is monitored. Such arrangements account for about one-fourth of the resources provided through France’s Ministry of Education, Research and Technology to tertiary education institutions.

²⁶ The choices are constrained by health, safety and employment regulations. Further, steps have been taken or proposed to ensure that institutions actually pay for the resources used. A specific example is the proposal advanced in New Zealand for “capital charging”, which would require institutions to pay out of their funds the annual costs of using the facilities. An allocation for such costs would be included in the funding provided to institutions; the thinking behind the proposal is that facilities will be more effectively used and maintained if institutions are obliged to pay for them.

²⁷ See Don Anderson, Richard Johnson and Bruce Milligan (1996), *Performance-based funding of universities*, Commissioned Report No. 51, Higher Education Council, National Board of Employment, Education and Training, Canberra. Also, the set of articles in a 1996 issue of the OECD’s *Higher Education Management*, vol.8, no. 1.

49. The contracting policy in Finland, and a related “profiling” policy in Australia, has also had the effect of encouraging the development of some differentiation and specialisation within institutional segments and so allow institutions to build up average enrolments in the study programmes in specific fields. An effort aimed at achieving such a result was launched in Belgium (Flemish Community).

50. Fourth, several countries have taken steps to hold down the accumulated costs of studies leading to qualifications. Comparative data show that some countries have relatively large expenditures when the average duration of studies is taken into account, even though annual per student expenditure is not high. (Table 12) One policy approach is to introduce incentives to encourage students to engage in their studies and move rapidly toward degree completion. Tuition fees provide such incentives, although the simple association between student and family expenditure on tertiary education (including as well as net of student financial aid) and the duration of studies appears to be weak.²⁸ New approaches incorporate different policies for fees and for financial support linked to them: uniform or differential fees, as established by individual public as well as private institutions in New Zealand, financed through income contingent loans; means-tested uniform tuition fees in the United Kingdom, paid through parental contributions; and deferred, income-contingent, differential student contributions in Australia. Each gives rise to its own combination of incentives.²⁹

51. Adjustments in eligibility for grants and allowances also introduce incentives to hold down the duration of studies. The Dutch case is illustrative: early in the 1990s, a student received a “time-related” allowance which required repayment, unless he or she completed one half of the first year’s study programme and acquired the degree within five years (for most programmes). The criteria were changed in 1996-97. A student commencing in that year was provided with an “achievement-related” allowance which required repayment, unless he or she did not graduate in six years.³⁰ The new policy shifted the emphasis from year-to-year progress to degree completion.

52. Fifth, countries that have introduced or expanded short-cycle tertiary education options distinct from regular university-based study programmes may on balance realise more modest increases in expenditure per qualification. These short-cycle options are not necessarily less expensive than university studies, when evaluated on an annual per student basis. In France, for example, per student expenditures on the short-cycle options available through advanced technician sections or vocationally-oriented university institutes of technology are 25 to 35 per cent higher than on university study programmes.³¹

²⁸ OECD (1998), *Education Policy Analysis 1998*, Paris.

²⁹ In comparing countries on a set of economic criteria applied to tuition fee and associated financial support policies in Australia, New Zealand, the United States and the United Kingdom, one analysis concludes that New Zealand has the financial incentives about right: sufficient discretion for individual institutions to set tuition fees, a well-conceived income contingent repayment option at near-market interest rate, and sensible treatment of lending in public accounts. No policy mix is without weakness or some unintended consequences, and other considerations might be taken into account in assessing policies. This analysis, however, is particularly useful for setting specific criteria against which policies for tuition fees and financial aid policies can be judged. Nicholas Barr (1998), “Higher Education in Australia and Britain: What Lessons?”, *The Australian Economic Review*, Vol 31, no. 2, pp. 179-88. Also, Nicholas Barr (1999), “Approaches to Financing Tertiary Education: What Can Be Learned from an International Perspective?”, presentation to the National Symposium on the Reform of Higher Education in Egypt, Cairo, 24 June.

³⁰ The allowance is available for four years, with access to loans for additional years of study.

³¹ Ministère de l’éducation nationale, de la recherche et de la technologie (1998), *Rèperes références et statistiques sur les enseignements et la formation*, Édition 1998, Paris. Expenditure data for advanced technician sections include spending on preparatory classes for entrance to the *Grandes Écoles*; university expenditure data exclude IUTs and engineering programmes attached to universities.

However, such programmes often are designed to be of shorter duration (or to be organised in such a way that students progress through to earned qualification in fewer years), and so lead to lower total costs for a qualification.

53. Sixth, co-operation in programmes, teaching and learning within and across sectors of tertiary education represents another way to hold down annual unit costs as well as costs for the average duration of studies. Examples of such co-operation may be found in articulation agreements between community colleges and bachelors' degree granting institutions in the United States; programmes offered jointly by some private universities and special training colleges, which lead to qualifications from both institutions, in Japan; and franchising arrangements between universities and further education colleges in the United Kingdom. However, other forms of inter-institutional co-operation may benefit from more directed incentives and supporting conditions, to overcome the possibility of a type of "prisoners' dilemma": the sum of effectiveness and efficiency gains to be realised by institutions from maintaining competitive positions is less than the gains to be realised for the system from co-operation, yet individual institutions are reluctant to pursue the potential gains from co-operation if it is perceived to place at risk certain gains from the current position or to foreclose the potential gains from squeezing out the competition.

54. Seventh, it is argued that efficiencies may be achieved through the use of information and communication technologies, both to hold down unit costs and to maintain if not improve learning outcomes. Reliable figures are hard to come by, but preliminary and very approximate calculations based on data provided in four countries (Japan, United Kingdom, United States and Australia) suggest that the on-budget costs of ICT-based distance learning approaches could be in the region of one-fourth to one-third of the per student costs in on-campus study options. These estimates need to be treated cautiously, as the populations served and programmes provided differ in important ways; costs may not be so much reduced as shifted from institution budgets to learners; and learning outcomes attributable to ICT use in distance learning have not been gauged.

55. Eighth, other policy measures provide incentives for institutions and programmes to improve the effectiveness of teaching and learning through measures which reduce failure and facilitate progress within and between study programmes. A possible consequence is reduction in the average duration of studies to a qualification.³² Among the examples:

- Initiatives in France aim to re-direct young people, starting in secondary schools, with substantial and highly accessible information about study opportunities and career options and, in the course of the first year of tertiary education, through a curriculum which permits some "sampling" of subjects (with, as yet, limited results).
- The Ministry of the Flemish Community in Belgium introduced a "10-point plan" which calls for improvements in preparation, counselling and information to students and teachers at the secondary level, and to encourage adaptations in tertiary-level programmes, teaching and learning. Five per cent of staffing resources is to be applied toward supplementary support of student learning in the first year. The Ministry judged the initial implementation of the plan to be weak, and has endeavoured to re-launch it.
- In the Netherlands, a substantial effort is being undertaken to produce a volume on "Guidance in Higher Education". The publication gives marks for each institution based on student evaluations and review committee findings, on the quality/dedication of teachers and quality of courses. The Ministry aims to draw up ranking lists showing various aspects of each institution: objectives/attainment of targets; study ease, correspondence with the labour market; international

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While improved effectiveness may help to reduce the average duration of studies, the overall volume of teaching and learning in tertiary education could increase to the extent that more students are encouraged to participate and more students complete their study programmes.

quality management; quality of staff; and graduation rates. Separate measures, through the “Quality and Study Ease” bill, place responsibility on institutions to guarantee their students that they can finish their study programme within the formal duration of the course. If students fail to finish because of barriers by the institutions, they can hold the institutions responsible for the extra costs. Mutual obligations are laid down in the “student by-laws, new style” which students receive on registration.

56. These initiatives are partly supported by earmarked or targeted funding; targeted funding is often provided on a competitive basis. Examples include: Australia’s Committee for University Teaching and Staff Development and Higher Education Innovation Programme; the Netherland’s Study-Ease Enabling Fund (among others); Japan’s Educational Research Centre; Sweden’s Council for the Renewal of Undergraduate Education within the National Agency for Higher Education and Virginia’s Centre for Innovative Technology.

57. Finally, attention should be drawn to policies introduced to provide more flexible recognition of prior learning, either through advanced placement, credit by examination or qualifications frameworks. New Zealand aimed, through its Qualification Framework, to recognise learning judged to meet agreed and approved “outcome” standards, for those who have mastered the identified skills or competencies. The approach has evolved into a flexible arrangement, in some respects similar to Ireland’s new Qualifications Authority. The latter takes as one of its principles to facilitate access, progression, transfer and mobility. One possible consequence is reduced study time.

58. New financing approaches have made students and their families as well as tertiary education institutions more sensitive to resourcing and resource use, and initiatives advanced through targeted funding have directed attention at the institution and programme level to specific adaptations in study programmes. Nonetheless, the incentives introduced through financing have not in all cases had their intended results: some are too recent to assess or very limited in their reach, others have had limited effect. The Dutch data indicate a range of policies in the Netherlands already has reduced the duration of studies, with some of the more recent initiatives just described yet to have their full impact.³³

Financing for equity

59. An important consideration, in the perspective of lifelong learning, is the extent to which new financing arrangements encourage and enable participation by all. Funding for growth should open up possibilities for participation and choice among options, particularly for those from groups currently under-represented in tertiary education.

60. A host of factors affect rates of participation, so it is not easy to separate out the role played by financing directed at students and their families or at institutions. In some respects, recent Australian experience provides a good case study: the numbers of students of low-socio-economic status (SES) have increased in proportion to the 30 per cent growth in enrolment over the first half of the 1990s, but their share of enrolment in 1996 stood at 15.5 per cent, about the same as in 1990.³⁴ This period coincided with the implementation of the Higher Education Contribution Scheme. Data for Sweden provide a similar picture: the share of new students, aged 21 or younger, from homes with junior level white-collar or unskilled workers in 1994-95 was unchanged from the 1987-88 share. Over this period, new entrants (all

³³ See The Netherlands’ Ministry of Education, Culture and Science (1999), Education, Culture and Science. Facts and Figures 1999, The Hague: Tables 2.6.5, 2.6.6, 2.7.5, 2.7.6.

³⁴ V. Lynn Meek and Fiona Q. Wood (1998), *Managing Higher Education Diversity in a Climate of Public Sector Reform*, Department of Employment, Education, Training and Youth Affairs, Canberra.

ages and backgrounds) increased by about 40 per cent.³⁵ Trends in participation rates, based on country-based information, suggest that while rates of participation for young adults from low social and economic backgrounds increased, they have also increased for all groups. (Table 13) The result is a distribution of students, as the Australian and Swedish data suggest, which looks about the same in terms of social and economic background as before the expansion.

61. Detailed studies, in Australia and Sweden, explore the extent to which patterns of participation are associated with financing and resources. In the Swedish case, the study allowance is judged to have contributed to increased participation from all groups, with stronger increases from the higher social groups. In Australia, the introduction of the Higher Education Contribution was judged to have decreased applications from school leavers by about 14 per cent, but to have no significant affect on mature age applicants. However, changes in HECS criteria in 1996 (increase in the rate, differential rates by course, a lowering of the income threshold at which repayments commence) had little effect on school leavers, but reduced mature age entrants (applications fell in the two years to 1998 by 11 per cent).³⁶ The Dutch country report submitted to the Education Committee's activity on Financing Lifelong Learning goes further, in providing an assessment of the reasons why some young adults might be dissuaded from participation: "graduates of secondary education from lower social background expect a higher debt, and find a lower debt acceptable than graduates from higher social backgrounds. This suggests that young adults from lower social backgrounds, in the face of rising study debts, will sooner decide not to participate in higher education." Aversion to debt, by students and parents seeking to minimise the educational debts of their children, was identified by the Scottish Independent Committee of Inquiry into Student Financing as a significant barrier to access and the cause of financial difficulties for families with dependent spouses.

62. If the form of financial aid affects enrolment and progress, so too might the rules governing eligibility. In this respect, the operation of student support schemes in Denmark and Belgium (Flemish Community) can be contrasted. In Denmark, students are entitled to twelve terms of support, available for any term in which they take up studies. Eligibility does not depend on performance in any given year; students who may fail all or part of end-of-year examinations may receive support in the next year. In the Flemish case, students receive bursaries so long as they maintain progress in their studies (succeed in end-of-year examinations in the previous year). They are not supported when "repeating" a year; the bursary is reinstated once students have successfully completed the year in question and progress to the next year in the study programme. The sums involved are modest, but they are likely to be more important for students from lower income families.

63. A recent analysis of the U.S. experience is instructive and revealing.³⁷ According to its authors:

- The most striking trend is the steady decline through 1980 in the overall share of tuition costs paid by families, the result of an increase in the enrolment share of public institutions (a declining share of enrolment in private institutions), the growth of federal grants and contracts and the rise in financial aid. However, the decline in the share of higher education revenues provided by

³⁵ National Agency for Higher Education (1998), *Costs of Study, Student Income and Study Behaviour in Sweden*, Stockholm.

³⁶ National Agency for Higher Education (1998), *Costs of Study, Student Income and Study Behaviour in Sweden*, Stockholm; Les Andrews (1997), *The Effects of HECS on Interest in Undertaking Higher Education*, Department of Employment, Education, Training and Youth Affairs, Canberra.

³⁷ Michael S. McPherson and Morton Owen Schapiro (forthcoming, 2000), "Trends and Patterns in Participation and Financing in U.S. Higher Education", *Higher Education Management*, vol. 12. See, also, Michael S. McPherson and Morton Owen Schapiro (1998), *The Student Aid Game*, Princeton University Press.

families came to an abrupt halt in the 1980s, with the family share increasing by 9 percentage points in the 1979-80 to 1994-95 period (reaching the highest level -- 23% -- since before 1959-60).

- Taking into account student financial aid subsidies over the period 1986-87 to 1992-93, actual tuition fees paid by students increased in real terms: \$4 232 versus \$4 756 for high income students; \$3 656 versus \$4 307 for middle income students; and \$2 247 versus \$3 263 for low income students. [But, the] recent pattern of declining real funding for federal grants coupled with rapid expansion in subsidised loans ... clearly moves support away from low income students and toward the middle class.
- The finding that only 49 per cent of young adult middle ability students from low income families and 75 per cent of high ability students from low income families advance to tertiary education -- compared with 80 per cent and 95 per cent of students from the high income group -- is worrying. [And] the enrolment rate for low income students from the highest ability group failed to increase from its 1961-63 level (60 per cent) ... to 1980 (58 per cent).
- The existing financing system may be less successful in providing a suitable tertiary education experience for many disadvantaged students. The range of alternatives appears to be quite sharply constrained by their incomes under existing arrangements. ... Over time, there is an increasing concentration of young adult lower income students at community colleges. We are now at a situation where only one of eight first-time lower income students enrolled anywhere in U.S. tertiary education is at a medium or highly selective bachelors' degree granting institution. Attendance at such institutions carries with it a number of advantages: more selective colleges and universities -- which disproportionately attract affluent students -- provide the largest subsidies in U.S. tertiary education.

64. A somewhat similar pattern of access to financial support for students arises in the French case. An analysis of costs and sources of support showed that students from lower social classes received about FF 1 000 per month in the form of direct cash and in-kind public support; the comparable figure for students from higher social classes was about FF 300 per month. When tax breaks available to parents are taken into account, the differences in levels of financial support for students narrows. Total public support for lower versus higher social classes amounted to, respectively, about FF 1 200 and FF 900 per month.³⁸

65. Efforts to improve participation from under-represented groups has also taken the form of siting new institutions in regions or areas characterised by low participation rates. This approach has been widely used to boost participation from rural areas or regions distant from urban centres, in such countries as Australia, Sweden and Belgium (Flemish Community). An important new development is the selection, as part of access policies, of urban sites for new institutions. This is the case in Sweden, where new institutions have been sited in parts of Stockholm where participation rates are relatively low. Similarly, the University of Western Sydney (Australia), although comprised of pre-existing educational institutions, has developed in the outskirts of a city seemingly well-served by tertiary education institutions. Its campus sites, however, are in areas where participation rates have been low.

66. Some countries use financial incentives, either as an obligation within regular funding means or through targeted funding initiatives, to develop and report on specific initiatives to improve access and success of under-represented groups. In Australia, each institution is required to develop equity plans, which are monitored along with performance for the system as a whole, and funds are set aside on a competitive basis to fund institution-level efforts. In Finland and the United States, institutions have the possibility to allocate at least some financial support on the basis of assessments of the circumstances of individual students. The judgements on whether and how much individual students should receive

³⁸ Data taken from Jean-Claude Eicher and Louis Gruel (1996). *Le financement de la vie étudiante*. La documentation Française.

expertise at each institution, are less transparent (and so less likely to be effective as incentives) and may be affected by aims other than access and success from under-represented groups. For these reasons, subsidies available to students regardless of where they enrol can be seen as an important incentive to attract additional support from institutions.

67. Two key conclusions to be drawn from country experiences are that (i) funding for expansion will not necessarily improve the representation of disadvantaged groups in tertiary education; and (ii) investments in schooling or targeted allocations in tertiary education for information, guidance and programme adaptations may be needed.

Fostering a lifelong pattern of participation

68. From a lifelong learning perspective, tertiary education can be viewed as a set of learning options available over a lifetime. The emphasis on learning acknowledges the demand for and interest in mixes of qualifications and the potential value for some students to spread participation over time. In a limited way, financing policies adopted in some countries have advanced and promoted such patterns. However, this remains an area for further policy reflection and development.

69. In most countries, funding policies either limit financial support to students to one programme or do not take into account participation simultaneously in different programmes or leading to multiple degrees. The new Lifetime Learning tax breaks in the U.S. cover participation in all eligible programmes in the course of the year. In the Netherlands, a single tuition fee covers a student's enrolment in any combination of programmes.

70. More varied pathways and combinations of qualifications have been opened up through other means, with financial consequences for students, institutions and governments. Virginia (United States) developed a state policy on transfer between community colleges and public bachelors' degree granting institutions in the state. All students completing a defined "transfer module" are guaranteed admission. Such articulation can be highly developed, as in the case of one public university in which transfer enrolments from the community college in the region comprise a larger share of entrants than first year enrolments. Increased flexibility afforded to Japanese tertiary education institutions has led to a few new joint degree programmes in which students can earn, in reduced time, a vocationally-oriented qualification from a special training college and a bachelors' degree from a private university. In this case, the new option was not developed in response to public funding incentives; rather, it was seen as a response to demand from potential fee-paying students.

71. There is some experience with "stacking" qualifications in the Netherlands. In the late 1980s, Dutch graduates of higher professional colleges (HBO) were given the possibility of obtaining a university degree in reduced time. While the statutory status of the qualification was withdrawn and new time limits were introduced for student financial aid, a share of students continues to seek both qualifications. In the Dutch case, attention is drawn to differences in motivations for and access to varied pathways according to socio-economic group. "Young people and their parents do not regard "stacking" of qualifications or the practice of changing the direction of their studies as a disadvantage. Instead, they are seen primarily as a way of keeping options open and of readjusting study choices."³⁹ However, these options appear to be followed more by students from higher social class backgrounds.

³⁹ Ministry of Education and Science (1995), *The Demand for Tertiary Education* (Contribution by the Netherlands to the OECD Project on Mass Tertiary Education), Zoetermeer.

72. Qualifications frameworks make it possible to pursue and benefit from more varied combinations of learning and pathways. Reference has been made to the introduction of such frameworks in New Zealand and Ireland. The new Irish Qualifications Authority has as one of its explicit aims “to ensure recognition of qualifications -- at inter-institutional, intra-institutional and transnational levels”.⁴⁰

73. Attention can also be drawn to funding approaches which promote new patterns of participation over adult life. Adults already participate in tertiary education, in programmes currently on offer and with financing and resources available to them. New financing policies, then, would need to be seen as measures intended to reinforce the trends. Some country examples indicate options implemented or considered. In New Zealand, where there is a long tradition of adult participation in tertiary education, a “study right” policy provided universities and other tertiary-level providers with larger tuition subsidies for students who enrolled for the first time and were under 22 years old (the “study right” applied for three years). The policy has been reconsidered, as it had the unintended effect of generating lower levels of public funding to institutions serving target populations. In a recent issue paper, an interesting proposal was floated: to provide a further subsidy *after a break in study*. The proposal was not adopted. Sweden’s 25-and-4 scheme, in which funded places are reserved for persons who are at least 25 years old and have 4 years of relevant work experience embodies a similar concept. In the Netherlands, the Hermans Committee proposed a more sweeping change in financing which would open up possibilities for diverse and delayed patterns of participation. All students would be able to tap into an account of NLG 20 400 over ten years, for up to four years of study. Eligibility to draw on the account would depend on performance. Students would be obliged to commence studies (enter the scheme) before age 25.⁴¹ The new government (with Hermans as Minister of Education) decided to adopt a less radical concept: all students in higher education receive an entitlement for 48 months of study grants. Each student has the opportunity to spread the use of her or his entitlement over a ten-year time span, until the age of 30. The system continues to be performance-based (receipt of diploma).

74. These arrangements go beyond what has been a gradual evolution of financing approaches to draw in resources and promote efficiency, primarily to stimulate new patterns of participation over a lifetime. The effects of such changes, in addition to new options to spread financing of tertiary education expenses over the lifecycle, will warrant closer analysis.

IV. Conclusions

75. The policy experience examined in this report reveals already considerable innovation and evolution in tertiary education funding strategies and approaches. While some of the approaches are too new to assess, the mobilisation of resources in support of substantial expansion in tertiary education throughout the OECD area stands as a notable achievement of the last fifteen years.

76. This sector study has taken as its starting point tertiary education in a perspective of lifelong learning. Such a perspective implies an interest in increased access and new patterns of participation in and pathways through tertiary education; new types of provision and new mixes of learning at the level of tertiary education; and a better mobilisation of resources, sufficient to ensure that needs and interests are met and attentive to ensure that learning is realised at least cost. Thus, there is a continuing need to mobilise, extend and make even better use of resources. Sufficient experience is now accumulating with

⁴⁰ Dick Langford (1999), Implications of the Qualifications (Education and Training) Bill, 1999, in Fleming, Collins and Coolahan, eds., *Higher Education: The Challenge of Lifelong Learning*, Centre for Educational Policy Studies, National University of Ireland, Maynooth.

⁴¹ Dutch Country Report submitted to the Education Committee’s activity on Financing Lifelong Learning, Paris, 1998.

new financing approaches developed or implemented in a number of countries to provide a preliminary basis for identifying the most promising policy directions.

77. Although the analysis of experiences and approaches will be extended and deepened, a few key conclusions may be advanced at this preliminary stage:

- Most countries have widened efforts to secure resources for tertiary education. An immediate difficulty is simply how to take account of the funding and resource flows. A policy challenge is to develop a more strategic view of the use of public finance, moving in the direction of a wider partnership and a broader concept of resources (in-kind as well as financial).
- The diversity in patterns of participation, programmes and pathways -- even for those undertaking studies toward a formal tertiary education qualification -- implies not only that the mixes in the sources of finance and resources may differ but also the most effective and appropriate financing mechanisms to secure them. In the perspective of even greater diversity in participation and learning within a lifelong learning framework, it may prove useful to examine more carefully the best ways to exploit the interaction of different funding sources and also of mixes of different means to secure resources for different learners.
- Financing policies increasingly aim to go beyond funding needs to encourage qualitative improvement in tertiary education provision and in conditions for learning. To have greatest effect, the incentives require adequate information, scope for institution and programme-level decisions and the capacity at these levels to take and implement decisions. There will be value within funding arrangements to allow a margin for (even to encourage) experimentation and to accept possible failure, followed by re-direction; this applies to students as well as programmes and institutions.
- Countries have incorporated varied design features in the development of approaches to encourage and enable increased participation in financing from students and families. The initiatives need to be monitored and compared for coverage, increases in (as opposed to re-allocations of) student or family spending, and wider lifecycle impacts.
- New funding streams and mechanisms are bringing market forces more prominently into play. Countries are situated differently along a continuum: some embrace more fully the “market”, but most now fall short of a position of leaving the solution of demand and provision solely to the “market”. Although new private and cross-border providers are emerging to meet market demand, governments now seek ways to allow for and use market-based approaches within frameworks and under conditions established by government. The policy challenge is to find an appropriate balance to permit and foster response and flexibility, while also advancing the public interest in clarity, simplicity, access and coverage in offerings and minimising unintended consequences.
- Equity concerns are not addressed solely through expansion. While financing approaches which hold down the costs to learners have played an important role, they are not sufficient to address the barriers. In spite of the uneven experience to date, it will be useful to examine more closely experiences with targeted funding aimed at adaptations and improvements in secondary and tertiary education.

ANNEX

Table 1. Change in total enrolment in tertiary education, 1990-1997
(based on headcounts)

	Change in enrolment				
	Total enrolment (1990=100) in tertiary education			Attributable to:	
	1985	1990	1997	Change in the size of Youth cohort	Change in enrolment rates
Australia	m	100	134	102	131
Austria	80	100	121	95	127
Canada	m	100	115	99	119
Czech Republic	m	100	161	116	139
Denmark	87	100	124	99	128
Finland	77	100	138	91	152
France	84	100	130	95	138
Hungary	m	100	205	112	182
Iceland	m	100	133	98	136
Ireland	79	100	158	109	146
Italy	86	100	135	98	138
Korea	m	100	157	97	166
Mexico	m	100	128	114	112
Netherlands	93	100	105	89	121
New Zealand	86	100	147	102	143
Norway	71	100	142	96	148
Poland	m	100	223	113	201
Portugal	m	100	268	105	257
Spain	73	100	144	101	144
Sweden	97	100	149	98	153
Switzerland	80	100	113	95	121
Turkey	m	100	196	118	165
United Kingdom	85	100	188	92	201
United States	91	100	106	96	108
Average of above		100	149	101	149

Source: OECD (2000), Education at a Glance: OECD Indicators 2000, Paris.

Table 2. Percentage of the population completing at least upper secondary education in three age cohorts, 1998

	Population presently aged 55-64	Population presently aged 25-34	Present generation
Australia	44	64	-
Austria	56	84	96
Belgium	34	73	84
Canada	65	87	72
Czech Republic	74	92	80
Denmark	67	85	-
Finland	41	84	89
France	41	75	85
Germany	76	88	93
Greece	22	66	83
Hungary	31	77	90
Iceland	40	61	92
Ireland	31	67	87
Italy	19	55	-
Japan	57	93	96
Korea	27	92	90
Luxembourg	-	-	62
Mexico	9	26	30
Netherlands	50	74	93
New Zealand	58	79	97
Norway	65	93	-
Poland	37	62	-
Portugal	12	29	56
Spain	12	53	67
Sweden	60	87	79
Switzerland	71	88	84
Turkey	7	24	46
United Kingdom	53	63	-
United States	80	88	74
Country mean	44	72	79

Note: Different measures are used to calculate the percentages for the different cohorts, so within cohort country data are most appropriate for comparisons across the three age groups. Data for 55-64 year old and 25-34 year old age cohorts refer to prior education attainment. The rate for the present generation is the annual number of upper secondary graduates divided by the population at the typical age of graduation. In countries where it is common to obtain more than one upper secondary qualification, there can be double-counting that exaggerates the proportion of a cohort who qualify at this level. For Belgium, present generation refers to Flemish Community. Data for Norway refer to 1997.

Source: OECD (2000), Education at a Glance: OECD Indicators 2000, Paris.

Table 3. Routes of Access into Tertiary Education in Selected OECD Countries	
(percentage distributions, various years)	
Australia (1991, cross-section)	
Commencing bachelor's (pass)	100
Complete final year of secondary education	55
Some tertiary education	26
Mature age/employment experience entry	6
Other assessment/admission methods	13
Denmark (1993, modeled cohort analysis)	
All participants	100
General upper secondary	75
Vocational upper secondary	15
Other	10
France (1995-96, cross-section)	
First-year entrants	100
New <i>baccalauréat</i> – general	62
New <i>baccalauréat</i> – technological	23
New <i>baccalauréat</i> – vocational	2
Other*	13
Japan (1995, cross-section)	
First-year entrants of high-school graduates	100
General secondary	85
Vocational secondary	15
United Kingdom (provisional 1994/95, cross-section)	
First-degree and diploma students	100
A-levels	65
Vocational qualifications (NVQ, GNVQ)	8
Other (access, conversion courses; professional qualifications)	27

* Category "other" includes students with a *Baccalauréat* examination who changed programmes as well as students with some tertiary experience.

Source: OECD (1997), *Education Policy Analysis 1997*, Paris.

Table 4. Initial Destinations in Tertiary Education by Entry Qualifications in Selected OECD Countries (per cent of students)	
France (1995, cross section)	
Entering tertiary education	
<i>Baccalauréat</i> – General	
University	100
Preparatory classes for <i>grandes écoles</i> (CPGE)	72
University institutes of technology (IUT)	13
Advanced technician sections of <i>lycées</i> (STS)	8
	7
<i>Baccalauréat</i> – Technological	
University	100
Preparatory classes for <i>grandes écoles</i> (CPGE)	30
University institutes of technology (IUT)	1
Advanced technician sections of <i>lycées</i> (STS)	13
	56
Germany (1992, cross-section)	
Entering tertiary education (FTFR)	
Higher education entrance qualifications	
University	100
<i>Fachhochschule</i>	79
	21
<i>Fachhochschule</i> entrance qualifications	
University	100
<i>Fachhochschule</i>	8
	92
Entering tertiary education (new Länder, 1993)	
Higher education entrance qualifications	
University	100
<i>Fachhochschule</i>	75
	25
<i>Fachhochschule</i> entrance qualifications	
University	100
<i>Fachhochschule</i>	1
	99
Japan (1995, cross-section)	
Entering tertiary education	
General high-school graduate	
University	100
Junior college or special training school	45
	55
Vocational high-school graduate	
University	100
Junior college or special training school	21
	79

Source: OECD (1997), *Education Policy Analysis 1997*, Paris.

Table 5. Split between University and Other Tertiary Education, 1990 and 1996
Enrolments for first degrees or diplomas (percentage)

	Index of growth in enrolment first-degree or diploma programmes (1990=100)	1990		1996	
		University	Other tertiary	University	Other tertiary
Australia	124	49.2	50.8	54.6	45.4
Austria	115	92.0	8.0	91.3	8.7
Canada	118	63.6	36.4	52.4	47.6
Denmark	128	86.1	13.9	82.2	17.8
Finland	131	74.5	25.5	79.0	21.0
Iceland	122	87.5	12.5	82.6	17.4
Italy	130	94.8	5.2	97.3	2.7
Japan	120	66.4	33.6	67.7	32.3
Korea	121	79.8	20.2	66.8	33.2
New Zealand	133	58.0	42.0	68.0	32.0
Norway	137	55.0	45.0	59.0	41.0
Poland	223	78.2	21.8	84.0	16.4
Spain	134	100.0	n	97.5	2.4
Switzerland	114	55.6	44.4	53.3	46.7
Turkey ¹	172	90.3	9.7	73.2	26.8
United Kingdom	174	63.6	36.4	70.0	30.0
United States	105	56.4	43.6	55.1	44.9

1. 1995 instead of 1996.

Source: OECD Education Database. Comparable data over this period are not available for Germany, owing to the reunification process. No data are available for the Netherlands, where all tertiary-level programmes are identified as university or equivalent.

Table 6. Public and private expenditure on tertiary educational institutions, 1997

	Expenditure as % of GDP	Private expenditure as % of total
Australia	1.7	31
Austria	1.5	11
Belgium (Fl.)	0.9	11
Canada	2.0	18
Czech Republic	0.8	14
Denmark	1.2	1
Finland	1.7	n
France	1.2	12
Germany	1.1	7
Greece	1.2	15
Hungary	1.0	20
Iceland	0.7	6
Ireland	1.4	21
Italy	0.8	19
Japan	1.1	53
Korea	2.5	78
Mexico	1.1	25
Netherlands	1.2	2
Spain	1.2	22
Sweden	1.7	9
United Kingdom	1.0	12
United States	2.7	48

Note: Data refer to expenditures on educational institutions, including public subsidies provided to households and other private entities attributable to private payments to educational institutions. Private expenditure on tertiary education institutions includes payments for tuition fees, private grants and contracts including those negotiated with employers for customised teaching, endowing income and alumni giving. Borrowing from private banks, even if guaranteed and partly subsidised by governments, are reported by some countries in the OECD Education Database as private expenditures. Private expenditure is net of public financial aid to students and public subsidies to other private entities destined to tertiary educational institutions, the value of tax breaks provided for education expenses is not taken into account.

Source: OECD (2000) Education at a Glance: OECD Indicators 2000, Paris.

Table 7. Change in public and private expenditure on tertiary educational institutions, 1990-1996

	(1990 = 100)			
	Direct public expenditure for educational institutions	Direct public expenditure for educational institutions plus public subsidies to the private sector	Direct private expenditure for educational institutions	Total direct expenditure from both, public and private, sources for educational institutions
Australia	132	137	190	150
Austria	128	141	m	m
Belgium (Flemish Community)	109	105	m	m
Canada	98	111	145	128
Denmark	113	114	x	x
Finland	128	135	x	128
France	132	135	115	131
Hungary	56	60	235	73
Iceland*	109	x	x	109
Ireland	164	156	167	159
Italy	74	78	m	m
Japan*	123	123	116	119
Mexico	92	95	m	m
Netherlands	97	92	126	95
New Zealand	107	135	m	m
Norway	132	129	m	m
Poland	m	m	m	m
Spain	140	142	201	152
Switzerland	99	99	m	m
Turkey*	91	93	m	m
United Kingdom	114	143	752	148

Source : OECD Education Database. * 1995

Table 8. **Growth in Funding for Tertiary Education by Source in the early 1990s** ¹
Average annual percentage change

Enrolment ³		Public expenditure		Net household expenditure on educational institutions ⁴
		Direct expenditure on educational institutions	Financial aid to students ³	
Japan	3.1	5.6	5.5	5.2
Portugal	13.5	6.6	27.6	29.0
United States	0.8	1.4	11.6	5.4

1. Constant prices.

2. Based on head counts.

3. Net household expenditure on educational institutions refers to tuition fees and charges, less financial aid to students destined to institutions. Net spending by households is overestimated, because other forms of support (e.g. from employers or through tax breaks) or financial aid (student borrowing, particularly the implicit subsidy components) for these expenditures are *not* deducted in these calculations.

4. Financial aid to students includes public grants, student allowances and the volume of student borrowing. The data do not include the implicit subsidy provided through tax breaks.

Source: Estimates by OECD Secretariat, based on country-provided information for thematic review of the first years of tertiary education. See OECD (1998), *Education Policy Analysis 1998*, Paris.

Japan: 1990-1994. Includes tertiary-level courses offered at special training colleges and miscellaneous colleges. In these calculations, net household payments are given by gross tuition revenues. Financial aid is provided largely by the Japan Scholarship Foundation in the form of repayable loans at no or low interest, which are assumed to be applied toward education-related and living costs rather than tuition. Local authorities also provide financial aid for students, mostly in the form of loans. The subsidy component of student loans is, in any event, a relatively small share of the volume borrowed. Financial aid funded from private sources which reduces costs to students and their families has increased over this period, but remains modest. Ministry of Education, Science and Culture (1997), *Statistical Abstract of Education, Science and Culture*, 1997 edition, pp. 168-69; Japan Scholarship Foundation (1995), *An Outline of the Japan Scholarship Foundation*, Tables 2 and 3; country-provided information.

Portugal: 1990-1995. Includes private tertiary education. Direct public expenditure on institutions excludes specific funding for research. In these calculations, net household payments are given by estimated average fees in public institutions multiplied by the number of public tertiary education students plus estimated average tuition fees in private institutions multiplied by the number of private tertiary education students. For public institutions, the fees are assumed to be Esc 1200 for the two reference years. For private institutions, average fees are assumed to have increased from Esc 300 000 to Esc 325 000. The number of students in public institutions paying fees is reduced by the number receiving grants; the latter are not obliged to pay fees. Grants for private tertiary education students, but not public tertiary education students, are assumed to be applied toward tuition fees. New reforms call for increases in fees for public tertiary education students and increases in funds for grants to private tertiary education students. Ministerio da Educaçao, Departamento do Ensino Superior (1997), *Higher Education in Portugal: A Report for the OECD*, Tables 6, 7 and 14; country-provided data.

United States: 1990-1994. In these calculations, net household payments are given by gross tuition revenues, less tuition remission and federal and state grants to students (including institution-financed shares of such grants). Student loans and other specially-directed financial aid are assumed to be applied toward education-related and living costs rather than tuition. Public expenditure on institutions is given by gross revenues from federal and state sources; financing for hospitals and auxiliary activities are excluded. Public financial aid to students is given by the total volume of support available from federal and state programmes, excluding institution-financed shares of awards in such programmes. No account is taken of private third-party support to students not recorded in institutional records. U.S. Department of Education, National Center for Education Statistics (1997), *Digest of Education Statistics*, Tables 178, 324; The College Board (1996), *Trends in Student Aid: 1986 to 1996*, Tables 1 and 2.

Table 9. Initial Sources of Public Funds for Expenditure on Tertiary Education by Level of Government (1995)

	Initial funds (before transfers between levels of government)				Final funds (after transfers between levels of government)			
	Central	Regional	Local	Total	Central	Regional	Local	Total
Australia	87	13	n	100	87	13	n	100
Austria	99	1	n	100	98	1	n	100
Belgium (Flemish Community)	16	82	1	100	16	82	2	100
Canada	47	53	n	100	33	67	n	100
Czech Republic	99	a	1	100	99	a	1	100
Denmark	87	3	10	100	87	3	10	100
Finland	83	a	17	100	77	a	23	100
France	91	5	4	100	91	5	4	100
Germany	15	85	1	100	7	92	1	100
Greece	100	n	a	100	100	n	a	100
Hungary	100	n	n	100	100	n	n	100
Iceland	100	n	n	100	100	n	n	100
Ireland	100	a	n	100	76	a	24	100
Italy	89	11	n	100	89	10	1	100
Japan	85	15	1	100	84	15	1	100
Korea	100	n	a	100	100	n	a	100
Luxembourg	m	m	m	m	m	m	m	m
Mexico	94	6	n	100	89	11	n	100
Netherlands	100	n	n	100	99	n	1	100
New Zealand	100	a	a	100	100	a	a	100
Norway	100	a	a	100	100	a	a	100
Poland	100	a	n	100	100	a	n	100
Portugal	m	m	m	m	m	m	m	m
Spain	47	52	1	100	47	52	1	100
Sweden	97	3	a	100	97	3	a	100
Switzerland	46	54	n	100	31	69	n	100
Turkey	100	a	a	100	100	a	a	100
United Kingdom	100	a	n	100	72	a	28	100
United States	37	56	7	100	37	56	7	100
Country Mean	82	17	2	100	78	18	4	100

Source: OECD Education Database. See Annex 3 for notes.

Table 10. Trends in Expenditure per Student and Enrolment in Tertiary Education, 1990-95

	Expenditure per student in 1995	Enrolment in 1995
Australia	114.02	128.97
Austria ¹	104.22	118.28
Canada	98.36	119.82
Finland	103.46	127.92
France	99.52	132.17
Ireland	90.25	149.62
Italy ¹	68.67	125.31
Mexico	113.62	107.27
Netherlands	89.94	87.06
Spain	133.77	123.39
Switzerland ¹	97.90	109.36
United Kingdom ²	73.69	178.56

1. Public institutions

2. Public and government-dependent private institutions

Source: OECD Education Database

Table 11. Types of System-Wide Performance-Based Funding in Seven Countries

	Approx. % of base funds at stake (or bonus)	Applies to Education only (E) or to Education + Research (RE)	Zero-sum (Z) or Non-Competitive (NC)	Areas of Performance: Research Quantity (RQT), Research Quality (RQL), Teaching Quality (TQ), Student Progress (L), Other (O)
Australia	5	R	Z	RQT
Denmark	95	E	NC	L
United Kingdom	20	R	Z	RQL
Germany (4 states)	minor	RE	NC	RQT,L
Netherlands	minor	E	NC	L
Sweden	60	E	NC	L
Tennessee	5.45 (bonus)	E	NC	L, O

Note: Brackets indicate that the area is under consideration

Source: D. Anderson, R. Johnson, B. Milligan, 1996, *Performance-based Funding of Universities*, Higher Education Council, National Board for Employment, Education and Training, Canberra.

Table 12. Expenditure per Student over the Average Duration of Tertiary Studies (1995)

	Method	Average duration of tertiary studies (in years)			Cumulative expenditure per student over the average duration of tertiary studies		
		All	Non-university	University-level	All	Non-university	University-level
Australia	CM	m	m	2.6	m	m	30 086
Austria *	AF	6.4	2.3	7.4	50 832	29 841	57 256
Canada	CM	1.9	1.4	2.5	21 574	14 446	30 707
Denmark	AF	4.2	2.1	4.4	34 177	x	x
France	AF	4.7	2.8	5.3	30 752	x	x
Germany *	CM	5.1	2.2	6.1	45 023	15 117	54 822
Greece **	CM	6.1	5.0	6.9	16 461	8 809	21 802
Hungary *	CM	3.9	a	3.9	18 644	a	18 644
Ireland	CM	2.6	2.0	3.0	18 666	x	x
Italy *	CM	4.2	1.1	4.9	20 824	7 427	24 342
Korea	CM	3.4	2.1	4.2	17 846	8 239	24 192
Mexico	AF	3.4	x	3.4	17 356	x	17 356
Netherlands	CM	3.9	a	3.9	35 202	a	35 202
Norway *	AF	3.3	2.5	4.0	31 547	x	x
Spain	AF	4.6	1.5	4.7	22 496	5 917	23 376
Switzerland *	CM	3.6	2.2	5.5	56 847	17 988	100 142
United Kingdom **	CM	3.4	1.8	3.5	24 563	x	x
Country mean		4.1	1.9	4.5	28 926	x	x
OECD total		4.2	1.8	4.4			
WEI Participants							
Russian Federation	CM	4.9	6.9	4.2	m	m	m

Either the Chain Method (CM) or an Approximation Formula (AF) was used to estimate the duration of tertiary studies.

* Public institutions.

** Public and government-dependent private institutions.

Source : OECD Education Database. See Annex 3 for notes.

Table 13. **Growth in Participation of Young Adults in Tertiary Education by Socio-Economic Group, Through the mid-1990s**

	Average annual percentage point change	
	Total	Low socio-economic group
Belgium(Flemish Community)	1.6	0.7
France	1.2	0.6
Japan	1.8	1.5
Ireland	1.0	0.6
United Kingdom	1.8	1.0
United States	0.9	1.2

Average annual percentage point increase is calculated as the percentage point change in participation rate divided by the number of years in the reference period.

Sources: OECD Secretariat, based on country provided information for the thematic review of the first years

of tertiary education and additional country-based data. *Education Policy Analysis 1999*

Belgium (Flemish Community): 1985-92. Data refer to students aged 18-25 in higher education (including non-university higher education). Low socio-economic group is defined as families whose heads are labourers. Ministry of the Flemish Community (1998), *Flemish Educational Indicators in an International Perspective, 1998 Edition*, Brussels; Jef C. Verhoeven and Ilse Beuselinck (1996), *Higher Education in Flanders (Belgium): A Report for the OECD*, Ministry of the Flemish Community, Brussels; Jef. C. Verhoeven (1996), *Toward Mass Higher Education in Flanders (Belgium): A Report for the OECD*, Ministry of the Flemish Community, Brussels.

France: 1982-93. Low socio-economic group is defined as students whose fathers are blue collar workers. Valérie Erlich (1998), *Les nouveaux étudiants. Un groupe social en mutation*, Armand Collin, Paris, Tableau B.

Ireland: 1986-92. Data refer to entering full-time students. Low socio-economic group is defined as unskilled workers (covering about 7 per cent of the employed population in 1986). Steering Committee on the Future Development of Higher Education (1995), *Interim Report of the Steering Committee's Technical Working Group*, Higher Education Authority, Dublin.

Japan: 1990-96. Data refer to enrolment in day courses at public and private university expressed as a percentage of 18 to 21 year olds. Tertiary-level enrolment in junior colleges and special training colleges are excluded. Low socio-economic group is defined as families in the lowest two income quintiles. The income quintiles are established from the Household Expenditure Survey for the population of families whose major income earners are 40 to 54 years old in the reference year. Family incomes are those reported by university (day course) students in Monbusho's special survey on student life, carried out every two years. Japanese researchers believe that student reporting in the Monbusho survey leads to an under-estimate of family income by students in the lower income groups and an over-estimate of the share of students in this group. Further, the reference income quintiles are estimated for a population which does not precisely match the pool of potential students, the latter including those with parents older or younger than the reference group or who are themselves older and employed. Generally, the researchers observe that there is no reason to believe that the relative magnitude of the biases and errors have changed over time so that the figures reported here should reflect changes in the underlying patterns of participation. Ministry of Education, Science and Culture (1997), *Statistical Abstract of Education, Science and Culture*, Tokyo; Motohisa Kaneko and Kazuyuki Kitamura (1995), "Towards Mass Higher Education. Access and Participation: Country Case Study - Japan", processed. Ministry of Education, Science and Culture, Tokyo (and more recent data from the special survey on student life conducted by Monbusho).

United Kingdom: 1991-97. Data refer to home domiciled initial entrants aged under 21 to full-time and sandwich undergraduate courses of higher education in further education and higher education institutions, expressed as a proportion of the averaged 18 to 19 year old population. Low socio-economic group is defined as unskilled. The 1991 Census provided the population distribution by social class for all years. Statistics (1998), *Social Trends*, Lonon.

United States: 1990-1996. Data refer to unmarried population. Low socio-economic group is defined as the lowest income quartile. The Mortenson Research Seminar (1998), *Postsecondary Education Opportunity*, No. 86, Oskaloosa, Iowa.