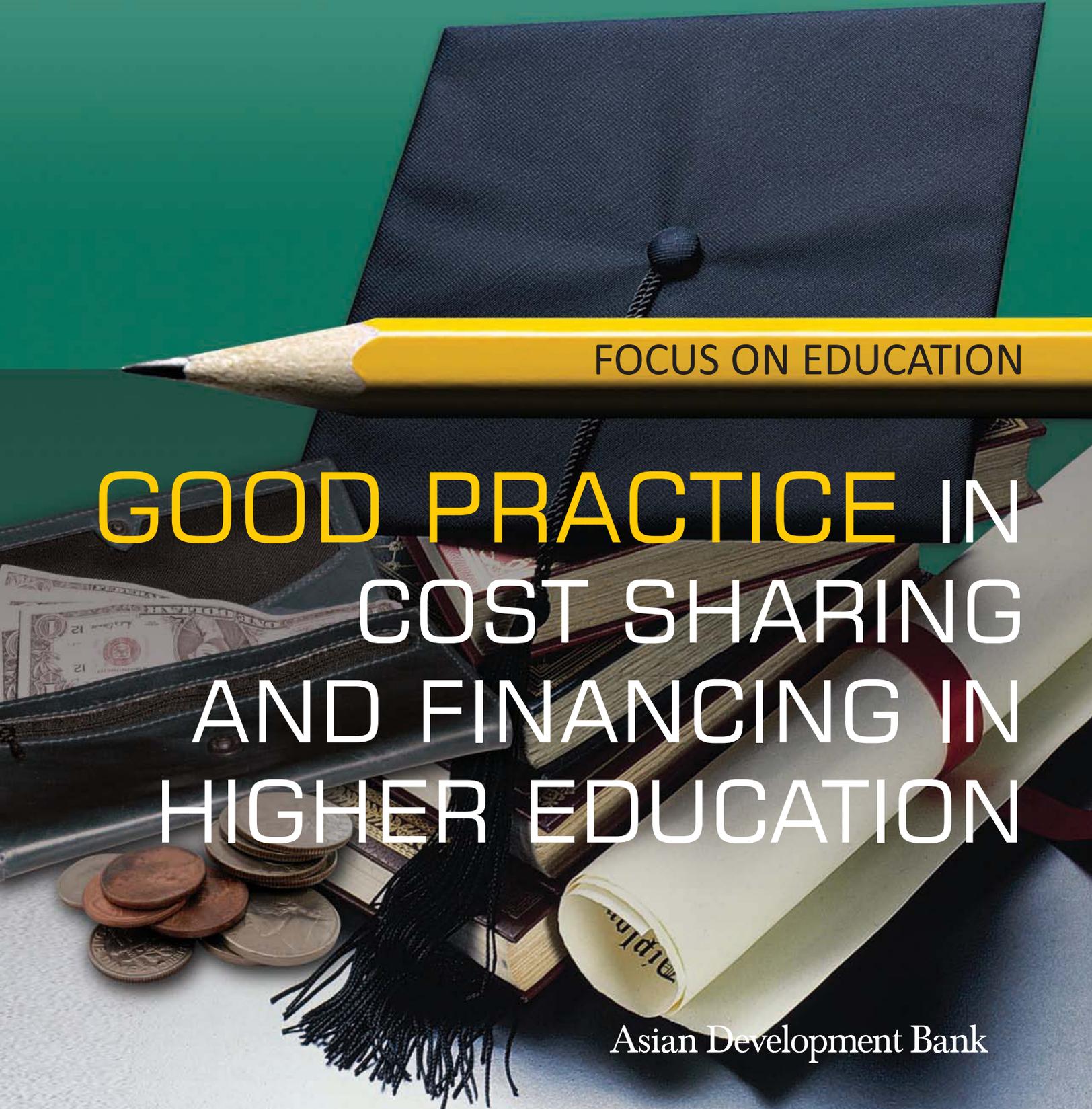


 A yellow pencil with a black eraser and a black ferrule, lying horizontally across the middle of the image. The pencil is sharp and has a small amount of lead visible at the tip.

FOCUS ON EDUCATION

 A collage of educational and financial items. At the top is a black graduation cap with a tassel. Below it are several books, some with red covers. In the foreground, there are stacks of coins and a rolled-up diploma tied with a red ribbon. A US dollar bill is also visible. The background is a solid teal color.

GOOD PRACTICE IN
COST SHARING
AND FINANCING IN
HIGHER EDUCATION

Asian Development Bank

ADB

Good Practice in Cost Sharing and Financing in Higher Education

Asian Development Bank

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Foreword

Focus on Education

The Asian Development Bank (ADB) has long been providing financing and advisory assistance to its developing member countries (DMCs) for broadening and deepening delivery of education services. Under its new long-term strategic framework, or Strategy 2020, ADB reaffirms its commitment to stepping up education sector operations and contributing to further development of human capital and skilled labor force in the DMCs. ADB is keen to ensure the development effectiveness of all its operations and that the assistance provided must be relevant and responsive and must add value.

This series—Focus on Education—surveys important topics including education sector policy, financing, and service delivery; identifies key concerns; and distills practical insights. It is intended for practitioners in the education sector in Asia and the Pacific. It will draw on a wide range of sources, including materials on the experience of ADB’s education sector operations, and specific studies conducted by ADB. The series is integral to ADB’s efforts to support knowledge sharing and the implementation of Strategy 2020 in the education sector. We hope that readers will find the series informative in their practice.



Xianbin Yao

Director General

Regional and Sustainable Development Department

Preface

ADB's developing member countries (DMCs) increasingly seek technical assistance and financing for higher education reform. ADB supports DMCs in improving policy and regulatory frameworks for higher education, in ensuring that higher education is relevant and adequately diversified to efficiently serve social and economic development needs, and in making it increasingly inclusive based on equitable access, including for lower income groups.

ADB plays an important role in promoting cost efficiency and sustainable financing in higher education. Higher education systems are rapidly expanding in many DMCs. DMCs increasingly recognize the importance of cost sharing and partnerships with stakeholders in higher education, including with the private sector. This good practice guide focuses particularly on these important and timely issues in higher education development. The guide supports ADB's education sector staff in their policy dialogue with DMC governments and other stakeholders, and during project processing. The guide discusses the debate and evolution of cost sharing and financing in higher education, options and design aspects in these areas, and strategies for policy dialogue and project preparation. The guide includes a practical "toolbox" to support these efforts.

Victor Levine, consultant, prepared a draft guide. It was finalized through peer review among education sector staff of ADB. Myla Bonto assisted in data preparation and coordination, and Imelda Marquez provided administrative support. Stephen Banta provided editorial inputs.

While the guide has been prepared primarily to support ADB's operations in the education sector, we hope it will also be useful more widely for education ministries, institutions, and other stakeholders of education in our DMCs.



Jouko Sarvi
Practice Leader (Education Sector)
Regional and Sustainable Development Department

Abbreviations and Acronyms

ADB	–	Asian Development Bank
BIA	–	benefit incidence analysis
DMC	–	developing member country
IMF	–	International Monetary Fund
PER	–	public expenditure review
PRC	–	People's Republic of China
SWAp	–	sector-wide approach
TVET	–	technical and vocational education and training
UK	–	United Kingdom
US	–	United States

Introduction

The Asian Development Bank (ADB) has provided substantial assistance to education, with cumulative support of about \$7.5 billion since 1970 (ADB 2008a). The education sector continues to be one of ADB's priorities, as it is one of the five core areas in ADB's new long-term strategic framework, Strategy 2020 (ADB 2008d). ADB's assistance to education, and particularly to higher education, is expected to increase. ADB's recent comprehensive regional study of the education sector indicates that demand for higher education is expected to double in 5 years and triple in 10 years in many developing member countries (DMCs). Investment in higher education will continue to increase in the region due to strong demand, as adequate output of higher education graduates is essential to support social and economic development and growth in DMCs (ADB 2008a). In addition, as economies in the region have grown larger and more complex, they also have become more integrated through various forms of economic and social exchange. Higher education is envisaged to have an increasingly important role in developing human resources and contributing toward movements of people, students, and workforce in the region (ADB 2008c).

Increased support for higher education must be planned within the context of resource constraints and competing priorities in DMCs. Recently revised poverty data¹ indicate that progress in poverty reduction has been far less successful than was previously assumed and that it will take at least an additional decade to meet Millennium Development Goal targets.² In ADB's DMCs over half the population (1.8 billion people) are either extremely poor or vulnerable to poverty; this is one-third higher than earlier estimates³ and suggests that DMC governments and development partners will need to be careful in containing education costs in the light of competing priorities.

Within the education sector, investments in basic education will continue to be important, particularly to support those DMCs that are off track for meeting Millennium Development Goal 2 primary education enrollment targets. In DMCs, sudden and large shifts of government financing to higher education can put at risk adequate government financing for basic education. Therefore, it is critical that new initiatives in the higher education subsector be designed to increase cost-efficiency through cost sharing and partnerships in higher education, with special emphasis on quality and equitable access to support inclusive growth (Sarvi 2008). Although many economies in the region are currently recovering from the recent financial crisis, resources are likely to undergo further pressure for the next several years.

ADB has a well-developed framework for project preparation, planning, and analysis that is articulated in key publications. The overall objectives of ADB are presented in the Strategy 2020 document (ADB 2008d). The education sector policy document (ADB 2002), the recent comprehensive regional study of the sector (ADB 2008a), and the ensuing education sector operation plan⁴ provide the framework for assistance in the sector. Key planning and design issues are identified in the series on economic retrospectives. Particularly relevant information is provided in *Economic Retrospective 2004* (ADB 2005), which focuses on the education sector, and *Economic Analysis Retrospective 2007* (ADB 2008e), which focuses on improving the quality of project economic analysis. It is beyond the scope of this good practice guide to attempt to summarize these documents; however, it is useful to briefly highlight several key points that relate to cost sharing in higher education.

In general, the education sector has received high ratings in Independent Evaluation Department reviews. Of the 10 sectors in which ADB operates, education had the highest proportion of ordinary capital resources operations rated successful and the third highest with Asian Development Fund financing (ADB 2007b).⁵ According to the *Economic Retrospective 2004*, there are, however, areas for improvement in education project preparation: more attention is required to the comprehensiveness of education sector analysis to support the formulation of project rationales and the financial sustainability of the activities in DMCs after project completion (ADB 2005).

Economic Analysis Retrospective 2007 identifies the need for an analytic framework with six attributes:⁶ economic rationale, demand analysis, alternatives analysis, benefits and costs evaluation, sustainability analysis, and sensitivity and risk analyses. In addition, the *Retrospective* notes there is need for an “exit strategy.” This good practice guide suggests adding a seventh attribute—equity analysis.

Introducing cost sharing in higher education is not fundamentally a technical exercise. This guide therefore focuses on strategies for identifying and obtaining information that will inform country-specific policy dialogue, rather than attempting to present a “recipe” for good practice. Special emphasis is placed on the need to predict funding shortfalls well in advance, as most cost-sharing initiatives in higher education—student loans in particular—will take many years before they begin to generate additional revenue.

While the guide draws on economic concepts and literature, it is written for non-economists. It also presents recommendations for a broader ADB role in harmonizing higher education cost-sharing policy with the policies of other aid agencies and in knowledge creation and dissemination.

The guide focuses on policy options and practical tools. Discussion of theoretical arguments is kept to a minimum, with references to other sources in endnotes and in the section on page 36, which identifies further readings and resources. The guide can be used without necessarily referring to the endnotes, which are provided as a source of additional information or clarification on specific issues that may be of interest to readers.

Extent of Cost Sharing: An Overview

This section briefly reviews cost sharing across education subsectors to highlight the fact that it is pervasive at all levels. It is noteworthy that in some countries, higher education has been the only subsector with little or no cost sharing and, in some cases, with fully subsidized living allowances for students.

- **Early childhood education.** In most countries, governments finance a relatively small share of early childhood education costs, with the primary burden falling on families and communities. There is momentum to increase public support to early childhood education in many countries, based on studies of the high rate of return in this subsector.
- **Basic education.** Despite the objective of universal “free” basic education, available evidence indicates that a very substantial share of the total cost of primary schooling is still borne by families and communities. A World Bank study (Kattan and Burnett 2004) estimates that about 20% of total costs in public primary schools is financed privately. The estimate rises to 40% in a number of regions served by ADB.⁷ The study also found that at least one type of primary school fee (e.g., textbooks, uniforms) exists in 97% of the 79 countries surveyed. Many countries have a tradition of fee-based after-school tutoring, which is another form of private cost. The cost of various fees and after-school tuition falls disproportionately on low-income households. In general, these private contributions are a key source of funding for quality-related inputs; they cannot be eliminated unless the lost fee revenue is replaced. This implies that, if basic education were to become entirely free, the basic education budget would need to increase by up to 40% in some DMCs.⁸
- **Secondary education.** Fees are common in government secondary schools in many countries; however, practice varies widely. In addition, in many countries private secondary schooling is widespread, exceeding 30% of total enrollment.⁹ A number of countries have means-tested scholarships for secondary schooling; Thailand, for example, has a loan program for senior secondary students.¹⁰ In addition to fees, private supplemental tutoring is common.¹¹ Where higher education is highly subsidized, affluent families will often invest in expensive secondary education as a “ticket” to free higher education.

- **Technical and vocational education and training (TVET).** It is difficult to generalize about cost sharing in the TVET subsector, as practice varies widely between countries. A recent study (ADB 2008a) groups strategic priorities into six categories based on the level of economic development. In the TVET subsector, there is often a pattern of multiple delivery systems with little cost sharing; it is common to find fully subsidized government institutions (frequently administered by a range of ministries), numerous programs offered by church groups and nongovernment organizations, and a proprietary sector charging full costs. Some countries also have traditional apprenticeship systems. The government system is often small, supply driven, and poorly aligned to the needs of the economy.¹² The largest investment in training may be enterprise based (either in the form of in-house training or on-the-job training). Much of the cost of this training may actually be borne by employees.¹³ A number of countries have training levies designed to finance TVET. In some cases, these are effectively taxes on employment that go to fund-bloated and ineffective systems (Woessmann 2008). Student loans are generally not available for TVET; however, Australia has recently extended its higher education loan program to cover some TVET courses.¹⁴
- **Higher education.** Although practice differs substantially between countries, higher education is often the one subsector in which there is little cost sharing, with governments financing all, or almost all, costs. This is particularly true of government-owned national universities. While there is a lack of consensus over the desirability of cost sharing in higher education, there is a clear international trend: cost recovery has become “mainstream” (Li 2007); in a summary article, Woodhall (2002, p. 6) notes that “cost sharing is here to stay.” In the People’s Republic of China (PRC), a large-scale cost-recovery plan was implemented in 1997 (Li 2007). Over 1995–2000, per capita expenditure on higher education doubled in the PRC, while the level of government support declined; the share of total costs paid by individuals doubled, with fees increasing by over 200% (OECD 2003). In 1996, Thailand introduced a new loan-based cost-sharing plan modeled on the Australian system. In the United States (US), full-time equivalent enrollment in state-supported universities increased by 36.5% over 1982–2006, while public funding increased by only 1.6%, resulting in (inflation-adjusted) fees (Koch 2008). The share of US state budgets allocated to higher education decreased by 30% (Kuo and Ho 2007). A number of DMCs that had at one time embraced the higher education fee policy have reversed that position.¹⁵

The Higher Education Cost-Sharing Debate¹⁶

When considering higher education finance reform, it is important to understand the arguments put forward by both sides and the saliency of each issue and argument within the specific country context. It is also important to note that higher education institutions offer a range of services and benefits above and beyond instruction (e.g., research, community service). The discussion that follows focuses on the finance of instructional services, as this is, by far, the largest component of higher education costs.

Consensus is broad that higher education funding needs to increase, but disagreement exists on the best means of financing expansion.¹⁷ There is an interesting dynamic in the policy debate on cost sharing. At the level of basic education, momentum to **decrease** or **eliminate** cost sharing with the objective of increasing access and equity is strong; this is reflected in the Education for All and Millennium Development Goal development frameworks. At the post-basic levels, and particularly in higher education, there is momentum to **introduce** or **increase** cost sharing. While a general consensus now exists that basic education should be fully subsidized, such consensus is lacking at the level of higher education. In most countries, public subsidies to higher education take the form of direct grants from the government to higher education institutions, allowing these institutions to accept students with either no fees for instruction or with fees that are substantially below economic costs.

Increased Higher Education Student Output

There is broad agreement that increased output of higher education graduates is essential to support economic development and growth. This issue is cited as a rationale both for public subsidy and for cost sharing, discussed below. There are no precise estimates of the anticipated shortfall of spaces, but some estimates project a worldwide shortfall of 100 million higher education places for qualified students by 2010 (Kapur and Crowley 2008).

- **Subsidy.** Proponents argue that public subsidies increase higher education enrollment by lowering private costs and increasing access. In the absence of subsidies, the cost of higher education would be prohibitively high and demand for higher education places would be insufficient to meet national manpower needs.
- **Cost sharing.** Proponents argue that higher education enrollment is constrained primarily by the limited supply of places, rather than

- by limited demand. Reliance solely on public subsidies severely limits the number of places that can be provided. Under the right conditions, individuals are willing and able to pay for higher education, and cost recovery will increase both the resources available for higher education and enrollments.
- **Empirical evidence.** While arguments that free higher education will increase enrollments and improve equity are intuitively appealing, empirical evidence and international comparisons generally do not support these assertions.¹⁸ Within the context of constrained public resources, there is evidence that increasing public allocations to higher education, at the expense of primary and secondary schooling, may actually be counterproductive. Based on an analysis of data from 86 countries, Mohamed (2008) found an inverse relationship between higher education enrollment rates and the share of public finance allocated to the subsector;¹⁹ in countries with higher enrollment rates for higher education, the share of the education budget for higher education is actually lower. This finding was confirmed in a separate study (Bergh and Fink 2008) using data from a subset of World Development Indicators for 120 countries.²⁰ The rapid growth of private higher education provision in both developed and developing countries is attributed largely to the inability of public provision to keep pace with demand (Fielden and LaRocque 2008). Moreover, there is substantial evidence that a large number of students (or their families) are willing and able to pay the costs of higher education (Kapur and Crowley 2008).

Market Failure/Merit Good

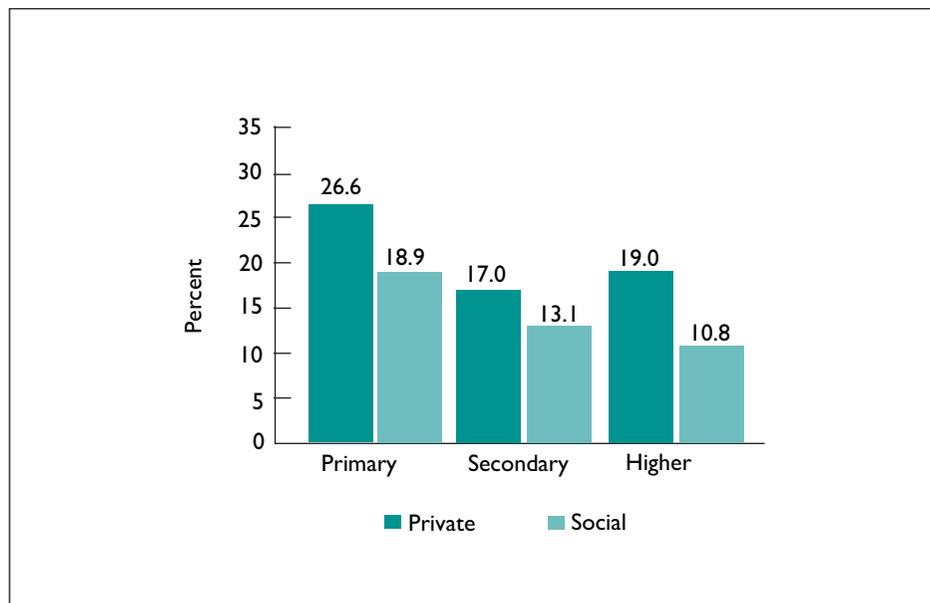
Two principal types of market failure are identified in the higher education debate: The first relates to **positive externalities** (benefits that accrue to society in general, above and beyond those that accrue to the graduate). If the social rate of return to higher education is substantially higher than the private rate, market-based solutions could result in suboptimal investment. The second relates to **capital market imperfections**. While higher education may, on average, be a good investment, the high levels of risk associated with individual loans could constitute a barrier to lenders, leading to less total investment than would be optimal. A related issue has to do with the concept of a “merit good.” Aside from issues of positive externalities, there are concerns that individuals may be “shortsighted” and therefore unwilling to bear the short-term costs of investment in higher education that will provide returns far into the future. Or, individuals may simply be uninformed about the value of higher education investment. In such cases, government “paternalism” may be preferable to consumer sovereignty.

- **Subsidy.** The argument is that in the absence of public subsidy, there would be “underconsumption” of higher education due to a

combination of high positive externalities, limited access to credit markets, or either uninformed or myopic behavior on the part of consumers.

- **Cost sharing.** The argument is that while a strong justification exists for public subsidies to basic education, the rationale decreases at higher levels of the system. Private rates of return to higher education are generally quite high, and capital market imperfections can be addressed with a loan system, which is much less expensive and more equitable than large subsidies and which can target beneficiaries (LaRocque 2003).
- **Empirical evidence.** The observed private rate of return to higher education has been rising in most countries, and international analysis suggests that the private rate of return exceeds the social rate of return²¹ (Figure 1). There is little evidence that individuals are reluctant to invest, as reflected in the high application rates relative to available places in most countries.²² Governments and development partners have a definite role in disseminating accurate information on market demand for skills, but there is little evidence to suggest that governments are better informed than consumers, as has been demonstrated with human resources forecasting and centrally planned economies. International trends suggest that the merit good rationale is weakening (Koch 2008).

Figure 1: Private and Social Rates of Return to Education



Source: ADB 2008a after Psacharopoulos and Patrinos (2004).

Equity

All DMCs are strongly committed to poverty reduction through improved equity in access to public funds.

- **Subsidy.** It is argued that, in the absence of public subsidies, students from poor backgrounds would be excluded, due to cost barriers, and therefore subsidies increase equitable access. It is also argued that subsidies will eventually be repaid through progressive income tax schedules.
- **Cost sharing.** Most economists agree that subsidized higher education is highly regressive, effectively redistributing income from the poor to the wealthy.²³ Moreover, the main obstacle to equitable access is the poor quality of basic and secondary education available to students from disadvantaged backgrounds.
- **Empirical evidence.** Based on a study of 35 countries, Bergh and Fink (2008, p. 18) concluded, “the claim that higher enrollment and lower inequality can be achieved through higher education subsidization is not warranted from an empirical perspective.”²⁴ This finding is consistent with studies conducted by Dabla-Norris and Gradstein (2004) for the International Monetary Fund (IMF) and by the World Bank (2003). In cases where higher education fees were eliminated, there was not a significant positive impact on the socioeconomic composition of the student body.²⁵ The main barrier to equitable access to higher education is clearly the stark income-related difference in access to quality basic and secondary education.²⁶ Many agree that subsidized higher education is extremely regressive.²⁷ Evidence shows that spending is more progressive in countries with strong governance, and that the share of resources going to higher education is strongly related to income inequality (Dabla-Norris and Gradstein 2004). The argument that progressive income taxes will recapture public subsidies is not consistent with observed trends. With increased competition for foreign direct investment, taxation has actually become less progressive in most countries (ILO 2008, Johnstone 2002).

Financial Sustainability

In many DMCs, the education sector is highly dependent on external development assistance to meet operational and development costs. Generally, the long-term objective of governments and development partners is to move in the direction of provision that is financially sustainable, independent of external assistance.

- **Subsidy.** Few arguments suggest that public subsidies will contribute to the financial sustainability of the education sector.

It is argued, however, that subsidies are essential to support the financial sustainability of higher education institutions, which could not operate on fee income alone.

- **Cost sharing.** The strongest argument in favor of cost sharing is the simple fact that the costs of higher education (and education in general) are rising faster than available public resources. The combined impact of population growth, increased access to basic education, growth of the middle class, and the need for substantial quality improvements simply makes cost sharing unavoidable.²⁸ Johnstone (2003, p. 6) summarizes the argument: “[The] most compelling case for cost sharing in developing countries...[is the] sheer need for alternative (i.e., nongovernment) revenue.”
- **Empirical evidence.** While time series data on tertiary enrollments are quite limited, analysis of the most recently available data for 118 countries (Appendix 1) indicates that, over the past 9 years, enrollment has increased by over 12% per annum, on average, increasing by almost 50% over this period. For the 18 ADB DMCs for which data are available, annual enrollment growth has been more than 14% a year. When weighted by the size of the systems in these 18 DMCs, the annual growth rate increases to almost 21%, or by 85% in total over the period.²⁹ India and the PRC are planning to triple higher education enrollments over the next 20 years.³⁰

Quality

There is broad agreement that the quality of higher education in many developing countries is poor and that substantial investments in quality improvement are required.

- **Subsidy.** Proponents argue that public subsidies are essential to maintain quality.
- **Cost sharing.** The argument is that, while public finance may be important, it is insufficient to provide adequate resources for quality education; the only way to increase resources is through increased contribution by higher education beneficiaries.
- **Empirical evidence.** Dissatisfaction with the quality of publicly provided higher education is cited as one factor contributing to the growth of the private higher education sector (Fielden and LaRocque 2008).

Efficiency

Higher education is expensive relative to other education subsectors; this is particularly the case in less developed countries where the ratio of unit costs

of higher education to primary schooling is in the order of 34:1—almost 20 times the comparable ratio in higher-income countries (ADB 2008a).

- **Subsidy.** The argument is that access to subsidized higher education places is based on merit; therefore public resources flow to the most able students with the highest probability of success, thereby maximizing the social efficiency of investments.
- **Cost sharing.** The argument is that, with cost sharing, institutions will become more responsive to clients and that students will be more concerned about receiving value for money. Under a regime of institutional grants from governments, incentives are available for higher education institutions to focus on bureaucratic and political interests. Moving toward market-oriented provision of higher education is consistent with the global trend of market-based provision of services (Tiongson 2006). It is also argued that fee-paying students are likely to be more conscientious.³¹ In general, consumption of “free” goods is often wasteful.³²
- **Empirical evidence.** Data on the efficiency of higher education institutions are quite limited, as the institutions differ markedly in their student intake as well as the relative importance of instruction versus research and of the competencies of graduates. Analysis of data from the US indicates that highly subsidized public institutions have lower graduation rates than private institutions (Woessmann 2008). Some evidence suggests that cost sharing improves students’ commitment to their studies.³³ In a number of countries such as Pakistan and the Philippines, governments have found that they can accommodate publicly funded students at private higher education institutions at lower per-student costs (Fielden and LaRocque 2008).

Tradition

One of the main barriers to introducing cost sharing in higher education is that higher education has traditionally been free; it is extremely difficult to withdraw an “entitlement.”

- **Subsidy.** Proponents argue that access to education is a basic right and that those students who have been successful in meeting entry requirements should continue to receive “free” education. In the Russian Federation, Eastern and Central Europe, and newly independent states, centrally administered free higher education was the norm. This tradition is also strong in Francophone Africa (Marcucci and Johnstone 2007). It should also be noted that the majority of senior officials, political leaders, and educationists in most DMCs were, themselves, once the beneficiaries of subsidized higher education.

- **Cost sharing.** The argument for cost sharing is that, before the mass expansion of higher education following World War II, access was limited to a small elite, and full public subsidy was financially feasible for a limited number of highly qualified students. The worldwide expansion of higher education means that the tradition of providing fully subsidized higher education is no longer financially feasible.
- **Empirical evidence.** There is a worldwide trend toward increased cost sharing in higher education. Even countries such as the Russian Federation, which has a constitutional provision stipulating free higher education, and the PRC, which had a 40-year tradition of free higher education, have moved to cost sharing.

Higher Education Cost-Sharing Options and Practice

The starting point in considering higher education finance reform is developing consensus on objectives. A World Bank working paper on tertiary education finance (Salmi and Hauptman 2006) suggests that finance reform can be intended to address five policy goals: access, equity, external efficiency, internal efficiency, and/or sustainability. The parameters of a reform program will depend on the relative importance of each of these objectives in a DMC.

International experience suggests that reform of higher education finance is likely to meet resistance and is best implemented incrementally over time. Johnstone (2003) presents a typology of 11 “stages” of cost sharing, in which the political acceptability and revenue impact of various options are analyzed.³⁴ There is a clear tradeoff between the fiscal impact of interventions and the resistance they will encounter.

Fees and Pricing

The easiest reforms are the introduction of small administrative charges such as application, registration, and examination fees. While these meet relatively little resistance, they generate little income; they are, however, a first step in the direction of establishing a culture of cost sharing.

In many countries, higher education students receive generous living stipends. One option, short of imposing fees, is to reduce the level of subsidy provided for food and lodging (Ziderman 2002).

In inflationary environments, simply freezing the nominal level of grants effectively reduces the level of subsidy over time.

A number of countries have experimented with dual pricing systems (Marcucci and Johnstone 2007). Provincial and state-funded systems frequently have lower fees for residents. National systems with a strong tradition of full higher education subsidy have allowed public universities to expand by accepting additional students, who pay full costs.³⁵ The PRC introduced a version of this system in 1985, but it was suspended under the 1997 reforms.³⁶ In the Russian Federation, where free higher education is mandated under the Constitution, fees were imposed with a supporting voucher system that provided five

bands of support (ranging from 0% to 100%) based on student performance on the national entrance examination.³⁷ A variant of the dual price system involves allowing public universities to introduce fee-based programs in specific disciplines within the overall framework of a fully subsidized system.³⁸

Encouraging Private Provision

Of course, the most common pattern of dual price provision is the parallel operation of a subsidized public system and fee-charging private institutions. Data on private enrollment in higher education are limited; however, it is clear that this is a major source of higher education provision, often operating with little or no public subsidy. Analysis of the 93 countries for which tertiary enrollment and the share of students in private institutions are available (Appendix 3) indicates that over 37% of total enrollment is in private institutions. For the 13 ADB DMCs for which data are available, the percentage increases to 42%. In the Philippines, about three-fourths of higher education students attend private universities.³⁹

Introducing Fees with Offsetting Grants

When higher education fees are introduced, it is common to establish a system of student grants to offset the impact on students. The structure of fees and grants should reflect the objectives of the finance reform. If direct government support to institutions is reduced to offset the cost of student grants, the reform will not provide additional resources for expansion or quality enhancement. If the fees are additional to existing institutional grants, this increases the level of public subsidy to higher education, thereby raising issues of equity and sustainability.⁴⁰

For this reason, grant programs are typically designed to support only some students, with grant allocation tied to scores on entrance examinations (merit) or to socioeconomic status (financial need), targeted to increase the participation of underrepresented populations (women, minorities, etc.), or linked to specific human resources requirements.

Options for Student and/or Family Financing of Costs

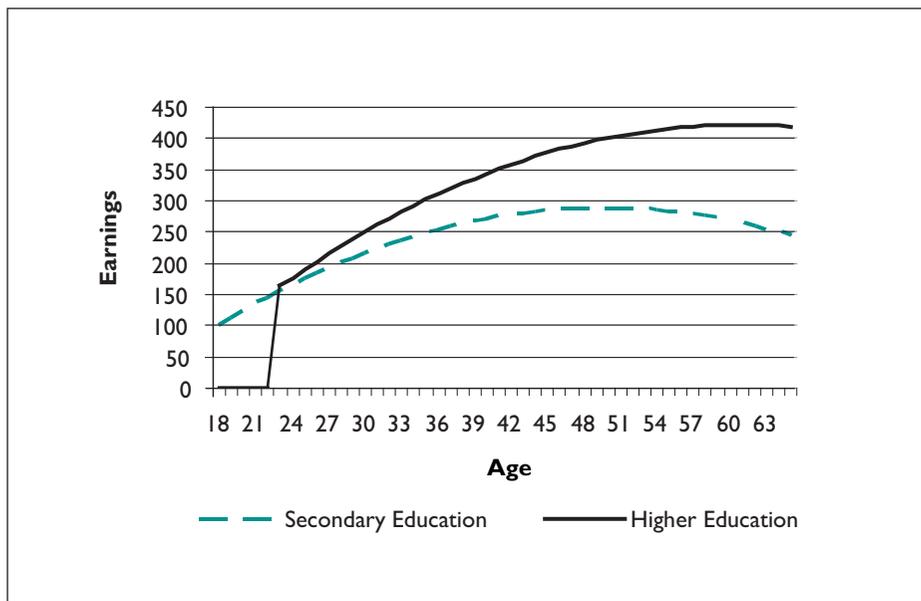
If an increased share of total costs is borne by the beneficiaries, the key question is how these costs can be financed without excluding students from economically disadvantaged backgrounds. Sub-issues are *who* should pay these costs (students or parents) and *when* they should be paid (at the time of study or later in life, after graduation).

There is a well-documented literature on the private returns to higher education. Typically, students (or their families) bear “up-front” costs in the form of direct expenses (fees, books, and additional boarding costs) as well as foregone income during study. These are offset after graduation in the form of higher lifetime incomes. A typical “age-earnings profile” comparing secondary and higher education graduate income streams is shown in Figure 2.

Loans

These are of particular importance as a tool for cost sharing in that they are potentially revenue generating. Moreover, the cost of repayment is borne

Figure 2: Typical Age-Earnings Profile



Source: Study team.

by the beneficiary after he or she has completed studies and entered the labor market, thereby linking repayment to ability to pay. For these reasons, government-sponsored loans have been widely adopted and implemented in more than 60 countries,⁴¹ including 13 ADB DMCs.⁴² Depending on how they are structured, loans can address both equity and sustainability concerns; however, historically, most student loan programs in developing countries have failed to shift a significant share of costs from governments to students.⁴³

The parameters of a loan program should reflect the policy objectives of the scheme. Ziderman (2004) identifies five general objectives that such programs may be intended to meet:

- generate income,
- expand higher education,
- improve equity,
- fill specific human resources needs, and
- ease student financial burdens.

A key question (to which answers will be country specific) is whether investments in higher education provide a reasonable private rate of return. Returns may differ by field of study and quality/prestige of the institution. If the private rate of return is high, the fundamental problem is one of market imperfections in access to credit, and some form of loan (rather than grant) is appropriate. If returns are unacceptably low, a loan-based solution is not likely to be viable. However, this calls into question the economic rationale for grants.

Repayment Architecture

In broad terms, repayment plans fall into two categories—“mortgage type” and income contingent.⁴⁴ The traditional mortgage-type loan has a fixed schedule of repayment over a specified period, as would be the case with a home equity loan. The main disadvantage of this type of loan is that repayment starts shortly after graduation, when incomes are typically lower than in later years,⁴⁵ and repayment commitments do not accommodate fluctuations due to unemployment or economic downturn, thereby increasing the risk of default.⁴⁶

Income-contingent student loans are growing in popularity⁴⁷ and have been either implemented or considered in about 25 countries⁴⁸ including several ADB DMCs. The key difference is that, in each year following graduation, repayment is contingent on earnings, and (in most cases) no payment is required if income falls below a specified threshold. Payments are defined as an agreed-upon percentage of annual income, and repayment is more evenly spread out over the professional career, with repayment deferred until returns from the investment in higher education are realized.⁴⁹ The Australian Higher Education Contribution Scheme is generally cited as a model of best practice for this type of loan.

Default Protection and Interest Subsidies

Loan guarantees and the interest rate are key issues in the design of any student loan system. Because of high levels of uncertainty and risk (combined with the fact that human capital is not “tradable” and therefore cannot be used as collateral), banks, particularly those in developing countries, are generally unwilling to provide student loans or need to add an extremely high “risk premium” to the interest rate.⁵⁰ One approach to this problem has been for governments to guarantee repayment in the case of default. Full government default guarantee is generally seen as poor public policy, as it is likely to increase default rates by decreasing or eliminating the incentive of lending institutions to pursue repayment.⁵¹

An alternative strategy is for governments to subsidize interest on student loans, thereby allowing lenders to charge a lower interest rate to students.⁵² It is essential to note that interest subsidies are effectively a “hidden” grant.⁵³ This practice takes a variety of forms. The PRC experimented with zero-interest student loans in the late 1980s, but the practice was subsequently dropped.⁵⁴ A study of subsidized loans in Malaysia, which had no income-related criteria, found that wealthy families were accessing these loans to fund other expenses.⁵⁵ In the United Kingdom (UK), where the interest rate is set at the inflation rate, this subsidy converted nearly one-third of a loan to a grant.⁵⁶

The hidden grant component of a loan program is reflected in the repayment ratio, which is the discounted present value of anticipated repayment divided by loan costs (discounted to the commencement of the loan). The repayment burden is the anticipated percentage of annual income required to pay off a mortgage-type loan. This can be calculated in two ways: either as a percentage of total anticipated income or as a percentage of the incremental income that is associated with the additional education (Ziderman 2004). The repayment ratio and repayment burden are obviously correlated. However, an extremely high repayment burden can result in increased default, lowering the repayment ratio.

In principle, economists generally agree that interest rates should not be subsidized and should reflect the government’s cost of borrowing funds unless the program is specifically targeted at either assisting students from low-income backgrounds or meeting specific human resources needs.⁵⁷ In practice, some form of interest subsidy is usually provided to lower the interest rate charged to students.

Incentives

Loan programs can be structured to include various incentives, tied to desired outcomes. Examples related to career choices include loan reduction or forgiveness for graduates in medicine or education who accept postings in remote locations,⁵⁸ for those who enter low-paying public service employment,⁵⁹ or for those who pursue public-interest law careers.⁶⁰ Loan incentives can also be tied to student performance, with partial loan forgiveness tied to completing studies within the normal time required⁶¹ or receiving passing grades in all courses.⁶² There can also be incentives for early repayment.⁶³

These incentives are, of course, not cost free, and they decrease repayment revenue, which can be a threat to financial sustainability. The actual costs of incentives would be more transparent if they took the form of posting or hardship allowances upon accepting employment.

Administration and Collection

The success or failure of a loan program is determined largely by effective collection, which depends on the quality of administration, the availability of information, and the incentives of the lending authority. Johnstone (2003, p. 10) notes that “student loan programs around the world have compiled an impressive record of failures”; many simply do not recover repayments. In developing countries, repayment rates are typically less than 50%.⁶⁴ In many countries, these programs are administered by the ministry of education or higher education. Annual funding for loans comes through government appropriations, and there is little capacity or incentive to track and enforce repayment.⁶⁵ In other cases, loans are administered by state agencies, private banks, or universities.⁶⁶

A successful loan program needs a collection authority that is professional, incorruptible, and technically expert. This suggests distancing the collection function from government or university bureaucracies. Several options include contracting private firms with international experience in capitalizing and loan recovery, sale of loans to secondary markets, and “securitization” (issuing bonds financed by anticipated loan repayment) (Salmi and Hauptman 2006).

Collection of income-contingent loans is more complex and difficult, requiring reliable information on graduates’ annual earnings as the basis for determining repayment. In developing countries, income is often not accurately reported, and much comes from informal activities. At the minimum, a workable recovery mechanism requires a national system for monitoring incomes and a unique identification number that follows graduates through their working lifetime.⁶⁷ A system that is not comprehensive can have the perverse effect of imposing a much higher effective repayment rate on individuals in wage employment and

on public sector employees in particular, where earning information is easily accessible.

Another difficulty relates to collection from graduates who emigrate or work overseas for extended periods; this is particularly the case for students who study abroad. Emigration has been described as the repayment “black hole” (Barr 2007). While the International Monetary Fund (IMF) (Spilimbergo 2007) notes that no comprehensive data on return rates of foreign students are available, substantial evidence shows that a significant number of higher education graduates either do not return or delay return for many years. Among ADB DMCs, the PRC and India have atypically high rates of students staying beyond the completion of studies. In 2003, 56% of immigrant scientists and engineers in the US were of Asian origin (ADB 2008c).

Increased Private Provision

One of the most direct ways to foster cost sharing is by encouraging private providers to enter or expand service. This can be accomplished by extending loan programs to students in private institutions. Moreover, public subsidization of loans to students in private institutions may be more cost effective than expansion of public universities (Ziderman 2004), as private providers may be more efficient (ADB 2008b). Bangladesh, India, Indonesia, Philippines, and Thailand have a very high proportion of private higher education enrollment (Bray 2002).

Innovative Finance Options

Two options that have been considered as follows:

- **Graduate tax.** Under this system, in return for government scholarships, graduates would be subject to an additional surcharge on income, generally for their lifetime. This approach has a number of associated problems: It may be a disincentive to increase earnings through extra work. Also, it may serve as an incentive for emigration to avoid the surcharge. For these reasons, no country has instituted a graduate tax.⁶⁸
- **Human capital contracts.** Under this arrangement, a private sector investor finances a student’s investment in higher education in exchange for a percentage of later earnings, usually for a fixed period. Private companies are offering this option in Chile, Colombia, Germany, and United States.⁶⁹

Key Design Issues

This section explores key issues in designing higher education financing programs.

Identifying and Addressing Obstacles to Finance Reform

Finance reform is more a political than a technical issue. As noted earlier, no strong consensus exists regarding the desirability of higher education cost sharing. In most Western, European, and Nordic countries, in particular, free public education is seen as an entitlement, and even discussion of cost sharing is seen in some cases as taboo (Barr 2005). Transitional societies emerging from Marxist systems also carry the tradition of fully subsidized higher education. Many developing countries have retained traditions and values reflecting their colonial legacy or Marxist influences (Johnstone 2003). Most politicians and senior civil servants benefited from free higher education, and this pattern is reinforced by externally funded scholarships (even from countries that impose cost sharing on their own citizens).

Aside from issues of culture and tradition, because of the regressive characteristics of full public funding, powerful elites will oppose reforms that are not to their personal advantage.⁷⁰ In addition, in most countries, university students constitute a politically active, vocal, and potentially volatile constituency (Rozada and Mendez 2002). Therefore, identifying and addressing the obstacles to reform is a key design issue.

Fiscal Impact and Sustainability

In most cases, the main objective of cost sharing in higher education is to increase the total level of resources available to the education sector and to contain public expenditure. If fees are fully funded in the form of scholarships, with a corresponding reduction in direct grants to institutions, public costs are not reduced⁷¹ and support to institutions is not increased. Even with a fully functional loan system, there may be increased public costs in the short to medium term while awaiting income through repayment. Any loan system will not likely be fully self-replenishing due to administrative costs, default, and the likely expansion of demand over time (Zideman 2004).

It is also important to note that most higher education loan systems have been poorly designed and have low recovery rates. If the plan includes

subsidized interest, a substantial share of the program is effectively a grant, which significantly increases the public cost. There is a real danger of having the illusion of cost recovery where little exists and of introducing policies that are not financially sustainable (Salmi and Hauptman 2006). All programs will also carry administrative costs and have some rate of default.

The key point is that introduction of cost recovery will not be a “quick fix” for resource shortfalls, and that any publicly funded program will still impose some share of the costs on taxpayers.

Equity and/or Efficiency Issues

One of the main reasons for introducing cost sharing is that public finance of higher education is extremely regressive.⁷² With globalization and high rates of economic growth, income inequality has been rising substantially.⁷³ Between 1990 and 2005, income inequality increased in two-thirds of the countries for which data are available (Tobin et al. 2008).⁷⁴

In most countries, demand for higher education places outstrips supply; and places in higher education institutions are allocated based on student performance in secondary school. The underlying assumption is that allocation of higher education places based on ability yields the greatest efficiency. However, access to high-quality secondary education in many countries is determined by household income, not innate ability. Clearly the main obstacle to equitable access to higher education is not simply access to finance but rather the large and systematic differences in access to quality basic and secondary education.⁷⁵ There is reason to believe that both equity and efficiency in the education sector could be improved by more equitable support of basic and secondary education to increase opportunities for high-ability children from poor and other disadvantaged households to develop their potential.

Efficiency Gains as a Complement to Cost Sharing

In parallel with examining options for increasing resources for higher education through cost sharing, it is important to determine how effectively existing funds are being used. In low-income countries, the ratio of public expenditure per student on higher education is 34 times that of primary schools; the comparable ratio for high-income countries is 1.8:1.⁷⁶ In some countries, publicly funded higher education institutions massively overspend their budget allocations, accumulating substantial debt. Alternatives such as distance education or the US community college model (with substantially lower instructional costs) should be explored as alternatives to expansion of traditional, high-cost institutions.

Reallocation of Savings

Another issue relates to the “public rationale” put forward for increasing cost sharing. If the additional funds are seen as contributing to the education sector, they are more likely to be acceptable to students and families. This is particularly the case in countries where there is the perception of corruption or inefficient public spending.

Means-Based Targeting

One obvious way to lower the public cost of grants and loans is to restrict access based on targeting financial need. The impact of targeting is obviously directly linked to the level of subsidy. Most countries offering student loans do not require students to meet a needs test (Salmi and Hauptman 2006). In most developing countries, which have large informal sectors, weak tax administration, and informal extended family support systems, financial circumstances can be difficult to assess. Complex systems of means testing can also be very cumbersome and expensive.⁷⁷ However, relatively uncomplicated methods have been used successfully for this purpose. These can be simple questions that do not directly attempt to capture income information but “infer” proxies from lifestyle questions (Salmi and Hauptman 2006) or use neighborhood information such as postal codes (Birch and Miller 2008).⁷⁸ Mexico has developed a system of estimating an economic need factor based on income, family size, and the tuition fee (Canton and Blom 2004). In some cases, the burden of a complex application process has been used as a means of discouraging more affluent applicants.⁷⁹

Realistic Pace of Reform

International experience has shown that cost recovery is best introduced slowly, in stages, over time. A “big bang” approach is likely to meet resistance. There is an “implicit social contract” with students currently enrolled in fee-free education. Also, secondary and even primary education can reflect a longer term family education investment strategy. In many countries, families have invested in higher cost private secondary schooling and after-hours tutoring with the expectation that this will lead to fully funded higher education for their children. For these reasons, it is important that economic and financial analyses be conducted as early as possible to identify the downstream need for higher education cost sharing and to allow time for consensus building and phased implementation.

Consistency of Policy Recommendations and Development Partner Practice

Sometimes at the country level a “disconnect” can be observed between the advice and practice of development partners in the area of cost sharing. Many bilateral and multilateral agencies offer fully subsidized scholarships to developing country nationals, with no provision for cost sharing. It is difficult to recommend a policy of cost sharing in the context of funding parallel scholarship programs in which the same principle is not applied. However, there is no disconnect between advice and practice should the fully subsidized scholarships be supporting equitable access to higher education and be targeted for students from poor and other disadvantaged groups, i.e., students who have no means to participate in cost sharing.

Public–Private Partnerships

According to Strategy 2020, ADB will explore new approaches and instruments involving public–private partnerships as a key component of the new education sector strategy (ADB 2008d). In Asia and the Pacific, Indonesia, Japan, Republic of Korea, and the Philippines have successfully constrained public costs by actively encouraging the expansion of private provision.⁸⁰ There is substantial scope for development assistance targeted at the private sector through public–private partnerships.⁸¹ The World Bank and the International Finance Corporation have extensive experience in lending to private higher education providers in developing countries.⁸² Examples include World Bank support to a consortium of 40 private universities in Mexico to develop a university-funded student loan program in 1998 (Canton and Blom 2004).

Unintended Consequences

Most of the research on possible unintended consequences of cost-sharing programs comes from developed countries and may not be applicable to DMCs. There is evidence, however, that debt can alter behavior and that this should be considered and included in monitoring and evaluation plans. Controlling for other factors, indebtedness appears to have changed career choices, with students holding debt less likely to pursue occupations in the nonprofit, government, and education sectors.⁸³ A study in Australia found that having additional debt (due to student loans) that was collected through income taxes increased the probability of misreporting income, controlling for other variables. In the UK, student loans were associated with an increase in bankruptcy filings. Levels of debt were also observed to adversely affect alumni contributions. However, research suggests that levels of debt are not related to decisions to pursue further graduate or professional education.⁸⁴

Strategies for Policy Dialogue and Project Preparation

In its work in higher education, ADB should pursue certain strategies:

Points of Entry

ADB has various “points of entry” to facilitate policy dialogue regarding higher education cost sharing. At the operations level, the most obvious point of entry is when technical assistance or project preparation explicitly focuses on the higher education subsector. However, policy dialogue can start well in advance of specific requests for project preparation tied to higher education. This paper recommends that, wherever possible, sector work should include data collection and analyses that will help determine whether there is likely to be a downstream need for higher education cost sharing and should generate the information needed to begin the policy dialogue process. This is extremely important because reforms in higher education finance are likely to meet with social and political opposition and are best implemented incrementally over a fairly long time frame. Moreover, there is likely to be a substantial delay between the time a cost-sharing program is implemented and significant repayment.

Country Partnership Strategy

The foundations for data collection and analysis to support dialogue on higher education finance reform can emerge from the country partnership strategy process. National plans and poverty reduction action plans in most DMCs emphasize poverty reduction, equitable access to public services, efficiency improvement, and economic growth; these are all key elements related to higher education reform. Good practice would suggest including the activities and analyses described in the next section of this paper (A “Toolbox”) in the country partnership strategy itself or as activities in the annual update of the strategy indicative rolling business plan.⁸⁵

Education Sector Work

Even when ADB engagement is focused on a specific subsector (e.g., basic education investments to meet Education for All and Millennium Development Goal targets), there is broad opportunity to “ground” subsector planning,

monitoring, and evaluation in the broader context of the overall education and training sector. The financial sustainability of investments in individual subsectors will ultimately be determined by the overall sustainability of the national financing framework and the costs and resource envelope available to the entire education sector, including higher education. As noted in the Introduction, ADB's *Economic Retrospective 2004* highlights the need to improve education sector analysis in support of project preparation.

Whole Government Engagement

While the ministry of finance is typically the borrower of ADB loans, project preparation often involves intensive engagement only with the ministry of education. Even in DMCs that are heavily dependent on external support for the education sector, the overwhelming bulk of finance will come from the national treasury. While development partners are increasingly concerned about aid effectiveness, ministries of finance often lack the capacity to exercise sufficient due diligence in monitoring the impact of government funds. Furthermore, in most DMCs there are two line ministries for education: one for basic and secondary education, and the other for higher education. It is therefore strategically important to develop an interministerial alliance that examines issues of equity, financial sustainability, linkage of higher education to the labor market, and internal efficiency of the overall education sector.

Broadened Development Partner Engagement

In many countries, bilateral development partners still focus primarily on support to basic education over other subsectors. Discussion of the issues of higher education reform, and cost sharing in particular, may meet indifference or opposition. The strategy to facilitate policy dialogue must therefore also aim at encouraging other development partners to address fundamental issues of equity and overall sector financial sustainability. Since many of these policies are determined at development partner headquarters, this may require broader ADB-led regional consultation on fundamental issues.

Collect Evidence to Inform Policy Dialogue

Given the highly political nature of cost recovery, policy dialogue needs to be grounded in sound empirical data and discussions need to be evidence based. This would include a retrospective time-series analysis of enrollments and costs at all levels of the education system and forward projections, combined with a forward-looking financing framework. This will identify situations where a financing gap is looming and flag the need to consider cost-sharing alternatives.

In addition, it is important to have quantified information on the beneficiaries of public funding (by socioeconomic status, gender, urban–rural dimension, language, and ethnicity). Ideally, this information would be collected well in advance of designing a cost-sharing policy, when the issues are likely to be less politically sensitive. Strategies and instruments for collecting relevant data are presented in the next section.

Sector-Wide Approach

A core principle of a sector-wide approach (SWAp) is that all expenditures on education and training (independent of ministerial responsibility or source of finance) should be analyzed holistically to assess efficiency, equity, consistency with national plans, financing gaps, and long-term financial sustainability.⁸⁶ In recent years, this principle has, in some cases, been affected by broadening practice to a program-based approach, with attention focusing on the principles of the Paris Declaration, the use of external funds, and a somewhat myopic concentration on basic education in isolation.⁸⁷ Preparation of a SWAp provides an ideal opportunity to initiate consideration of the longer-term financing implications of higher education policy within the context of overall sector finance.

Political Buffering

There are generally few incentives for line ministries to champion higher education cost recovery, as this can be a politically volatile issue. One strategy that has been used in a number of countries,⁸⁸ and is recommended, is to establish an independent body to assess options and make recommendations on higher education finance reform.

A “Toolbox” for Policy Dialogue, Planning, and Analysis

Having identified the information that is required to facilitate policy dialogue and to design appropriate interventions, the next issue is identifying the range of tools that are available to inform this process. The tools, described in the next page, are not higher education specific. As emphasized throughout this good practice guide, higher education cost sharing must be planned within the broader context of overall education and training finance. Even when ADB assistance is not focusing specifically on higher education cost sharing, or even on the higher education subsector, collection and analysis of data that lay the groundwork for future policy dialogue are extremely useful. In all likelihood, higher education cost sharing will eventually become an issue at some point.

For purposes of discussion, this guide considers how each of these tools can be used for the preparation of specific loans for the higher education subsector as well as their utility in supporting broad policy dialogue, even in cases where ADB's current engagement focuses on a different subsector. An overview of the applicability of specific tools to project preparation and facilitating policy dialogue is shown in the table on page 28.

Labor Market and Rate-of-Return Analysis

An essential (but not sufficient) prerequisite for cost recovery within a student loan framework is that private return to investments in higher education should be sufficient.⁸⁹ International evidence indicates that this is generally the case in most market economies.⁹⁰ The pattern of returns to education is changing due to both supply- and demand-side reasons: rates to post-primary education are higher than rates to primary education in countries where supply of primary education graduates has increased due to increased enrollments (and thus wage rewards to primary education have fallen) and where demand for employees with low skills may have fallen due to changes in skill composition needed to support economy (Colclough et al 2009).

One source of information is the “Mincerian” Human Capital Earnings Function.⁹¹ Comparative international data have been collected and published regularly since 1973.⁹² It is important to develop and update country-specific estimates as a basis for policy dialogue.⁹³ In many DMCs, updated estimates can be developed from household data surveys.⁹⁴ Information on the demand

A “Toolbox” for Policy Dialogue and Project Preparation

	Labor Market Analysis	Public Expenditure Review	Unit Cost Analysis	Benefit Incidence Analysis	Financing Framework & Projection Models	Cost of Existing Education Commitments	Medium-Term Expenditure Framework	Comparative Analysis & Best Practice	Country Context & Institution Analysis	Assessment of Credit Markets
BROAD POLICY DIALOGUE										
Develop Evidence Base	X	X	X	X	X	X	X			X
Whole Government Engagement	X	X		X	X	X	X			
Broaden Development Partner Engagement		X		X	X	X	X			
Country Partnership Strategy	X	X		X	X		X	X		
Sector-Wide Approach	X	X	X	X	X	X	X			
Political Buffering Body	X								X	
Public Awareness Campaign			X	X					X	
PROJECT PREPARATION										
Address Obstacles to Reform	X			X	X	X	X			X
Fiscal Impact & Sustainability		X	X		X	X	X			
Equity/Efficiency Trade off	X	X	X	X						X
Potential Efficiency Gains	X	X	X				X			
Reallocation of “Savings”			X	X	X	X	X	X		
Feasibility of Loan System								X	X	X
Feasibility of Income-Contingent Loan System								X	X	X
Loan Default Guarantees								X	X	X
Subsidized Interest Rate					X			X	X	X
Means-based Targeting	X	X		X						X
Realistic Pace of Reform								X	X	
Consistency of Policy & Practice	X	X	X	X			X			
Public-Private Partnerships		X								X
Unintended Consequences	X									

Note: “X” indicates linkage of sector financing issues with policy dialogue and project preparation.

Source: Study team.

for specific skills and remuneration can be obtained through tracer studies of recent graduates and corporate and public sector wage surveys.⁹⁵ Documenting the high rate of return to higher education can be an important step in initiating dialogue on equity issues.

Public Expenditure Review

It is important to conduct policy dialogue and planning within the context of information on where public funds are actually going and how they are being spent. ADB and the World Bank regularly undertake public expenditure reviews (PERs) independently or in collaboration. As of 2005, PERs had been completed in 21 ADB DMCs (ADB 2005). Ideally, the analysis would cover all public expenditure across ministries and sectors. However, an analysis of the education sector can be conducted alone. There is a well-developed methodology for conducting PERs, and the World Bank has developed specific guidance for PERs in the education sector. Unless one has been conducted recently, a PER of the entire education sector (including higher education) should be conducted as a component of sector work, even when higher education and cost sharing are not the main issues under consideration.

Unit Cost Analysis

Within the PER framework, it is extremely useful to collect information at the level of the individual school or institution and to aggregate to larger units (e.g., subsectors, provinces, etc.). Within the higher education subsector, it is important to attempt to develop estimates of unit costs by type of institution⁹⁶ and by broad program area. It is also important to conduct international comparisons of unit cost for comparable countries. Online instruction, for example, can reduce unit costs by up to 60% compared with traditional delivery modes. In DMCs, savings through distance education have been in the order of 75%, with 5 of the 10 largest systems in the world operating in ADB DMCs.⁹⁷ Large-scale open university programs are being developed in the People’s Republic of China (PRC), Indonesia, and Thailand.⁹⁸

Benefit Incidence Analysis

A benefit incidence analysis (BIA) contrasts the value of public benefits received (by individuals or groups) with the distribution of income or wealth of these individuals or groups, usually measured by income quintile or decile.⁹⁹ Information on the allocation of public funds by population subgroup (socioeconomic status, gender, ethnicity, urban-rural dimension, etc.) is generally not collected and analyzed in most countries. This information can be obtained in various ways and can be essential in informing the policy dialogue regarding equity issues in higher education cost recovery.

It is not sufficient to look at higher education entry as a dichotomous variable, as there are often significant differences in quality of institution, returns to specific fields of study, and levels of support and subsidy.¹⁰⁰ In the PRC, for example, Li (2007) found an inverse relationship between university quality and fees, with lower-income students overrepresented at the higher cost, less prestigious institutions. Male students were also much more likely to be enrolled in elite institutions. Good practice would involve developing estimates of the monetary value of public subsidies realized by different demographic groups.

In many DMCs, a substantial portion of support for higher education comes through external scholarship programs. It is therefore important to collect information on the characteristics of benefit incidence of these programs as well, with particular emphasis on the characteristics of students who receive overseas scholarships. If external support is going directly to institutions, this should be included in the BIA as well.

Financing Framework and Sustainability Projection Model

Many countries regularly prepare and update a multiyear financing framework, often in collaboration with the International Monetary Fund (IMF). This provides a basis for estimating the “resource envelope” that is likely to be available to specific sectors during the plan period. One limitation of such frameworks, as they relate to education, is that the full education cycle (preschool through higher education) covers 16 or more years, far exceeding available projections. While long-term projections are always uncertain, extrapolating from the available financing framework can provide an initial “signal” as to whether proposed education policies are likely to be unsustainable under a range of plausible assumptions. Given the high costs of higher education and the rapid pace of enrollment growth in many countries, an extended financing framework can be a useful tool in raising awareness of the pending need for higher education cost sharing.¹⁰¹

Determining the Cost of Existing Education Commitments

Within the context of a sustainable financing framework, it is important to identify education commitments that will have “first call” on public resources. At the whole-government level, these would include commitments to debt service and functions that are mandated in the Constitution or through legislation. The remaining projected resource envelope constitutes the “discretionary budget.” The education sector will have to compete with other sectors for resources

within the discretionary budget. Within education’s projected resource envelope, legal commitments for service provision (typically basic education) will have first call on resources. Funding for higher education would therefore have to come out of the “residual,” i.e., education resource envelope minus funding of legally mandated services.

Medium-Term Expenditure Framework

It is increasingly common for DMCs to develop a medium-term expenditure framework as part of program preparation for on-budget external support. The framework is most useful when it is developed within the constraints of a projected resource envelope and includes longer-term projections of the recurrent cost implications of new policies and investments. Unfortunately, in many cases, medium-term expenditure frameworks do not cover the entire education sector (including higher education) but focus on the subsectors in which assistance is planned. When assisting a DMC in developing a medium-term expenditure framework, good practice would require that the entire education sector be included.

Comparative Analysis and Examples of “Best Practice”

As noted earlier, information on higher education finance and institutional costs and effectiveness is often incomplete, fragmented, or simply nonexistent. Much of the required information is available in institutional rather than national budgets. Also, most national education management information systems do not include higher education institutions in their annual surveys. This is clearly an obstacle to presenting comparative analyses to support project preparation and policy dialogue. It would therefore be advisable for ADB to support the collection and analysis of higher education data from a representative sample of DMC higher education institutions, linked to data on the national budget and on scholarship programs. Alternative higher education finance and cost-sharing systems (some noted in this guide) will provide a basis for examples of “best practice” as well as examples of strategies and interventions that have not been effective.

Country Context and Institutional Analysis

The success of a student loan program (particularly an income-contingent program) requires reliable data on income, generally based on a national income tax or social security system, as well as reliable institutions for loan administration and collection. It is therefore critical to conduct an analysis of

institutional systems and capacity. Given sufficient lead time, it may be possible (in some situations) to link development of a cost-sharing program to general reform of the government tax system.

Assessment of Credit Markets

Most student loan programs are poorly administered. It is therefore important to assess national and local credit markets to determine whether financial institutions are currently offering student loans or might be potential partners for a new student loan scheme.¹⁰²

A simple way to get preliminary information on the extent of educational loans, collateral requirements, fees, and interest is through meetings with a few large commercial banks. If a new loan system is under consideration, it is important to involve the banking sector from the start. Even if loans are ultimately provided by a government entity, the commercial banking sector might be the best agent for loan administration and collection.

Proxy measures of national credit accessibility can also be constructed from international data on the banking sector.¹⁰³ The most recent update (November 2008) covers 210 countries through 2007, including 35 ADB DMCs (Beck et al. 2008). Controlling for other factors, an improvement in credit access is associated with increases in both the secondary and tertiary enrollment rates (Mohamed 2008).¹⁰⁴

Summary and Recommendations

In most ADB DMCs, higher education cost sharing will eventually become necessary due to constraints on public resources. It is therefore important that underlying data collection and analysis be undertaken, well in advance, to initiate policy dialogue and to assure that the process is “evidence based.” Ultimately, good practice must accommodate the country-specific context, wherein social, cultural, and political considerations are paramount. While this paper focuses on technical analysis and tools, technical analyses will not “determine” the appropriate policy. The tools can, however, help “ground” and inform that process and can identify instances wherein higher education cost sharing will be required in the future.

Equity and the regressive characteristics of most higher education subsidy practices are key issues in framing policy dialogue, but information on the equity of most education systems is generally not available. It is therefore important that BIAs be included in sector work to provide an objective basis for discussion.

Sound policies on higher education finance cannot be developed in isolation, outside the framework of a holistic picture of the entire education sector. By extension, the same principle applies to other subsectors. It is a common tendency to focus on expanding basic and secondary education without sufficient attention to the implications for downstream higher education demand and costs. The issues and analyses identified in this guide should be included in all education sector work, even if the immediate focus is on lower education levels. Many higher education cost-sharing issues are highly contentious, and there is urgency in collecting sound data and developing consensus on basic principles (e.g., equity, poverty reduction, and financial sustainability) before higher education cost-sharing options are overtly “on the table.”

In many countries, student loan programs are likely to be the most appropriate option for cost sharing. Where students and families do not have the capacity to pay fees at the time of study, loans are the only option with the potential for providing finance and the advantage of passing the burden of cost sharing from current students (or their families) to working graduates. However, a viable loan program requires substantial administrative capacity, which is often lacking in government bureaucracies, and a reliable system for tracking income. Therefore, substantial advance planning, capacity development, and the exploration of options for outsourcing administrative services need to be incorporated into reform strategies.

Income-contingent loans are the preferred model for loan recovery, as they flexibly reflect changes in ability to pay and can shift the repayment burden from families to graduates. However, they require an information system that accurately reflects earnings, plus robust mechanisms for collection. The necessary conditions for an income-contingent system may not exist in some DMCs, although they might be developed as part of a comprehensive reform of the tax system.

Student loan systems have been widely adopted around the world; most have been unsuccessful in terms of administration and loan recovery. This does not imply that they cannot work; it generally reflects the fact that they were poorly designed at the outset. Government bureaucracies, and ministries of education in particular, generally lack the skills, capacity, and incentives to operate a loan system. It may be advisable to outsource these services to a professional organization, accepting that there will be administrative and service costs.¹⁰⁵

Cost sharing will not be a viable option in situations without a reasonably high private rate of return to higher education. To work, cost sharing requires that students have a real incentive to invest in higher education and sufficient additional income to repay loans.

Public costs can be reduced through means-based targeting. However, in many DMCs disparities in access to quality basic and secondary education are the main constraint to higher education access by the poor. Moreover, reliable information on family or household income and wealth may be difficult to obtain, although it is possible to develop reasonably reliable proxy indicators. The costs of an excessively complex system of means testing can outweigh the benefits. If student loan systems are not highly subsidized, good practice would suggest making loans available to all applicants without means testing. Students and families who are financially secure will have no incentive to access these loans.

In the short to medium term, loan programs will not address a funding shortfall; there will be a significant time lag between issuing loans and the start of significant repayment. For this reason, it is important that initial work on policy dialogue and financial modeling start as early as possible, preferably as part of general education sector work. Even a well-functioning cost-recovery system will not be fully self-financing.

All sector interventions must be supported by sufficiently comprehensive education sector analysis. Regardless of the specific subsector focus of ADB engagement, sector work should cover the entire education sector (including higher education) and should include analyses of costs, financing, efficiency, equity, and financial sustainability, using some combination of the tools identified in the previous section of this guide.

As the premier agency funding education in Asia and the Pacific, ADB is well placed to coordinate dialogue with other development partners to develop

a coherent and consistent set of policies related to higher education cost recovery. These should include the following:

- Establish a broader view of sector program support, which requires a holistic analyses of the costs, financing, and financial sustainability of the education sector in DMCs.
- Emphasize the importance of consistency between policy advice on cost sharing and practices of externally funded projects.
- Develop a sound knowledge base, including a comparative study of higher education provision, finance, costs, and cost sharing in a representative sample of DMCs, as the basis for knowledge dissemination. This might eventually become the source of an on-line database with more comprehensive and reliable information on higher education finance than is currently available from other sources. A possible model exists in the recent Delta Cost Project in the US, where information on cost and finance for 1,944 higher education institutions was collected and analyzed (Wellman et al. 2008, 2009).
- Develop the capacity and pilot innovative public–private partnerships for higher education cost sharing as recommended in ADB's Strategy 2020.

Further Readings and Resources

See the following for additional information:

- **Data on income inequality.** The World Institute for Development Economics Research of the United Nations University maintains a time series database of world inequality covering 161 countries, including 24 ADB DMCs. The data were last updated in October 2008. Available: www.wider.unu.edu/Database/en_GR/wiid/
- **Benefit incidence analysis of education expenditure: data and instructions.** IMF data set on the benefit incidence of education and health spending in 56 countries as of November 2003. Available: www.imf.org/external/pubs/cat/longres.cmf?sk=16940.0 Also see Davoodi et al. (2003) for a primer on conducting BIA in the social sectors.
- **Methodology for public education expenditure review.** World Bank. *Preparing PERs for Human Development: Core Guidance*. Available: siteresources.worldbank.org/EXTPERGUIDE/Resources/PER-Complete.pdf
- **Methodology for comparative higher education cost and finance studies.** The Delta Project on Postsecondary Education Costs, Productivity, and Accountability has developed a methodology and database on almost 2,000 US higher education institutions. Available: www.deltacostproject.org
- **Annotated bibliography of higher education finance.** Library and annotated bibliography of 500 works on higher education finance. International Comparative Higher Education Finance and Accessibility Project, Center for Comparative and Global Studies in Education, State University of New York at Buffalo. Available: docs.google.com/View?docid=dgc8h4k2_ldddmxrdk
- **Education statistics.** Time series data on a wide range of education statistics. These data are also available through a number of international agencies, including ADB and the World Bank. Data on higher education finance are generally fragmented and incomplete, particularly for ADB Pacific Island DMCs. Available: www.usi.unesco.org
- **Loan systems in Asia.** Review of higher education student loans systems in five Asian countries, including discussion and recommendations of best practice (Ziderman 2004).

- **Higher education finance in Africa.** Seven major foundations (Carnegie, Ford, Hewlett, Kresge, MacArthur, Mellon, and Rockefeller) have invested \$350 million in supporting the Partnership for Higher Education in Africa. Activities include studies of finance and cost sharing in higher education. Available: www.foundation-partnership.org/
- **Databases on private higher education.** The Program for Research on Private Higher Education provides a database on private higher education provision in 92 countries and produces a working paper series. Available: www.albany.edu/dept/eaps/prophe/
- **Private higher education finance.** The Global Center on Private Financing of Higher Education provides a clearinghouse on data and analysis of trends in private higher education finance. Available: www.ihep.org/Research/gcpf.cfm
- **Bibliography on international higher education finance.** See Marcucci and Johnstone (2006).
- **Bibliography on private higher education.** See Maldonado-Maldonado et al. (2004).
- **Economics of higher education funding.** See Woodhall (2007).

Appendix 1: Annual Growth in Higher Education Enrollment, 1999–2007

Country/ Territory	Initial Year		Most Recent Year		Average Annual Growth (%)
	Year	Enrollment	Year	Enrollment	
Algeria	2002	624,788	2007	901,562	8.9
Andorra	2002	267	2006	401	12.5
Angola	1999	7,845	2006	48,694	74.4
Argentina	2000	1,766,933	2005	2,082,577	3.6
Armenia ^a	2000	62,794	2007	111,544	11.1
Aruba	2000	1,578	2007	2,232	5.9
Australia	2000	845,132	2006	1,040,153	3.8
Austria	2000	314,722	2006	253,139	(3.3)
Azerbaijan ^a	2000	117,077	2007	111,544	(0.7)
Bangladesh ^a	2000	726,701	2006	1,053,566	7.5
Barbados	2000	8,074	2007	11,405	5.9
Belarus	2000	411,861	2007	556,526	5.0
Belgium	2000	355,907	2006	394,427	1.8
Benin	2000	22,415	2006	42,603	15.0
Bhutan ^a	2000	1,837	2006	4,141	20.9
Bolivia	2000	278,763	2004	346,056	6.0
Botswana	2000	6,332	2005	10,950	14.6
Brazil	2000	2,781,328	2004	4,572,297	16.1
Brunei Darussalam	2000	3,984	2007	5,284	4.7
Bulgaria	2000	261,321	2006	243,464	(1.1)
Burkina Faso	1999	9,878	2007	33,459	29.8
Burundi	2000	6,132	2006	17,061	29.7
Cambodia ^a	2000	22,108	2007	92,340	45.4
Cameroon	2001	68,495	2006	120,298	15.1
Canada	2000	1,212,161	2004	1,326,711	2.4
Cape Verde	2000	801	2007	5,289	80.0
Cayman Islands	2000	380	2006	567	8.2
Central African Republic	2000	6,323	2006	4,462	(4.9)
Chad	2000	5,901	2005	10,468	15.5
Chile	2000	452,177	2006	661,142	7.7
China, People's Republic of ^a	2000	7,364,111	2006	23,360,535	36.2
Colombia	2000	934,085	2007	1,372,674	6.7

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Appendix 1 (continued): Annual Growth in Higher Education Enrollment, 1999–2007

Country/ Territory	Initial Year		Most Recent Year		Average Annual Growth (%)
	Year	Enrollment	Year	Enrollment	
Costa Rica	2000	61,654	2005	110,717	15.9
Croatia	1999	95,889	2006	136,646	6.1
Cuba	2000	158,674	2007	864,846	63.6
Cyprus	2000	10,414	2006	20,587	16.3
Czech Republic	2000	253,695	2006	338,009	5.5
Denmark	2000	189,162	2006	228,893	3.5
Djibouti	2000	190	2006	1,928	152.5
Egypt	1999	2,447,088	2005	2,594,186	1.0
El Salvador	2000	114,675	2006	124,956	1.5
Eritrea	2000	4,135	2004	4,612	2.9
Estonia	2000	53,613	2006	68,286	4.6
Ethiopia	2000	67,732	2007	210,456	30.1
Finland	2000	270,185	2006	308,966	2.4
France	2000	2,015,344	2006	2,201,201	1.5
Gambia, The	1999	1,169	2004	1,530	6.2
Georgia ^a	2000	137,046	2006	144,991	1.0
Ghana	2000	54,658	2007	140,017	22.3
Greece	2000	422,317	2006	653,003	9.1
Honduras	2000	90,620	2004	122,874	8.9
Hungary	2000	307,071	2006	438,702	7.1
Iceland	2000	9,667	2006	15,721	10.4
India ^a	2000	9,404,460	2006	12,852,684	6.1
Indonesia ^a	2001	3,017,887	2006	3,657,429	4.2
Iran, Islamic Republic of	1999	1,308,150	2007	2,828,528	14.5
Ireland	2000	160,611	2006	186,044	2.6
Israel	2000	255,891	2006	310,014	3.5
Italy	2000	1,770,002	2006	2,029,023	2.4
Japan	2000	3,982,069	2006	4,084,861	0.4
Jordan	2000	142,190	2006	220,103	9.1
Korea, Republic of	2000	3,003,498	2006	3,204,036	1.1
Kyrgyz Republic ^a	2000	160,684	2007	239,380	7.0
Lao People's Democratic Republic ^a	2000	14,149	2006	56,716	50.1
Latvia	2000	91,237	2006	131,125	7.3
Lebanon	2000	116,014	2007	187,055	8.7

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Appendix I (continued): Annual Growth in Higher Education Enrollment, 1999–2007

Country/ Territory	Initial Year		Most Recent Year		Average Annual Growth (%)
	Year	Enrollment	Year	Enrollment	
Lesotho	2000	3,524	2006	8,500	23.5
Lithuania	2000	121,904	2006	198,868	10.5
Luxembourg	2000	2,437	2006	2,692	1.7
Macao, China	2000	7,471	2007	23,868	31.4
Madagascar	2000	32,046	2007	58,313	11.7
Malawi	1999	3,179	2007	6,458	12.9
Mali	2000	19,751	2007	50,913	22.5
Malta	2000	6,315	2005	9,441	9.9
Mauritius	2000	8,256	2006	16,773	17.2
Mexico	2000	1,962,763	2006	2,446,726	4.1
Moldova	2000	103,944	2007	148,449	6.1
Mongolia ^a	2000	74,025	2007	142,411	13.2
Morocco	2000	276,375	2007	369,142	4.8
Namibia	1999	9,561	2006	13,185	5.4
Netherlands	2000	487,649	2006	579,622	3.1
New Zealand	2000	171,962	2006	237,783	6.4
Norway	2000	190,944	2006	214,711	2.1
Oman	2002	36,204	2007	69,018	18.1
Pakistan ^a	2002	385,506	2007	954,698	29.5
Panama	2000	118,502	2006	130,838	1.7
Paraguay	2000	83,088	2005	156,167	17.6
Peru	2001	823,995	2006	952,437	3.1
Philippines ^a	1999	2,208,635	2006	2,483,988	1.8
Poland	2000	1,579,571	2006	2,145,687	6.0
Portugal	2000	373,745	2006	367,312	(0.3)
Qatar	2000	6,626	2007	8,881	4.9
Romania	2000	452,621	2006	834,969	14.1
Rwanda	2000	11,628	2005	26,378	25.4
Saudi Arabia	2000	404,094	2006	636,445	9.6
Slovak Republic	2000	135,914	2006	197,943	7.6
Slovenia	2000	83,816	2006	114,794	6.2
South Africa	2000	644,763	2006	741,380	2.5
Spain	2000	1,828,987	2006	1,789,254	(0.4)
Swaziland	2000	4,738	2006	5,692	3.4
Sweden	2000	346,878	2006	422,614	3.6
Switzerland	2000	156,879	2006	204,999	5.1
Tajikistan ^a	2000	79,978	2007	147,294	12.0
Tanzania	1999	18,867	2005	51,080	28.5

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Appendix 1 (continued): Annual Growth in Higher Education Enrollment, 1999–2007

Country/ Territory	Initial Year		Most Recent Year		Average Annual Growth (%)
	Year	Enrollment	Year	Enrollment	
Thailand ^a	2000	1,900,272	2007	2,503,572	4.5
Trinidad and Tobago	2000	7,737	2005	16,920	23.7
Tunisia	2000	180,044	2006	325,325	13.4
Turkey	2000	1,588,367	2006	2,342,898	7.9
Uganda	2000	55,066	2004	88,360	15.1
Ukraine	2000	1,811,538	2007	2,819,248	7.9
United Arab Emirates	2000	43,459	2007	77,428	11.2
United Kingdom	2000	2,024,138	2006	2,336,111	2.6
United States	2000	13,202,880	2006	17,487,475	5.4
Uruguay	2000	97,641	2006	113,368	2.7
Uzbekistan ^a	2000	305,409	2006	280,837	(1.3)
Venezuela	2000	668,109	2006	1,381,126	17.8
Viet Nam ^a	2000	732,187	2005	1,354,543	17.0
West Bank and Gaza	2000	71,207	2007	169,373	19.7

Summary

Weighted Average Annual Growth (%)

All countries with data (N = 118)	12.3
ADB DMCs (N = 18)	20.7

() = negative growth.

Note: Source data refer to higher education enrollment.

^a ADB DMC.

Source: Downloaded from World Bank EdStats, 12 January 2009.

<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTEDUCATION/EXTDATASTATISTICS/EXTEDSTATS/0,,contentMDK:21528247~menuPK:3409442~pagePK:64168445~piPK:64168309~theSitePK:3232764,00.html>

Appendix 2: “Stages” of Cost Sharing

Type of Cost Sharing	Potential Revenue Impact	Potential Political Acceptability
1. Small “earmarked” fees (e.g., registration, examination, but not yet “tuition”)	Generally small	Quite acceptable
2. “Freezing” (lessening of the “real” value) of student grants	Generally small but continuous	Relatively acceptable
3. Cutting or elimination of some student support grants	Small to large	Unpopular
4. Encouragement and even revenue support of tuition-dependent private sector	Significant over time, but requires tuition fees	Quite acceptable
5. Introduction of fees for lodging and food	Can be large	Unpopular, but can be done gradually
6. Introduction of tuition only for students not admitted to “free” slots: dual or parallel track	Can be large	Acceptable: provides opportunities to students who had none
7. Introduction of tuition only for certain public institutions or programs	Medium to large	Relatively acceptable
8. Introduction of tuition in the form mainly of deferred contributions	Uncertain; revenue in future	Relatively acceptable
9. Introduction of “up-front” tuition fees at all public institutions	Large	Unpopular
10. Enhancing recovery of student loans	Potentially significant, but extremely difficult to effect	Relatively acceptable
11. Large increases (beyond the rate of unit cost increases) in tuition; increase in percentage of costs recovered	In response to state cuts; no net revenue impact	Moderately unpopular

Source: Adapted from Johnstone (2003: Table 1).

Appendix 3: Percentage of Private Higher Education Enrollment

Country/ Territory	Private (%)	Country/ Territory	Private (%)	Country/ Territory	Private (%)
Albania	0.8	Ethiopia	16.3	Malaysia	35.5
Angola	33.9	Finland	10.5	Marshall Islands	22.4
Argentina	23.0	France	16.6	Mauritius	17.8
Armenia ^a	21.9	Georgia ^a	21.2	Mexico	32.7
Aruba	17.3	Ghana	4.0	Moldova	15.4
Australia	2.2	Guinea	5.6	Mongolia ^a	34.4
Austria	13.3	Honduras	19.7	Morocco	10.4
Azerbaijan ^a	16.5	Hong Kong, China	6.3	Mozambique	33.3
Bangladesh ^a	48.8	Hungary	15.0	Namibia	82.5
Belarus	13.3	Iceland	19.7	Nepal	33.0
Belgium	55.4	Indonesia ^a	61.2	Netherlands	100.0
Belize	3.2	Iran, Islamic Republic of	52.0	New Zealand	9.1
Bermuda	100.0	Iraq	6.5	Nicaragua	41.4
Bolivia	16.7	Ireland	7.9	Niger	20.4
Botswana	100.0	Israel	84.5	Norway	13.6
Brazil	71.8	Italy	7.2	Oman	24.7
Brunei	0.3	Jamaica	28.0	Pakistan ^a	32.9
Darussalam		Japan	79.9	Palau	100.0
Bulgaria	18.5	Jordan	30.7	Panama	25.5
Burkina Faso	16.5	Kazakhstan	48.9	Paraguay	56.9
Burundi	31.7	Kenya	30.7	Peru	54.4
Cambodia ^a	58.4	Korea, Republic of	80.1	Philippines ^a	65.8
Cameroon	8.5	Kuwait	25.6	Poland	30.8
Cape Verde	54.9	Kyrgyz Republic ^a	8.7	Portugal	25.0
Chad	8.6	Lao People's Democratic Republic ^a	26.7	Qatar	30.8
Chile	76.1	Latvia	96.1	Romania	26.3
Colombia	44.9	Lebanon	53.4	Rwanda	40.1
Congo, Republic of	8.4	Libya	19.5	Saudi Arabia	7.4
Croatia	4.0	Liechtenstein	100.0	Senegal	21.0
Cyprus	66.6	Lithuania	8.3	Slovak Republic	4.4
Czech Republic	8.9	Macao, China	61.0	Slovenia	9.2
Denmark	1.1	Macedonia	0.4	Spain	13.4
Egypt, Arab Republic of	16.5	Madagascar	14.0	St. Lucia	32.9
El Salvador	66.3			Sweden	7.8
Estonia	83.6			Switzerland	18.6
				Tanzania	5.4

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Appendix 3 (continued): Percentage of Private Higher Education Enrollment

Country/ Territory	Private (%)	Country/ Territory	Private (%)	Country/ Territory	Private (%)
Thailand ^a	16.6	United Arab Emirates	58.2	Viet Nam ^a	10.2
Trinidad and Tobago	7.9	United Kingdom	100.0	West Bank and Gaza	55.3
Tunisia	1.1	United States	25.5	Yemen, Republic of	14.9
Turkey	4.8	Uruguay	14.8	Zimbabwe	10.3
Uganda	10.1	Venezuela	44.7		
Ukraine	11.8				

Summary

	N	Unweighted (%)	Weighted by (%) (most recent year)
All countries with % private tertiary data	118	31.4	
All countries with data on % private and higher education enrollment	93		37.5
ADB DMCs with data on % private and higher education enrollment	13		42.4

Notes:

Figures listed reflect the most recent year for which data are available.

Weighting is based on the most recent year for which data are available. This may not correspond to the year for which data on the percentage private tertiary enrollment are available.

^a ADB DMC with data on % private and higher education enrollment.

Source: Downloaded from World Bank EdStats, 12 January 2009.

<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTEDUCATION/EXTDATASTATISTICS/EXTEDSTATS/0,,contentMDK:21528247~menuPK:3409442~pagePK:64168445~piPK:64168309~theSitePK:3232764,00.html>

Endnotes

- ¹ The World Bank conducted a major revision of poverty estimates based on improved purchasing power parity data (Chen and Ravallion 2008).
- ² The Millennium Development Goal (MDG) 1 target was to reduce the absolute number of people living in extreme poverty by 50% from 2 billion to less than 1 billion.
- ³ The World Bank data were further analyzed by ADB to focus on its DMCs (Bauer et al. 2008).
- ⁴ ADB's operation plan for the education sector, for 2010–2012, is expected to be finalized in 2009.
- ⁵ The main source of ADB loans is ordinary capital resources. The Asian Development Fund supports concessional loans to low-income DMCs.
- ⁶ These attributes are also presented in *Economic Retrospective 2004* (ADB 2005).
- ⁷ The study suggests that in former Commonwealth of Independent States and East Asian socialist countries, private contributions, collected through various user fees, constitute 40% of expenditure in public primary education.
- ⁸ This would reflect a “quality-neutral” increase, with public finance compensating for reduced private funding. In many countries, there would still remain the additional funding required for quality enhancement of basic education. Moreover, if basic education were entirely free, there would be an enormous increase in enrollment.
- ⁹ See Jimenez and Sawada (2001) for information on 12 countries wherein this is the case.
- ¹⁰ Many secondary scholarship programs also cover living expenses. A shift to means-tested secondary loans would increase the number of students who could be supported within the same resource envelope (Ziderman 2002).
- ¹¹ In Sri Lanka, about 60% of O-level students and 84% of A-level students receive private tutoring, and in the Republic of Korea over 37% of out-of-school expenditure goes for tutoring (Bray 2002), with tutoring costs consuming an estimated 2.9% of gross domestic product (Dang 2007). In Hong Kong, China, 70% of upper secondary students receive private tutoring (Bray and Kwok 2003). In Greece, private expenditure on secondary education is estimated to be equal to total public expenditure (Psacharopoulos and Papakonstantinou 2005).
- ¹² In a recent review, Woessmann (2008) reports that most public training programs in Europe have an extremely low, sometimes negative, rate of return and are mostly ineffective.

- ¹³ An extensive literature on human capital theory differentiates between investments in “general” and “firm-specific” human capital. In the case of general human capital, acquired on the job, costs are borne by the employee.
- ¹⁴ See a description of the FEE-HELP system in Chapman et al. (2008).
- ¹⁵ See the discussion of policy changes in Mongolia, People’s Republic of China (PRC), and Viet Nam in Johnstone (2003).
- ¹⁶ There is an ongoing debate regarding this issue. For example, during October–November 2008, the *Economist Magazine* hosted an on-line internet debate on higher education cost sharing. This provides a good overview of key issues (Joyce et al. 2008).
- ¹⁷ Due, in part, to the international focus on basic education, funding shifted away from higher education over the past two decades. In 1994, the World Bank concluded that higher education was in crisis. See the discussion in Johnstone et al. (1998).
- ¹⁸ It is difficult to generalize about the large body of empirical studies. However, two recently published studies cited in this paper are based on large comparative studies and are therefore persuasive.
- ¹⁹ Countries with low per-student expenditure for basic education had lower enrollment ratios in higher education.
- ²⁰ The analyses reported are based on a subset of the 120 countries, depending on data availability. Causality may be bidirectional: countries with very low higher education enrollment may be able to afford to provide high subsidies; as enrollment increases, there is financial pressure to reduce public subsidy.
- ²¹ Psacharopoulos and Patrinos (2004) estimate the private rate of return to higher education at 19%, compared with a social rate of return of 10.8%.
- ²² If anything, there may be overinvestment in countries with a tradition of assured civil service jobs for university graduates.
- ²³ See Bray (2002), LaRocque (2003), OECD (2003), Dabla-Norris and Gradstein (2004), Barr (2005), Marcucci and Johnstone (2007), Bergh and Fink (2008), and Woessmann (2008) for evidence and discussion.
- ²⁴ This is the same study cited with regard to higher education enrollment; the sample size decreased from 120 to 35 countries because of the paucity of data on income distribution.
- ²⁵ See ADB (2006). The same pattern emerged with the elimination of fees in Ireland in 1995—there was no improvement in access for students from lower-income households (Marcucci and Johnstone 2007).
- ²⁶ There is some evidence that financial assistance can improve access, when looking only at students who have completed secondary school successfully (Canton and Blom 2004); however, the main barrier is that most children belonging to the lower socioeconomic status do not have the opportunity to obtain high-quality secondary education.

- ²⁷ In summarizing empirical studies, Rozada and Menendez (2002, p. 2) conclude that “free higher education implies a transfer from lower income groups to higher income groups.”
- ²⁸ For a more detailed discussion, see Johnstone (2003, p. 6).
- ²⁹ Data come from the UNESCO Institute for Statistics, extracted for World Bank EdStats.
- ³⁰ See analysis of DMC country aspirations for higher education in Appendix 8 of ADB (2008a).
- ³¹ Ziderman (2002) posits that students, particularly those from affluent backgrounds, will be more committed to studies when paying fees.
- ³² This is a fundamental argument against subsidization. See Oosterbeek and Patrinos (2008).
- ³³ After introduction of a student loan program in Mexico, loan recipients had higher grade point averages and lower repetition rates than other students. Sixty percent of the students reported that they had increased their effort because of the loan (Canton and Blom 2004).
- ³⁴ The conference at which the paper was presented focused on higher education finance in Africa, but the approach and parameters are broadly applicable. A modified version of Johnstone’s (2003) summary table is included as Appendix 2.
- ³⁵ Fully funded places are allocated based on secondary school examination scores, with students who have acceptable grades but who miss the scholarship “cutoff” admitted as fee-paying students. This arrangement is seen as somewhat arbitrary and lends itself to abuse and corruption (Johnstone 2003).
- ³⁶ Higher education finance reform has gone through a series of transitions over the past two decades. See Li (2007).
- ³⁷ See the description of the Russian Federation system in Marcucci and Johnstone (2007). About 50% of total revenue for higher education in the Russian Federation now comes from fees under this dual track system (Johnstone 2004).
- ³⁸ These may operate as a private or quasi-private unit within a public institution (OECD 2003).
- ³⁹ Figures in Appendix 3 suggest 66% private enrollment in the Philippines; however, Jimenez and Sawada (2001) report 77%. This suggests that the figures in Appendix 3 may be biased downward.
- ⁴⁰ Even when fiscally neutral, there are arguments that favor a fee-grant combination over direct grants to institutions, as this will encourage competition and improved efficiency.
- ⁴¹ See World Bank working paper by Salmi and Hauptman (2006). For a tabular summary of the success and failure of various programs, also see Ziderman (2002).

- ⁴² As of 2004, student loan programs were in operation in the PRC, India, Indonesia, Kazakhstan, Malaysia, Mongolia, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Uzbekistan, and Viet Nam (Ziderman 2004).
- ⁴³ A World Bank study (Johnstone et al. 1998, p. 35) notes, “Loan systems that are generally available without requirement of co-signatories (thus frequently incurring significant default rates), and that carry low rates of interest and long repayment periods, are able to recover only very small portions of the original amounts lent. Such systems are largely ineffective in shifting significant higher educational cost burden from governments, or taxpayers, to students.”
- ⁴⁴ For a discussion of the differences and relative merits, see Bray (2002).
- ⁴⁵ The typical age-earnings profile for university graduates rises steeply during the first 10–15 years after entering the labor market and then plateaus, before declining near retirement age. Therefore, graduates’ capacity to repay loans varies over their working lifetime. Some countries have a hybrid mortgage loan that permits graduated payments: smaller ones earlier in the repayment period and larger later payments (Salmi and Hauptman 2006).
- ⁴⁶ There are examples of hybrid mortgage-income contingent plans. In the Netherlands, for example, mortgage-type loans include a provision for an income threshold for repayment. If loans are not repaid within 15 years, they are written off (Oosterbeek and Patrinos 2008). In the United Kingdom (UK), unpaid loans are written off after 25 years (Barr 2005).
- ⁴⁷ Examples of Australia, New Zealand, and UK can be found in Birch and Miller (2008).
- ⁴⁸ See Chapman (2005) for a discussion of experience in these countries. The list includes several ADB DMCs: Indonesia, Papua New Guinea, and Philippines.
- ⁴⁹ Oosterbeek and Patrinos (2008) point out that in this way, payments are more evenly spread out over the graduate’s career.
- ⁵⁰ See Ziderman (2002) and Barr (2005). The exception is the case wherein a family member can guarantee a loan with physical collateral. Of course, this does not address the issue of access to finance for disadvantaged groups.
- ⁵¹ Chapman (2005) notes that this is an ironic unintended consequence of government attempts to increase the availability of loans.
- ⁵² Salmi and Hauptman (2006) note that even in Australia, a wealthy country, the costs of high-interest subsidies proved unsustainable, and subsidies had to be reduced.
- ⁵³ Ziderman (2002) notes that interest subsidies should be considered only when they are clearly targeting economically disadvantaged students or as an incentive to promote specific areas of study to meet clear skills shortages.

- ⁵⁴ See Salmi and Hauptman (2006) and Li (2007) for a discussion of the evolution of higher education policy in the PRC, which included a series of abrupt changes.
- ⁵⁵ Since the proceeds of loans are fungible, there is incentive to access subsidized loans even when they are not needed to finance education (Salmi and Hauptman 2006).
- ⁵⁶ Correcting for inflation, this translates into an effective interest rate of zero percent (Barr 2007).
- ⁵⁷ There is, in fact, evidence that loan programs with a lower rate of subsidy may be more effective in addressing equity issues, as this will increase the number of students who can be supported within a fixed budget (Salmi and Hauptman 2006).
- ⁵⁸ A portion or the entire debt can be forgiven for accepting remote postings in scarce skill areas (Salmi and Hauptman 2006). The UK also provides a 10% annual write-off for education graduates in scarce skill areas who teach in the public system (Barr 2005).
- ⁵⁹ In the US, a group of 56 law schools collaborate in a program of partial loan forgiveness for students who accept public service jobs (Chapman 2005).
- ⁶⁰ Oosterbeek and Patrinos (2008) provide an example in which scholarships for law students are converted to loans if they do not pursue a public-interest law career.
- ⁶¹ In Norway, a portion of the loan is converted to a scholarship if studies are completed on schedule (Salmi and Hauptman 2006).
- ⁶² The South African loan system has a provision under which the outstanding debts of students who pass all their courses are decreased by as much as 40% (Johnstone 2003).
- ⁶³ In Australia, students receive an additional 10% credit for early repayment (Birch and Miller 2008).
- ⁶⁴ Most loan systems are not financially sustainable, and even successful systems rarely collect more than 70% of funds lent (Ziderman 2002).
- ⁶⁵ Pillay (2008) notes that in most African countries no serious effort is made to collect loans. Moreover, the beneficiaries of these so-called loans are often from the most affluent households.
- ⁶⁶ Oosterbeek and Patrinos (2008) note that, regardless of the administrative arrangement, loan systems tend not to be effective unless, as a last resort, the taxing power of the state can be used to assure repayment.
- ⁶⁷ Chapman and Ryan (2002) note that these conditions do not exist in most developing countries.
- ⁶⁸ See Chapman (2005), Salmi and Hauptman (2006), Marcucci and Johnstone (2007), and Oosterbeek and Patrinos (2008) for additional information.

- ⁶⁹ See Chapman (2005), Salmi and Hauptman (2006), and Oosterbeek and Patrinos (2008). The first company to offer this option, in 2002, has the evocative name “MyRichUncle.”
- ⁷⁰ Marcucci and Johnstone (2007, p. 5) note that “the immediate beneficiaries of free public higher education have tended to be the politically powerful middle and upper classes that use these rationales to support their own interest in keeping higher education free.”
- ⁷¹ There will, in fact, be the additional cost of administering the program.
- ⁷² The regressive nature of public expenditure on education, other than basic education, is well documented. See discussion and analyses in World Bank (2003), Johnstone (2006), and ILO (2008).
- ⁷³ A recent study by ILO (2008) reports that income inequality has been growing in virtually all countries. Inequality has increased most rapidly in countries with high rates of economic growth (World Bank and IMF 2008).
- ⁷⁴ The differential between the poorest and richest 10% of the population increased in 70% of these countries.
- ⁷⁵ Woessmann (2008, p. 22) observes that “the main reason for inequality in access is probably not that children from disadvantaged backgrounds cannot afford to go, but that they do not have the prerequisite qualifications.
- ⁷⁶ See discussion in ADB (2008a). The comparable figures for secondary education are 14:1 versus 1.4:1 in high-income countries.
- ⁷⁷ An extreme example is the case of the US federal system for targeting assistance. About 10 million students a year are required to complete a five-page application with 127 items. Even students who are applying for unsubsidized loans must submit this application. A recent study by the National Bureau of Economic Research (Dynarski and Scott-Clayton 2008) estimates that the full cost (including an imputed value for time used in completing applications) plus administrative costs totals \$4 billion. The analysis also finds that a simplified process would result in only minor changes in allocations.
- ⁷⁸ Proxy measures can be developed through regression analysis of household survey data. Simple indicators such as house construction materials, cooking and heating fuel, type of toilet facilities, and access to piped water typically explain a large share of income variance in developing countries. Even quite simple indicators such as the household’s utility bill (Salmi and Hauptman 2006), parental education, occupation of the principal wage earners, and number of cattle (Johnstone 2003) have been used effectively.
- ⁷⁹ In the Philippines, some Catholic universities use a complex system for assessing need on the assumption that only truly needy students will be sufficiently motivated to undertake the process (Salmi and Hauptman 2006).

- ⁸⁰ This policy is common in Latin America and East Asia, where public finance is limited to a small number of elite public institutions. See Johnstone (2002) for details.
- ⁸¹ A number of governments have entered directly into public–private partnerships for higher education provision. For example, the governments of Botswana and Zambia are financing the capital costs of new universities, with arrangements for private firms to manage the institutions and to meet operating costs (Pillay 2008).
- ⁸² For information on the International Finance Corporation EdInvest program, see www.ifc.org/edinvest.
- ⁸³ In a “natural experiment” in the US in which loans were eliminated and all students were fully supported with scholarships, the number of graduates accepting jobs in the nonprofit, government, and education sectors significantly increased (Rothstein and Rouse 2007). There may also be impacts on choices related to the age-earnings profile of careers selected, with graduates holding debt selecting occupations having higher initial wages but lower rates of growth throughout their careers (Minicozzi 2005).
- ⁸⁴ This finding emerges from analysis of data in the US (Monks 2001).
- ⁸⁵ See ADB (2007a) for a more detailed discussion of the country partnership strategy.
- ⁸⁶ There is a well-developed literature on education SWAPs that consistently emphasizes the need for an overarching sector plan and financing framework covering the entire education sector. As Riddell (2007, p. 14) notes, “The most important aspect of a SWAp is the strategic, sector-wide education development plan, which necessitates the prioritization of subsectoral objectives—and trade-offs between them...so that the rationale for any subsectoral expenditure is embraced within this wider framework.” Ward (2006) emphasizes that an essential characteristics of a SWAp is that “It is sector-wide, in that planning and activities have a whole-sector perspective.”
- ⁸⁷ *Economic Retrospective 2004* (ADB 2005, p. 16) observes that “there seems to be considerable confusion on the so-called program-based approaches, such as: What is the difference between a program loan, a sector loan, and an SDP [sector development program]? What is a SWAp?”
- ⁸⁸ Examples include Australia, India, and UK (Salmi and Hauptman 2006).
- ⁸⁹ In some countries, there is evidence of limited employment prospects for graduates with higher levels of education. In the Philippines, for example, the highest unemployment rates are recorded for graduates of secondary and higher education (ADB 2008c).
- ⁹⁰ Moock et al. (2003) report that rates are low in centrally planned economies but rise as reforms are implemented. Observed returns may therefore be low in transitional economies, but there is reason to believe that these will rise over time. They note that in the PRC, for example, in the 1980s the rate of return to schooling was typically below 5%.

- ⁹¹ This is the widely used approach in which the logarithm of earnings is regressed on years of schooling, years of experience, and experience-squared. The estimated coefficient on years of schooling is interpreted as an estimate of the private rate of return to investments in education. See Mincer (1974).
- ⁹² The most recent update (Psacharopoulos and Patrinos 2004) provides data on 98 countries. Returns to higher education generally rose over 1973–2004.
- ⁹³ For example, in Papua New Guinea evidence shows that, contrary to international trends, the rate of return to schooling increases with schooling level (Gibson and Fatai 2006).
- ⁹⁴ ADB has regularly supported national household, income, and consumption surveys in DMCs with access to the underlying data. International household data from demographic and health surveys are also available on the internet.
- ⁹⁵ In many countries, annual wage surveys with extremely detailed occupational categories are conducted by large accounting firms and provided to corporate human resource officers on a commercial basis. Trends in wages and starting wages, in particular, can provide insights into current market conditions.
- ⁹⁶ In a major study of the cost and finance of 1,944 higher education institutions in the US, significant differences in cost were identified when categorizing institutions into six types based on the Carnegie classification system (Wellman et al. 2009).
- ⁹⁷ In the PRC, India, Indonesia, Republic of Korea, and Thailand, unit costs are about one-fourth of those in traditional universities (ADB 2008a, Appendix I).
- ⁹⁸ See discussion of lending for information and communication technology in Chapter 4 of ADB (2008a).
- ⁹⁹ See Tiongson (2006) for an overview of World Bank experience with BIAs, and Davoodi et al. (2003) for an IMF primer on BIA in the social sectors as well as links to relevant data.
- ¹⁰⁰ While most analyses focus only on participation, a comprehensive study would also include measures of access to appropriate facilities, teacher quality, and instructional materials, and output measures such as graduation and employment (OECD 2003).
- ¹⁰¹ Where a government-endorsed financing framework does not exist, it can be useful to undertake these projections using a simplified set of assumptions about economic growth, the national budget, and education's share of the budget. It is important to involve representatives of central ministries in this process, although the analyses will not likely gain formal "endorsement."
- ¹⁰² The chances of student loan programs achieving acceptable repayment levels increase substantially when they are serviced and collected by banks or other private entities (Salmi and Hauptman 2006).

- ¹⁰³ For a discussion of the methodology, see Beck et al. (1999).
- ¹⁰⁴ This analysis was conducted using an earlier version of the World Bank data set. A comparable analysis with the newer data set is not yet available.
- ¹⁰⁵ In some countries there is the illusion that government administration is “cost-free” in the sense that the staff who will be undertaking this function are already on the payroll. Internal administration carries the opportunity cost of staff being diverted from other activities. In the worst systems, the loan function is staffed by individuals who are unproductive in their current roles and are “warehoused” in the scholarship/loan office.

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Good Practice in Cost Sharing and Financing in Higher Education

Higher education will have increasing importance in channeling human resources to support social development and economic growth but faces resource constraints and competing priorities in ADB's developing member countries (DMCs). Sudden and large shifts of government financing to higher education in DMCs may derail adequate funds for basic and secondary education. It is thus critical that new paradigms be found for financing higher education. With its well-developed framework for planning, project preparation, and analysis, and its excellent track record in education, ADB is well positioned to provide leadership in this important area. This good practice guide focuses on policy options, strategies, and practical tools for identifying and obtaining information to feed into country-specific dialogue concerning funding shortfalls and innovative methods of higher education finance, including partnerships with the private sector.

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