formulas linking resources to measures of institutional performance, encouragement of resource mobilization by institutions, competitive funds for investments in quality improvement, and student financial aid.

Strategic Framework for Future Bank Support

Investment in tertiary education is an important pillar of development strategies emphasizing the construction of democratic knowledge societies. The World Bank can play a central role in the process in a number of ways. Under the right circumstances, the Bank may play a catalytic role by facilitating policy dialogue on tertiary education reforms. This can be accomplished through information sharing and analytical work in support of national dialogue and vision formulation efforts.

Three vital lessons that have been learned from past and current tertiary education reform projects are that comprehensive reforms are more effective, sensitivity to stakeholders and the local political economy of reforms is vital, and integration of positive incentives for change can be pivotal. Based on these lessons, World Bank support to client countries should be appropriate to a country's specific circumstances, predicated on strategic planning at national and institutional levels, focused on promoting autonomy and accountability, geared toward enhancing institutional capacity, sequenced with a time horizon consistent with the long-term nature of capacity enhancement efforts, and sensitive to local political considerations.

While most strategic options outlined above are relevant to middle-income countries, important distinctions are warranted for transition countries, low-income nations and small countries. The leading options for improving tertiary education in the transition countries of Eastern Europe and Central Asia include introducing more-flexible and less-specialized curricula, promoting shorter-term programs, creating a more adaptable regulatory framework, and establishing systems of public funding that encourage institutions to respond to market demands for quality and diversity.

A tertiary education development strategy for low-income countries would include three priorities: building capacity for managing and improving the basic and secondary education system, including the training and retraining of school teachers and principals; expanding the production of qualified professionals and technicians through a cost-effective combination of public and private nonuniversity institutions; and making targeted investments in strategic fields of advanced training and research in chosen areas of comparative advantage.

Priorities to address the tertiary education needs of small states are subregional partnerships with neighboring small states to establish a networked university, strategically focused tertiary education institutions that address a limited number of the nation's critical human skill requirements, negotiated franchise partnerships between the national government and external providers of tertiary education, and government-negotiated provision of distance education by a recognized international provider.

Globalization and the growth of borderless education raise important issues that affect tertiary education in all countries but are often beyond the control of any one national government. Among those challenges are the new forms of brain drain resulting in a loss of local capacity in fields critical to development, the absence of a proper international accreditation framework, the absence of legislation for foreign tertiary education providers, the lack of intellectual property regulations governing distance education programs, and barriers of access to information and communications technologies. The World Bank will work with its partners in the international community to promote an enabling framework for these global public goods, which are crucial for the future of tertiary education. ■

Means Testing in Developing Countries

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Many underfunded institutions of higher education in developing nations are considering the imposition or the increase of tuition fees. To prevent the exclusion of academically qualified, low-income students, various student financial aid schemes that target assistance on low-income students are being contemplated. Other nations interested in improving social equity and fairness have established financial aid programs for students who would not otherwise have access to higher education. These programs require means testing to determine which students should receive aid.

"Family" Responsibility?

The decision to distribute aid to students based on means testing first requires determining whose means are to

be tested. Should a student's family be responsible for the higher education costs of the student? What constitutes a "family"—the nuclear family or a more extended family? Should there be an age of the student beyond which the family no longer has the responsibility to help pay tuition fees (21, 30, or 40 years)? What should be done in cases where the student and the student's family are estranged from each other—that is to say, there is no "family" relationship?

What portion of the family's resources should be available to support the student? This is another way of asking what standard of living the family should enjoy before its resources are directed to supporting the student's higher education costs.

All of these questions raise difficult political issues and touch on important and sensitive cultural values. In addition, there are practical issues of verification and documentation—such as birth, marriage, and death certificates and court records to establish, for example, whether a student is an orphan, how many other siblings the family is supporting, and whether a claim of family estrangement is genuine or just economically convenient. Therefore, the quality of public records and the ease of accessing them in developing countries are important constraints on means testing.

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Standard Questionnaires

The actual process for gathering information about the financial and family circumstances of the student and the student's family is usually by means of a standard questionnaire. One obstacle to gathering useful information by questionnaire in developing countries is that the income and assets of a substantial segment of the population may be in kind rather than in cash or cash equivalents.

A second and even more important issue is how to determine that the information about the income and assets of the student and the student's family is true and accurate. How can the information provided on a questionnaire be verified? One possibility is to compare the information provided on the means testing questionnaire with the information provided to the government for purposes of collecting either a national income tax or contributions to a national pension system. However, many developing countries have neither a national income tax system nor a contributory public pension scheme. Or, the income tax system and public pension scheme may only cover a small segment of the workforce or the official information may not be dependable.

Social Indicators

An alternative method for means testing is to use various social indicators to distinguish those who have the ability to pay tuition fees from those who do not. One example of the use of such social indicators is the application for financial aid at the Pedagogical University in Mozambique. In addition to asking for information about family income, the application requires information about the occupation of the student's parents or guardian, whether the student's home has running water and electricity, and whether the student relies on public transportation. Another example is a study of students at Makerere University in Uganda, which defined family income categories in terms of the number of years of schooling of the father and whether he had access to an official or a personal vehicle.

The assumption behind the use of such indicators is that the social status and lifestyle that they signify are correlated with family income and assets available to pay tuition fees. However, the use of such social indicators in determining ability to pay tuition fees also presents some significant practical problems. First, verifying the accuracy of the information with respect to these indicators is very labor intensive. Staff from the Pedagogical University of Mozambique visit the neighborhood and home of the applicant for student financial aid. The staff asks people in the neighborhood, the parish priest, and others whether the information provided is accurate as well as inspecting the quality of the home itself. At the American University in Kyrgyzstan—which collects similar information from applicants for scholarships—university staff sometime actually visit the family and count the size of its flock of sheep. The confirmation of information in this manner is very time consuming and expensive.

A second limitation of the use of social indicators in determining ability to pay tuition fees is that it is by its nature highly subjective. The best that can probably be hoped for is a judgment that the student and the student's family have no ability to pay or have some ability to pay tuition fees. Social indicators are likely to be unreliable in deciding which family can pay 10 percent of tuition fees or 50 percent, versus 100 percent.

The process of verifying information about families' ability to pay could be made more manageable by only verifying the accuracy of the information for a sample of those who apply. The efficacy of sampling or spot-

checking depends on the severity of the penalty for cheating, the certainty that the penalty will be applied if cheating is discovered, and the thoroughness of the verification of the sample.

Conclusion

The use of means testing at the University of the Philippines represents a good summary example. Adrian Ziderman and Douglas Albrecht report in *Financing Universities in Developing Countries* (1995): "To assess financial need, the university has had to move beyond income tax returns, which often understate true ability to pay. . . . (A)pplicants must complete a twelve-page questionnaire which asks about family assets, parental occupation and education levels, and location of residence. The questionnaire itself does not stop dishonest applicants, but home visits and harsh disciplinary actions are believed to make applicants answer questions more truthfully. Home visits verify the accuracy of most reports. Several students have been expelled from the university for giving false information."

In sum, means testing for purposes of student financial aid in developing countries is subject to a number of serious practical difficulties that call into question its viability. It is particularly burdensome if attempted for large numbers of students or for student applicants drawn from across a large country. Therefore, the implementation of increased tuition fees in developing countries is likely to be hard to achieve in ways that are economically efficient and socially fair. ■

The Private Universities of Bulgaria

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Over the past decade, Bulgarian private universities have managed to establish themselves as a separate, distinct sector of the Bulgarian higher education landscape. In Bulgaria, where 247,000 students are educated at 42 universities and 46 colleges, 11.3 percent of those enrolled are at private universities.

The First Decade

Nonstate initiatives in Bulgarian higher education became possible immediately after the fall of the communist regime in 1989. The first private universities appeared in 1991, following enactment of the law on academic autonomy. The private higher education sector grew quickly, although it never reached the expansion levels of private higher education in other postcommunist countries. In Belarus, Moldova, Poland, and Romania, for instance, student enrollments in the private sector constitute approximately 30 percent of the total student population. Between 1991 and 1995, the Bulgarian Parliament recognized five new private universities. Currently, four of them are in operation: Varna Free University (with some 9,000 students), the New Bulgarian University (with 7,500 students), Burgas Free University (with 6,600 students), and the American University in Bulgaria (with 640 students). The fifth private institution, the Slavic University in Sofia, functioned for four years before being closed down by Parliament in 1999 due to administrative irregularities.

Private institutions differ not only in many aspects from their state counterparts but also from one another. Whereas, for instance, the Free Universities of Varna and Burgas rely primarily on local support and tuition fees, the New Bulgarian University and the American University in Bulgaria are also heavily dependent on financial support from foreign donors. The latter institution is rather small, offering American-style education and differing in many aspects from other institutions discussed in this article. Throughout the 1990s, however, the private universities faced common challenges. One major difficulty was the legal vacuum in which they operated for several years. It was not until 1995 that the higher education law officially recognized private universities as institutions with different structures and modes of operation—a trend further strengthened by the 1999 changes and amendments to the law, with the recognition of the department as a basic institutional unit. The 1995 higher education law also created requirements for the establishment of other private institutions.

Another major challenge for Bulgarian private universities involved accreditation procedures. State accreditation is granted by the National Accreditation Agency and verifies that all programs and institutional structures comply with the law on higher education and the uniform state requirements. Should an institution fail to file an application for accreditation or receive a negative accreditation, the state will stop future student admissions (and terminate funding, in the case of state universities). Uniform state requirements define in detail the educational process while at the same time accommodating the familiar "old" disciplines and traditional university structures. Paradoxically, then, in their attempts to receive national accreditation, individual private institutions—with their different institutional structures, forms of governance, and programs—also had to comply with these state standards.