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Diversifying Finance of Higher Education Systems in the Third World: The Cases of Kenya and Mongolia

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Abstract:

In countries throughout the world, there are increasing pressures to reduce the government share of costs for goods and services with high payoffs to individuals so that the limited available public funds can be used for other needs. This paper suggests several strategies for reducing government expenditures on higher education, including direct cost recovery, grants from and contracts with external agencies, income-producing enterprises, private contributions, and expansion of the private sector. Policy implications and examples (e.g., student access and financial aid, tax status of revenues from enterprises, deferred cost recovery) are presented for both developing and developed countries.

As developing countries struggle to meet the financial demands for full participation in the world economy, there is strong pressure to change patterns of government expenditures in order to meet changing budgetary needs (e.g., funding neglected infrastructure improvements, especially transportation and communication). International donor agencies and development banks support fiscal policies that reduce what are considered to be patterns of inordinately high expenditures on education and human resources in order to facilitate necessary reallocation of scarce government resources. This is an example of what are commonly known as "structural adjustment policies" (SAPs).

To implement SAPs, governments are encouraged to identify those sectors of their economies in which there are possibilities for "cost sharing," namely, shifting greater portions of

the burden of payment to the individuals who are the recipients or users of the services provided. Hence, it is understandable that a frequent target for cost sharing is higher education, a service that is both very expensive to provide and from which recipients can expect to receive significant financial benefits. Recent research suggests that even in the Philippines, an "educationally advanced developing country" (40% baccalaureate-level enrollment ratio and more than half of the institutions in the private sector), higher education has demonstrable individual as well as national development payoffs (Hossain & Psacharopoulos, 1994).

Several options for "widening and diversifying sources of finance" of higher education (Woodhall, 1993) are explored in this paper, including (a) direct cost recovery, (b) grants from and contracts with external agencies, (c) income-producing enterprises, (d) voluntary contributions, and (d) expansion of the private sector. Comparisons are made between the strategies and approaches used to implement various options in Kenya and Mongolia, two Third World countries under strong pressure to implement SAPs. While both countries have well-developed higher education systems, the prospects for maintaining vitality and reaching an internationally competitive standard have become increasingly remote because neither government can afford to pay world market prices to supply each of their institutions with state-of-the-art educational, scientific, and technological materials and equipment. Hence, both countries are involved in efforts to reform higher education through more efficient use of existing resources, strategic planning for new resource acquisition, and organizational changes that reduce the role of central government and provide greater institutional autonomy.

The paper begins with (a) some general background information on the national development contexts and higher education systems in Kenya and Mongolia, and (b) a general framework for understanding the notion of "revenue diversification" (Albrecht & Ziderman, 1992) in higher education which illustrates the relationships among various public and private funding sources. It includes discussion of policy issues related to specific types of financial diversification, presenting examples and implications for higher education in both developed and developing countries.

Development Contexts and Higher Education Systems in Kenya and Mongolia

Kenya gained its independence from Great Britain in 1963. It had a one-party political system until the end of the 1980's when opposition parties were legalized, though none is a viable threat to the ruling party. According to the World Bank (1994, Table 1), Kenya is among the poorest countries in the world, ranking 19th from the bottom of its list of 132 economies. Per capita Gross National Product (GNP) was \$ 310 in 1992. Education constituted 20% of central government expenditures which represented 6% of GNP (World Bank, 1994, Table 10).

The contemporary history of university-level education in Kenya dates only from 1963 when there were just 571 students enrolled in what was to become the University of Nairobi (Weidman, 1995, Table 2). Education in the newly independent Kenya was modeled on the British 7-4-2 system, with 7 years of primary schooling followed by 4 years of secondary school and an additional 2 years of advanced secondary education (signified by successful completion of the A-level exams) to qualify for entrance to 3-year university bachelor's degree programs. In the 1980's, there was a shift to an American-style 8-4-4 system with 8 years of primary education followed by 4 years of secondary school and a 4-year bachelor's degree curriculum (Mwiria & Nyukuri, 1994, pp. 10-12). Under both systems, students seeking admission to universities were required to take a competitive national examination.

Mongolia gained its independence from China in 1921, and following 3 years of a constitutional monarchy headed by Buddhist leaders, established the Mongolian People's Democratic Republic in 1924. Mongolia maintained its independence for the next 65 years but

had a strong alliance with the Soviet Union that included very close economic ties. In the 1986-89 period, inflows of resources from the Soviet Union averaged about 32% of Gross Domestic Product (GDP)! These resources, which included books and scientific equipment for the universities, stopped by the end of 1990 following the break-up of the Soviet Union (World Bank, 1992, pp. 2, 8). The Asian Development Bank (1993, p. 1) estimated the 1992 per capita GNP of Mongolia to be \$ 299. According to the World Bank (1992, p. 82), expenditures on education at the end of 1990 were 25% of the government's total budget which constituted a sizable 14% of GDP.

The oldest contemporary university-level institution of higher education, now named the Mongolia National University, was founded in 1942. Mongolia has a 6-2-2-4 educational system, with primary education lasting 6 years, followed by either a vocationally- oriented 2-year secondary program or a 4-year, university-oriented secondary program. Higher education in Mongolia was originally modeled on the Soviet system in which curricula were highly specialized and student places were determined on the basis of projected manpower needs. Universities were primarily teaching institutions, with responsibility for research and the awarding of the highest scientific degrees vested in independent institutes under the Academy of Science.

A shift is now underway to a less specialized American-style system in which students will earn bachelor's degrees at the end of four years and places are determined, at least in part, by student demand. Efforts are underway to integrate the research institutes of the Academy of Science into the universities. Each higher education institution administers its own competitive admissions examinations.

Data on higher education enrollments for both countries are shown in Table 1. Mongolia has a much smaller population but its overall higher education enrollment rate is 5.6 times greater than Kenya's. Mongolia also has a much larger private higher education sector. To put these enrollment rates in perspective, both countries are above the Sub-Saharan average of 89, but well below both the Latin American average of 1468 and the OECD (Organization for Economic Cooperation and Development) average of 2392 (Zymelman, 1990, p. 22).

Table 1. Enrollment in Baccalaureate-Level Institutions of Higher Education by Country and Sector

Country	1992* Population (millions)	BA-level** Enrollment (thousands)		Enrollment per 100,000 People	
		Public	Private	Public	Private
Kenya	25.7	40.7	2.0	158	8
Mongolia	2.4	17.5	3.9	762	169

*Source: World Bank, 1994, Table 1.

**Sources: For Kenya - public universities (1991-92), Republic of Kenya, 1994, Table 1.13; private institutions (1990-91), Saint, 1992, p. 42. For Mongolia (1993-94) - Bray, et al., Tables 1 and 2.

The historical funding patterns of higher education in Kenya and Mongolia are similar to many developing countries in Africa and the emerging formerly socialist countries of Eastern Europe and Central Asia. Higher education was not only free of charge, but students received additional allowances from the government for their living expenses and study materials. Sanyal and Martin (1991) describe "the relatively high cost of African higher education" as follows:

...cost of a graduate of Sub-Saharan Africa, according to one estimate is eight times GNP per capita whereas it is only 3.7 times the GNP per capita for all the developing countries combined (Mingat and Psacharopoulos, 1985). The ratio between unit costs in higher and in primary education varies between 30:1 and 50:1 in African countries as against 10:1 in Asia or Latin America (Hinchliffe, 1987).

In Kenya, 1992/93 national "recurrent" expenditures per student in public universities were 46 times higher than those for each primary school student, even though actual total "recurrent" expenditures for primary education were almost three times larger than those for public universities (Weidman, 1995, Table 3; Republic of Kenya, 1993, p. 184).

Just a small fraction of the eligible age cohort is enrolled in Kenyan universities. While virtually all children in Kenya enter primary school, only half of the original entering students are still enrolled at the end of primary school. Because just half of the primary school leavers gain admission to secondary school, there is an effective secondary school enrollment ratio of 24% of the nation's young people of secondary school age (Opondo & Noormohamed, 1989, p. 88). In 1990, there were enough available university places for just 7.5% of the secondary school leavers (Mwiria & Nyukuri, 1994, pp. 10-11), so the effective university enrollment ratio was less than 2% of university-age Kenyans. Only 37% of the students enrolled in government universities are women (Weidman, 1995, Table 2).

In Mongolia, virtually all children also enter primary school, but 89% complete the eighth grade, and 50% complete secondary school (i.e., tenth grade). Among Mongolians under the age of 34, only 2% did not complete secondary school. In the total workforce, 16% have completed at least some higher education (World Bank, 1992, pp. 82-83). Women constitute 64% of the students in baccalaureate-level government institutions of higher education. In private baccalaureate-level programs, 76% of the students are women (Bray, et al., 1994, Tables 1 and 2).

A "Revenue Diversification Model" of Higher Education Finance

Table 2 illustrates the combination of public and private sector sources from which funding for higher education systems is generated that has been called the "revenue diversification model" (Albrecht & Ziderman, 1992) of higher education finance. Even though the model was developed with specific reference to the type of funding structure that exists in Great Britain, the basic components appear in a variety of national higher education systems.

Table 2. Funding Sources for Higher Education Systems by Sector*

	Public Sector	Private Sector
Government	X	
Grants Commission	X	
Research Councils	X	X
Loan Agency	X	X
Students	X	X
Alumni		X
Industry		X

*Adapted from Albrecht & Ziderman, 1992, Chart 1.3, p. 14.

Table 2 also suggests the interaction between the public and private sectors in university finance. The public sector is shown to fund universities in five different ways, four of which do

not provide resources directly to the institutions but rather through intermediary agencies or through students. In this example, funds are provided by the government to students in two ways: (1) through direct grants which can be used to pay university costs, but are not subject to repayment; and (2) through partial funding to an agency which offers loans to students. The "private sector" component of the "loan agency" is self-perpetuating, namely, through loan payments made by former students.

Many developed countries have been placing increasing emphasis on loans rather than direct grants to students, thereby reducing the government share of higher education costs. In the USA, for instance, student aid provided by the federal government shifted from 20% loans and 76% grants in 1975-76 to 64% loans and 33% grants in 1992-93 (Gladieux et al., 1994, p. 134).

The British government also finances a "grants commission" (for capital projects) and "research councils" (for research projects) which provide funds to universities on a competitive basis. In this model, industry "may contribute to university finances directly or indirectly through research councils and sponsored students" (Albrecht & Ziderman, 1992, p.13). Alumni of higher education institutions also contribute funds privately to universities. Not shown in Table 2, but certainly worth noting, is the contribution made by industry and alumni to the pool of available government funds through the proportion of their income taxes that is allocated to higher education. It is important, however, to keep the following cautionary note in mind when considering this type of model:

...Since revenue diversification implies also diversifying the outputs and activities of the university system, this process may lead to a change in the role of universities away from traditional teaching for degrees and research. If revenue diversification is pressed too far, on too broad a front, serious issues concerning the role of the university may arise (Albrecht & Ziderman, 1992, p. 13).

An example of the scope of revenue diversification in a highly developed country is contained in Table 3 which shows the average proportions of different revenue streams for public and private colleges and universities in the USA. The fundamental differences in revenue streams between the two sectors lie in the greater reliance of private higher education institutions on tuition, private gifts, and endowments. At least in the USA, both public and private institutions generate equal amounts through sales and services. It should also be noted that even the public higher education institutions generate, on average, almost half of their revenues from non-government sources. In the next section of this paper, actual strategies for diversifying revenues are described.

Table 3. Revenues of Colleges and Universities in the USA by Sector, 1990-91*

	Public	Private
Tuition and fees	16%	40%
Federal government	10%	15%
State governments	40%	2%
Local governments	4%	1%
Private gifts, grants, contracts	4%	9%
Endowment income	1%	5%
Sales and services		
Educational activities	3%	3%
Auxilliary enterprises	10%	11%
Hospitals	10%	10%
Other	3%	4%

* Source: The Almanac of Higher Education, 1994, p. 76.

Diversifying the Sources of Finance for Higher Education

The following are several strategies for diversifying the funding base of higher education systems suggested in a recent paper by Woodhall (1993, pp. 8-10) that are also designed to reduce the government's share of costs. Where relevant, specific reference is made to the current status of efforts to employ the strategies in Kenya and Mongolia.

1. Direct Cost Recovery

a. Charge fees to students for tuition. The largest potential source of funds results from requiring students to pay fees for tuition (basic instruction) and related instructional services (e.g., registration, examinations, computer, access to library, etc.). There is considerable variability, both among institutions and among countries, in the proportion of costs recovered via tuition and student fees.

Some Mongolian students were assessed fees for the 1992-93 academic year and all students enrolled in public higher education in 1993-94 were being charged. At least as initially determined, it appeared that tuition fees for the public higher education institutions in Mongolia were being set at levels that provided for full recovery of all costs. Particularly during this period of transition into a market economy and entry into the world economic system, it is important that there not be radical shifts in funding patterns that would materially harm Mongolia's well-established higher education system. Further, even as students are required to share costs at increasingly greater levels, it is essential that there be some government funds available for much-needed maintenance and improvement of buildings (Harsh winters take their toll.), for instructional facilities such as libraries and laboratories, for support of students from poor families, and for faculty and program development. Requiring total cost recovery provides virtually no allowance for such investments in the future.

With respect to the notion of "cost recovery," it is instructive to note the following observation in a World Bank discussion paper:

...There are no university systems which are characterized by cost recovery in a pure form (though there are particular universities that are financed in this way); in practice, cost recovery operates in tandem with, and complements, state subsidy of higher education. Characterizing a system as one of cost recovery in practice relates to the breadth of student coverage of fees and their size in relation to costs (Albrecht & Ziderman, 1992, p. 11).

In Kenya, public university students are required to pay fees, but the amount continues to be quite low, currently 300 Kenya pounds (6000 Kenya shillings, or about 150 US\$) per year. This amount was equal to just over 10% of the total estimated government recurrent expenditures per university student in 1992/93 of 2889 Kenya pounds (Republic of Kenya, 1993). Any increase in fees should, however, also incorporate some scheme for providing scholarships to poor students with high academic potential.

b. Eliminate student stipends. Requiring students to pay charges for board and lodging from their own funds would allow the government to eliminate the costs of providing student stipends for personal expenses, though it may still be desirable to provide small stipends for

books and instructional materials. Government stipends for Mongolian students were virtually eliminated in 1993- 94. In Kenya, stipends for personal expenses are covered under the student loan scheme.

2. Contracts and Agreements with Private and Public Sector Agencies

a. Sponsorship of students. Institutions of higher education can seek to establish agreements with private sector employers willing to sponsor promising students by paying their tuition and other fees, or by providing scholarships.

b. Contracts for consulting services. Funds can be obtained by contracting with external agencies (e.g., commerce, industry, government, etc.) for the provision of expert services by professors and other skilled staff. This could include contracts for consulting, for applied research, or for other expertise represented within the higher education community. Efforts along these particular lines are now occurring in Mongolia, especially in the Technical University.

c. Paid internships. Arrangements can be made for students to receive salaries and/or tuition support from employers for internships related to their fields of study. Such internships could be done either during a vacation period or during a semester away from campus.

3. Income Producing Enterprises

This method of generating funds is currently used by all of the public higher education institutions in Mongolia. The most common of these is maintaining a herd of livestock (cattle, sheep, goats, etc.), but there are others (renting space for a shop, providing copying services, running bookstores, etc.). The public universities in Mongolia which have such enterprises generate income, on the average, equal to roughly 10% of their total operating budgets. Most of the government universities in Kenya as well as several private ones also maintain farms to generate revenue.

4. Private Contributions and Endowments

In many parts of the world, there are annual campaigns to solicit gifts from alumni and staff as well as private donors. When higher education institutions get sufficiently large contributions (either alone or when several gifts are combined), endowments can be established by making investments from which all or part of the income can be used, usually for specific purposes. Governments often encourage private contributions by providing income tax deductions for gifts made to eligible, non-profit higher education institutions. Neither Kenya nor Mongolia generate any significant revenues for higher education in this way.

Higher education institutions should have sufficient autonomy to be able to keep any additional revenue generated from contracts, enterprises, and contributions, and not have either to return it to the government or to have subsequent budget allocations reduced by the amount of the income (Woodhall, 1993, p. 12). Institutions should be allowed to control and monitor their own expenditures, preferably using standard reporting procedures supported by an automated financial accounting system. It is also essential that those government funds which are appropriated to higher education institutions be received in a regular and timely way.

5. Student Employment and National Service Scholarships

a. Work-study. This is wage earning employment, not necessarily limited to campus jobs but administered through higher education institutions. There are usually some financial need criteria which must be satisfied before a student can get a work- study job.

b. Scholarships for national service. These programs provide participants with the opportunity to accumulate funds, on the basis of established formulae, that can be applied to higher education expenses. Often the government matches the participants' contributions at some pre-determined rate. Both of these approaches involve government expenditures, but the funds are disbursed in exchange for specified productive activity rather than as outright subsidies. Examples of such programs that have existed in the USA are the Civilian Conservation Corps of the 1930's, the Peace Corps, VISTA, and the National Health Service Corps (Gladieux et al., 1994, p. 138).

6. Deferred Cost Recovery

a. Tax on future earnings of graduates. While likely to be politically unpopular, this approach requires payment of a tax based on salaries earned by graduates of publicly supported higher education institutions. It could be a payroll tax paid by employers or be assessed on the graduates, themselves.

b. Tax on private sector employers. This would be a tax based on either the proportion of graduates from higher education employed or on a percentage of total earnings by the company, again depending on the proportion of graduates among all employees.

c. Student loans. This is the most widely used mode of deferred cost recovery. The students who borrow money generally either do not have the financial resources necessary to pay for higher education during the period of their enrollment or wish to pay back the tuition costs in inflated currency some years later. If well-structured and efficiently operated, loan programs can be virtually self-perpetuating. There are five basic issues that need to be considered in the design of any higher education student loan program:

...First, a deferred payment program requires the participation of a credible collection institution with incentives to collect, which in most instances required the direct participation of commercial banks, a taxation department or a social security agency.

...Second, with loans, there must be a willingness to charge interest rates equal to or above inflation in order to minimize subsidies.

...Third, the relationship between necessary repayments and the likely income of students must be examined to ensure that repayment burdens never pose an excessive burden on graduates.

...Fourth, developing a means of targeting support to needier and more academically deserving students will be crucial to a program's efficiency.

...Fifth, loan losses can be justified if there are potential social gains that would not be reflected in a graduate's income (Albrecht & Ziderman, 1992, p. 100).

Loan programs may include such incentives as deferred interest payments while a student is enrolled in higher education, loan forgiveness for graduates working in areas of national need, subsidized interest rates, and government guarantees to private lenders offering student loans. In all of these cases, the loan programs are not self-funding and require government support, though certainly at a much lower level than direct scholarship grants. Further, if the government is the primary source of loans, its financial outlay will not be reduced until a significant amount of money is being returned through loan repayment. For a more detailed discussion of specific loan schemes in African and Asian countries, see Woodhall (1991a and b).

The government's inability (or unwillingness) to finance the student loan scheme that was to have been fully implemented for the 1993-94 academic year seems to be a fundamental problem in Mongolia. The national government has apparently tried to shift the burden of financial responsibility for guaranteeing loans to the local government (aimag) level in Mongolia, but local authorities are understandably reluctant to make commitments on the basis of an uncertain future. Until recently, there has been no effective agency in Kenya for collection of outstanding student loans, with 75-80% never being repaid (Woodhall, 1991a, p. 55). In 1994, the government increased its effort to collect loans from public employees by instituting a more aggressive program of withholding monthly payments from their paychecks.

7. Expanding the Private Sector

One additional way for national governments to reduce their share of the total costs of providing higher education is to encourage the establishment and growth of private institutions. Asian countries with large private higher education sectors are Indonesia (58% of national enrollment), South Korea (66% of enrollment), Japan (76% of enrollment), and the Philippines (85% of enrollment). The private higher education institutions in Indonesia and Japan receive 20-30% of their expenses from the government; those in South Korea and the Philippines receive less than 10% of their funding from the government (James, 1991, p. 6). As is shown in Table 1, only 5% of the BA-level students in Kenya are enrolled in private higher education institutions. In Mongolia, the corresponding private enrollment is 18%.

The growth of private higher education institutions in Mongolia appears to be driven by "excess demand:"

Excess demand for education often exists when the capacity of the public school system is less than full enrolment; that is, the option of attending a free or low- price public school is not available to everyone. If the private benefits from education are high (e.g., because of labour market rewards), many people who are left out of the public schools will seek places in private schools, as a "second best" solution (James, 1991, p. 3).

In areas such as foreign languages and market-oriented economics, the public higher education sector in Mongolia is not able to accommodate the numbers of qualified students who seek admission. This is partly due to a vestigial pattern of the old "command economy" in which government, through its National Planning Board, continues to determine the number of places available for each course of study on the basis of projected manpower needs, independent of student demand. It is also partly due to the lack of sufficient numbers of qualified teachers in these areas within the public higher education institutions.

Largely because of the Mongolian government's failure to fund adequately the national loan scheme in 1993-94, public higher education institutions admitted a significant number of self-paying students beyond the centrally established quotas into high demand fields. This was a

way of generating revenue to meet operating expenses during the beginning of the academic year while the government tried to get commitments from local authorities to guarantee students' loans. Funds are not being released to higher education institutions by the government until the loans are guaranteed.

In Kenya, the private sector has only recently been allowed to expand as the government has been more willing to authorize the establishment of private higher education institutions. The secondary level in Kenya can, however, be also characterized as being driven by "excess demand," with just over half of all students attending private secondary schools (James, 1991, p. 5).

A fundamental concern for government authorities in any country is making certain that private higher education institutions meet reasonable standards of academic quality and operational procedures. Four areas in which governments regulate private educational institutions are (1) physical facilities - health and safety standards, space and furniture, target enrollments related to physical facilities; (2) academic regulations - curriculum, degree requirements, national examinations, language of instruction; (3) organizational and reporting requirements - periodic financial reports, minimum investment, tax status; and (4) teachers and students - teacher qualifications, procedures for hiring and firing teachers, allowable student fees, student selection criteria, government representatives on institutional governing bodies (James, 1991, p. 25).

Governments vary, of course, in the emphases placed on any specific area of regulation. With respect to allowable profits, for instance, the governments of Korea and the Philippines regulate both the amount of tuition that can be charged in private higher education institutions and the numbers of students, thereby limiting income. There is also the issue of tax status of revenues generated by auxiliary enterprises in both public and private higher education institutions as well as fairness of price competition with private enterprise providers of similar products and services. Such concerns are common in both developed and developing countries.

Ultimately, however, it is the responsibility of governments to establish policy with respect to the diversity of funding sources for higher education; the levels of student fees, the types of loan or subsidy programs that will be made available to assist needy students in the payment of fees in order to ensure broad access to higher education; the mix of public and private sector institutions; standards for the accreditation and operational authorization of both public and private sector higher education institutions; and the degree of autonomy higher education institutions will have in the control and management of their finances. This paper has provided some specific examples, but any application of the various strategies for revenue diversification mentioned will have to be adapted to fit the particular social, political, cultural, and economic environment of the host country.

Note:

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