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Perspectives on the Financing of Higher Education

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Summary

This paper looks at the challenge faced by higher education systems in developing countries in terms of their capacity to meet the economy's needs for scientific training and research. It explores various reform and innovation strategies and examines their financial implications.

Four generic principles are proposed to guide the design of reform strategies which will ease the tension between rising enrollments and stagnating resources without compromising the quality of teaching and research: excellence, responsiveness, efficiency, and equality. To achieve these objectives, each country needs to design a higher education reform strategy consonant with its specific economic and social circumstances. This requires a long term vision defining the mission of higher education and its various components. It also implies a framework of coherent policies and measures to ensure the long term financial viability of the higher education system.

Many countries are implementing financial strategies to mobilize, allocate and utilize resources in a more effective and innovative way. But focusing exclusively on the financial aspects is generally not sufficient. Financial measures appear most successful when integrated into system-wide institutional diversification strategies whereby countries accommodate the growing social demand through low-cost alternatives (short cycle programs, open university) while strengthening prestige institutions for graduate studies and advanced research.

PERSPECTIVES ON THE FINANCING OF HIGHER EDUCATION

Introduction: the Challenge of the 1990s

"The crucial question for the future is whether national and international policies will permit the potential created by technological progress to be exploited."¹

In 1990, General Motors, the world's biggest car manufacturer, produced 6 million vehicles with a workforce of 800,000. During the same year, Japan's first car producer, Toyota, built 5 million cars with a workforce of 80,000, i.e. only 10% of its American rival. Notwithstanding the necessity to treat such comparisons with caution because of differences in production factors other than labor, these figures illustrate in a vivid way a productivity gap which is not the result of more abundant natural resources or a larger domestic market, but reflects the ability to apply more advanced technologies and processes. Japan's success story, and the accomplishments of the Newly Industrialized Economies (NIEs) of East Asia, attest to the crucial role of scientific and technological development in economic growth. Between 1960 and 1987, knowledge-driven increases in productivity accounted for as much as 28% of GDP growth in the East Asian countries².

At present, the distribution of scientific and technological capabilities across nations is still highly unequal, despite some progress in the last decade. Industrialized economies have proportionally nine times as many scientists and engineers as developing countries³. The latter account for only four percent of world spending on research and development and most of it is concentrated in the NIEs and a few large countries like India and Brazil.

To prevent the technology gap from growing, in a world economy which is becoming increasingly dependent on highly specialized knowledge, higher education systems have a particularly critical mission to fulfill in developing countries. In addition to their important social functions in forging the cultural identity of a nation and providing an avenue for upward mobility, higher education institutions contribute to economic development in two ways. First, they have the main responsibility for educating and training a country's middle and higher level scientific, technical and managerial manpower. Second, they create new knowledge through research and advanced scientific

¹. The World Bank, World Development Report 1991: the Challenge of Development, New York, Oxford University Press, 1991, p. 2..

². Ibid., p. 45.

³. Castells, M., "The University System: Engine of Development in the New World Economy", Paper prepared for the World Bank Worldwide Seminar on Higher Education and Development", Kuala Lumpur, June 1991.

training, and serve as a key conduit for its adaptation, transfer and dissemination. But are higher education systems in the developing world in a position to confront that challenge?

After highlighting the results of three decades of university expansion in the developing world, this paper explores guiding principles for the design of reform and innovation strategies in higher education. It then analyses their implications in terms of financing. Finally, it examines under what conditions donor agencies can make a positive contribution to support these reforms.

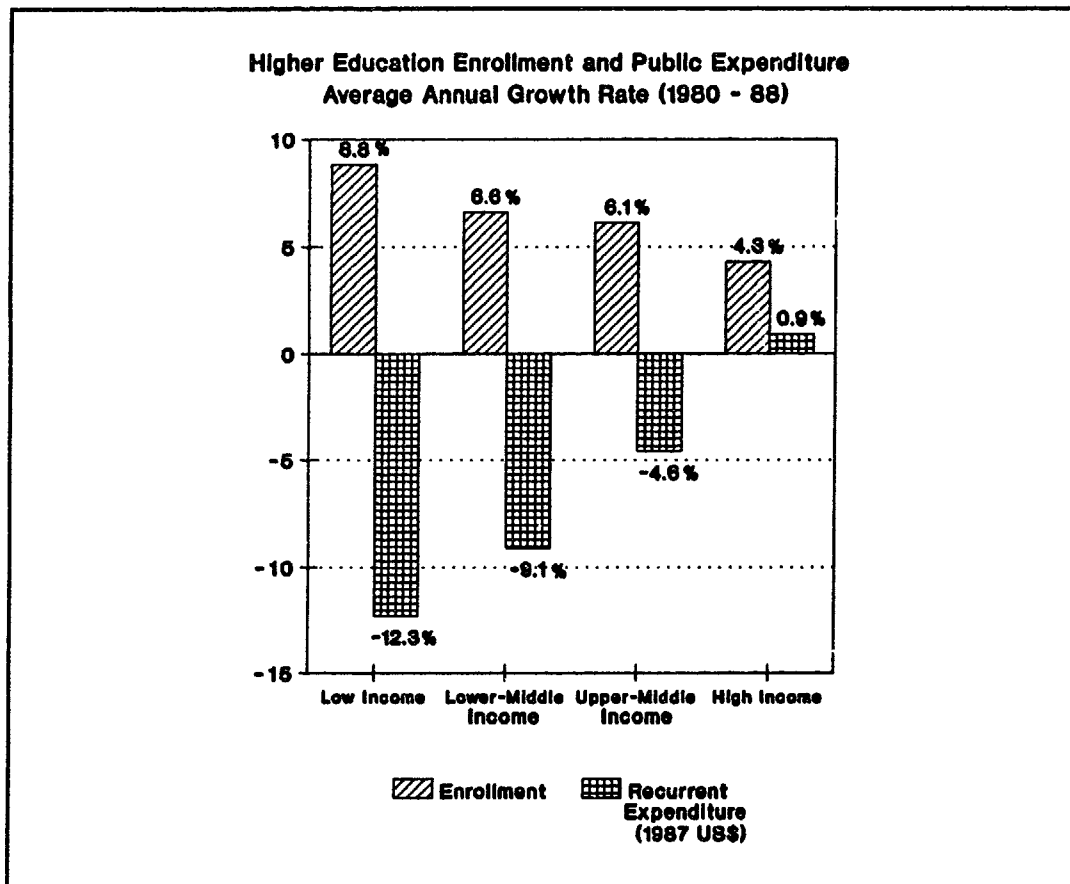
The Higher Education Crisis

"One of the abiding impressions ... is the sense of loss, amounting almost to grief, of some of the most senior professors in the older African universities as they compare the present state of their universities with the vigor, optimism and pride which the same institutions displayed twenty or thirty years ago. It is not just the universa' regret of age at the passing of youth, nor the sad awareness that a generation of unique academic pioneers has almost run its course. It is also the grim knowledge that the nature of the university experience today is profoundly different for many teachers and students, so different and so inferior that some wonder whether it can rightly be called a university experience at all."⁴

Most developing nations have invested considerable resources over the past three decades to establish or develop their system of higher education, often with the support of donor agencies. The results have surpassed the expectations. Between 1965 and 1988, higher education enrollments increased very rapidly in most parts of Asia, Africa and Latin America. Over that period, the average annual growth rate was 12% in low income countries, 10% in middle income countries, and 7% in upper middle income countries. Many developing countries have established a comprehensive infrastructure for advanced training and have achieved the major accomplishment of fully indigenizing their civil service. Outstanding training and research institutions have been set up in a number of countries. However, the very success of these expansionary policies has put higher education in jeopardy.

The majority of universities in developing countries are confronted today with a difficult situation of uncontrolled growth of enrollments and expenditures against a background of diminishing financial resources. During the 1980s, student numbers continued to rise rapidly whereas real expenditures followed a downward trend, as illustrated by the following figures.

⁴ Coombe, T., "A Consultation on Higher Education in Africa", Report to the Ford Foundation and the Rockefeller Foundation, January 1991, p. 2.



In many countries, the quality of teaching and research has declined as a result of overcrowding, inadequate staffing, deteriorating physical facilities, poor library resources and insufficient scientific equipment⁵. Internal efficiency is often very low and there is a rising problem of mismatch and graduate unemployment. Numerous institutions of higher education in developing countries now operate at the periphery of the international scientific community, unable to engage in the generation and application of the advanced knowledge necessary to address social and economic development problems.

Paradoxically, the rapid expansion of higher education has also had adverse effects from a social equity standpoint. Despite increased democratization in terms of student enrollment, the pattern of allocation of resources between levels of education is highly inequitable in many countries. It is important to underline the regressive fiscal impact of a higher education system

⁵. Salmi, J., "The Higher Education Crisis in Developing Countries: Issues, Problems, Constraints and Reforms", International Review of Education, forthcoming.

financed by the entire population but available only to a tiny minority, especially when the majority of the students come from high and middle income urban families. In Congo, for instance, 30% of the education budget is allocated to 2% of the student population; in Rwanda, 15% of the budget goes to 0.2% of the student population; in Burkina Faso, the figures are 28% and 1.2% respectively⁶.

While the global picture may be bleak in many developing countries, it is important to underline that the crisis of quality is far from being uniform. Even in those nations confronted with the most severe problems, there are institutions which have found resourceful ways to cope with the economic crisis and there remain pockets of excellence. Furthermore, a number of countries have embarked on positive reform initiatives at both the national and institutional levels.

Strategies for Reform and Innovation

"In human affairs, the logical future, determined by past and present conditions, is less important than the willed future, which is largely brought about by deliberate choices."

René Dubos

Guiding principles. Despite the existence of common features and issues, it is important to recognize the diversity of country situations and circumstances which critically influence the nature of policy analysis in higher education. While most primary and secondary education systems have evolved along relatively similar lines all over the world, there is much more variation in the configuration of higher education systems across countries. There is also more diversity in terms of modes and forms of interaction between universities and their economic environment and institutional context. As a result, higher education systems tend to be much more complex and differentiated than the other education sub-sectors. Their shapes and development patterns reflect the imprint of each country's historical, cultural, political, social and economic evolution.

This element of diversity makes it difficult, if not meaningless, to follow a global approach to analyze higher education systems and make detailed policy recommendations. Any attempt to write universal recipes involves the risk of making trivial assessments and proposing simplistic solutions. Caution is required in generalizing about higher education systems, their problems and strategies for addressing them.

One way of aggregating countries for analysis and policy-making purposes would be to follow a regional or sub-regional approach. It could be more meaningful to focus on groups of countries which have comparable higher education structures and traditions and which are

⁶. World Bank estimates.

confronted with similar challenges and constraints (Maghreb and Middle East, South Asia, South-East Asia, Anglophone Eastern and Southern Africa, Francophone Western and Central Africa, Central and Eastern Europe, Caribbean States, South America).

But even recognizing the need to consider detailed policy options in the specific socio-economic context of each country and in relation to the distinctive characteristics of each higher education system, it is possible to identify four generic objectives and priorities to inform the design of country-specific strategies.

First Principle: Quality. Institutions of higher education may differ in structure and organization, but they all share a common purpose: the search for excellence. This is a common goal for all categories of post-secondary institutions, whether their sole mandate is training (undergraduate education, short-cycle programs, open university) or a combination of teaching and research functions. There is also a need for advanced training and research at international levels in selected fields to build or strengthen a country's endogenous capacity to apply scientific knowledge to development problems. In most countries which have embarked on a higher education reform in recent years, improving the quality of teaching and research has been the first priority.

Second Principle: Responsiveness. Higher education systems are faced with competing and often conflicting social and economic demands. On the one hand, there is a need to accommodate the pressure of enrollments fueled by the growing social demand for post-secondary education. On the other hand, higher education must be responsive to rapidly changing economic needs and labor market requirements. The challenge is to determine how higher education programs can be structured and differentiated to match effectively the potential of an increasingly large and diverse student body with the economy's demand for advanced knowledge and expertise.

Third Principle: Efficiency. Considering that resources are increasingly limited and are under competing claims as a result of rising expenditures and diminishing budgets, it is essential to ensure that available resources are distributed and used in the most efficient manner without eroding the quality of teaching and research. It is in particular important to invest in those educational inputs which are most effective in ensuring adequate learning conditions.

Fourth Principle: Equality of Opportunity. It is critical to promote an equal distribution of higher education opportunities to secondary school graduates. Access and selection mechanisms should not be biased against any particular ethnic, social, regional or gender group and the ability to learn should be the determining factor. In particular, no member of society who has the intellectual capability to benefit from higher education should be excluded for financial reasons. Each country will need to make a political decision concerning the legitimacy of using higher education as a channel to redress social inequities originating in the lower levels of education. It is also important to ensure that the application of the equality of opportunity principle does not have adverse effects on the quality of teaching, learning and research.

Implications for the Financing of Higher Education

"The economic crisis affecting most of Africa has had a particularly damaging effect on higher education in the region. The universities, depending predominantly on government subventions, are faced with a situation in which the grants which governments are able to make available to them are dwindling in real terms from year to year while at the same time there are increasing and competing demands for the services of the institutions."

Association of African Universities⁷

To achieve the above objectives, each country needs to design a higher education reform strategy consonant with its specific economic and social circumstances. This requires a long term vision defining the mission of higher education and its various components. It also implies a framework of coherent policies and measures to ensure the long term financial viability and sustainability of the higher education system. In this respect, it is important to stress that the most critical decision confronting higher education policy makers is not of a financial nature but of a strategic one. The higher education crisis faced by many countries is not solely one of lack of resources to strengthen or sustain particular institutions, but a crisis of conflicting social and economic objectives affecting the higher education system in its entire development. Indeed, the most crucial factor bearing on the financial health of any higher education system is the pace and pattern of enrollment expansion. Addressing this issue comes therefore as a priority.

Managing Enrollment Growth Through Institutional Diversification. Countries have followed different strategies to reduce the tension between rising enrollments and stagnating resources without compromising the quality of teaching and research. Among the most promising approaches, the experience of a number of Asian nations stands out. They have adopted a proactive institutional diversification strategy aimed at accommodating the growing social demand through low-cost alternatives while strengthening prestige institutions for graduate studies and advanced research. Singapore, for example, has opened several Polytechnics to train middle-level technicians outside the two main universities. At present, these polytechnics enrol 20% of the 20-24 age cohort while another 15% attend the universities⁸. Thailand has established two Open Universities (Sukothai and Ramkhamhaeng) and several Regional Universities to protect Bangkok's four prestigious universities from the pressure of social demand. China has set up a network of Provincial Universities as well as a Television University. On the African continent, Tunisia, Nigeria, Kenya and Ghana are examples of countries which have adopted an institutional differentiation strategy. In Kenya, for

⁷. Association of African Universities, "Study on Cost Effectiveness and Efficiency in African Universities", May 1991, page v.

⁸. Selvaratnam, V., "Higher Education, Innovation and National Development: the Singapore Initiative to be at the Competitive Edge", Education and Employment Division, The World Bank, Washington D.C., forthcoming.

instance, three national polytechnics and eleven private colleges operate alongside the public universities.

The potential success of this type of strategy depends on whether the lower-cost modes of delivery are perceived and function as second-rate institutions or programs. They should represent a viable, good quality alternative serving, in an effective manner, the demand which cannot be satisfactorily met by the traditional universities. Otherwise, there is a risk of resource wastage and student discontent. In Egypt, for example, which has one of the largest higher education systems in the developing world, the government has addressed the issue of open access by stabilizing the growth of enrollment in its thirteen universities and creating a large network of two-year post-secondary technical institutes for the secondary graduates who could not enter the university. Unfortunately, many of these institutes are under-funded and the quality of training varies substantially depending on the availability of facilities, equipment and teachers. As a result, the two-year technical institutes are regarded as academic parking lots for surplus students and their graduates are not well considered by industry⁹.

Competing for Public Resources. The first financial decision affecting the amount of resources available for higher education is to determine the level of public funding for the education sector as a whole and the distribution of resources among the various education sub-sectors. It is important to acknowledge in that respect the high degree of complementarity existing between primary, secondary and tertiary education and the fallacy of considering them as independent and competing areas of investment. Higher education institutions play an important role in setting the academic standard for primary and secondary education. They are responsible for training school administrators and teachers. They also provide policy advice in the education field and support for the preparation of school curricula. The efficiency of public investment in primary and secondary education is therefore largely conditioned by the performance of higher education. Conversely, the quality of university education is determined, to a large extent, by the qualifications and motivations of secondary school graduates.

The results of rate of return analyses, which were traditionally interpreted as showing higher benefits for primary schooling than for tertiary education, should be revisited in the light of these observations. Further work is necessary to determine the economic criteria for defining an 'appropriate' level of public financing for higher education in conjunction with investments in primary and secondary education.

Allocation of Public Subsidies. Independently from the magnitude of government subsidies allocated to higher education, public funding should be distributed among institutions in such a way as to foster efficiency and responsiveness. In theory, there are two types of allocation

⁹. The World Bank, Study on Technical Education in Egypt, Washington D.C., 1988.

mechanisms that could be applied to achieve this purpose: input-based funding and output-based funding¹⁰. In the first case, input-based funding, universities receive a budget reflecting a formula combining enrollments and standard unit costs. In the second case, output-based budgets are based on measures of performance such as the number of graduates or a university's research production.

In reality, however, most developing countries follow a third system which can be called negotiated funding. Ministries of Finance or Education allocate a "negotiated" budget to higher education institutions without necessarily taking objective criteria linked to the universities' internal efficiency or performance into consideration. The main reference is usually the previous year's budget, sometimes modulated by across-the-board incremental increases or as a function of each institution's political standing. This type of allocation mechanism has serious drawbacks. When the funding formula is not linked to institutional performance and does not allow for flexibility, it is difficult to adjust the distribution of financial resources to changing circumstances and needs. This can lead to very inefficient patterns of resource distribution and utilization or to situations of dire resource gaps.

For example, several African countries such as Algeria, Morocco, Ghana, Kenya and Senegal have dual systems of higher education comprising, on the one hand, one or several universities and, on the other hand, a number of specialized technical schools or institutes. Typically, enrollment in the traditional universities has grown at a much faster pace than the higher education budget whereas, in the specialized institutions under the authority of various technical ministries, enrollment has tended to stabilize or even decline as a result of public sector recruitment freezes. But since budgets are allocated on an incremental basis, reflecting the previous year's budget rather than student numbers or actual expenditures, these specialized institutions end up with relatively more resources than the university sector plagued with soaring enrollments and dwindling budgets. In Senegal, for instance, the budget of the 11 specialized schools and institutes which operate outside the university sector and whose students represent only 12% of total higher education enrollment is slightly larger than the combined budget of the four faculties of the University of Dakar which accommodate 81% of all students in the country¹¹.

To protect higher education institutions from unstable and insufficient budgets, and to provide them with incentives to manage their resources more efficiently and be more responsive to labor markets and student needs, a few countries are considering the introduction of performance-based allocation mechanisms. In Nigeria, for example, a new, input-based funding formula is being applied within the context of the current higher education reform. Each country should work out

¹⁰. Albrecht, D., and Ziderman, A., "Funding Mechanisms for Higher Education: Financing for Stability, Efficiency and Responsiveness", Education and Employment Division, The World Bank, Washington D.C., unpublished paper, September 1991.

¹¹. "Revitalizing Higher Education in Senegal: the Challenge of Reform", Population and Human Resources Division, Sahelian Department, unpublished sector report, The World Bank, Washington D.C., October 1991.

a funding formula in harmony with its resources constraints and development priorities for the higher education sector.

It is however important to recognize that, even though performance-based allocation mechanisms seem to be, in principle, more appropriate than negotiated budgets, they have serious limitations which should not be overlooked. Input funding, for example, has a built-in inefficiency premium linked to the fact that an institution's budget is directly dependent on the size of its enrollment. Whether students have good academic results or are repeaters does not matter; on the contrary it is financially convenient to keep low achievers as it increases overall enrollment. There are also problems with output funding methods because of the danger of focusing too much on quantitative objectives in a mechanistic way at the expense of quality factors which are difficult to measure.

Countries may also want to consider to what extent reliance on a buffer organization mediating between higher education institutions and the central government can improve the budget allocation process. Such intermediate funding agencies exist in a number of countries like India, Pakistan, Hong Kong, Nigeria, Zimbabwe and the Sudan. In Kenya, the mandate of the Commission of Higher Education is being enlarged to include a role in the planning, budgeting and allocation process. In theory, these buffer organizations present the advantage of shielding universities from government interference, thus fostering institutional autonomy and quality control. But in times of severe financial restraints, they can be used as scapegoats to impose painful budget reductions. Recent developments in Australia and the United Kingdom provide a vivid illustration of this danger¹².

Using Resources More Efficiently. While it is true that, in most developing countries, the financial resources allocated to higher education are insufficient in absolute terms given the rapid growth of enrollments, significant improvements could be achieved if existing resources were managed and utilized in a more efficient manner. Many higher education systems suffer from a high level of wastage, there is often a disproportionate share of resources going to student support services, and management practices tend to be inadequate. In Madagascar, for example, the average pass rate at the end of the first year of university is only 13%. In Senegal, 52% of the higher education budget is spent on scholarships and student support services. Very few universities operate with modern management practices.

To reduce the level of wastage, higher education institutions can take measures to increase internal efficiency. Introducing stricter selection mechanisms and applying academic

¹² Marshall, N., "End of an Era: the Collapse of the 'Buffer' Approach to the Governance of Australian Tertiary Education", Higher Education, Volume 19, 1990, pp. 147-167.

Love, J.H., and McNicoll, I.H., "The Economic Impact of University Funding Cuts", Higher Education, Volume 19, 1990, pp. 481-495.

regulations regarding promotion and repetition with more rigor can result in significant savings in countries with very high failure rates. There is worldwide evidence that the cost of selecting students who are not qualified to successfully participate in higher education programs is high¹³. At the University of Dakar, where internal efficiency has been particularly low, the Dean of the Faculty of Medicine took the initiative two years ago to screen new entrants on the basis of their "baccalauréat" results and their age. This initiative has made a significant difference, as evidenced by a comparison of pass rates at the end of the first year of study at the Faculty of Medicine and the Faculty of Sciences which recruit from the same pool of science secondary school graduates. The proportion of successful students is 42% in the Faculty of Medicine versus only 11% on average in the Faculty of Sciences¹⁴.

The transformation, re-grouping and, when necessary, relocation of existing university and non-university departments, faculties, schools and institutes could result in more rational higher education systems. There would be less duplication, reduced operation costs, and less enrollment and resource imbalances between overcrowded and underutilized institutions than is presently the case in many countries. In Ghana, for example, the government is considering system-wide reforms to reorganize higher education in a more effective manner¹⁵. The State Education Commission of China has drawn up a plan to reorganize the country's network of universities and colleges to "rationalize small departments, broaden specialties, eliminate duplications of programs, and make more effective use of staff and physical resources"¹⁶. Nigeria has implemented measures to eliminate inefficient programs. However, it is important to proceed carefully with such reforms. The recent Australian experience with mergers indicates that "forced amalgamation" can lead to increased inefficiencies when the change process is not based on consensus-building mechanisms¹⁷.

Management is another area where much progress can be achieved. Strengthening management practices in higher education institutions would go a long way towards ensuring that available resources are used in the most effective manner. There is a need to move away from traditional administrative approaches to a more managerial culture in university administration. Decentralized personnel and financial procedures should replace the existing centralized systems. Introducing flexible budgeting and disbursement procedures is a pre-requisite for institutions seeking

¹³. Klitgaard, R., Elitism and Meritocracy in Developing Countries: Selection Policies for Higher Education, Baltimore, John Hopkins University Press, 1986.

¹⁴. "Revitalizing Higher Education in Senegal: the Challenge of Reform", Population and Human Resources Division, Sahelian Department, unpublished sector report, The World Bank, Washington D.C., October 1991.

¹⁵. Ministry of Education, "White Paper on the Reforms to the Tertiary Education System", 6 August 1990.

¹⁶. Weifang, M., op. cit., p.15.

¹⁷. Goedegebuure, L., and Meek, V., eds., Change in Higher Education: the Non-University Sector, Center for Studies in Higher Education, Enschede, the Netherlands, 1988.

to increase the cost-effectiveness of their programs. Quite often, publicly-funded higher education institutions suffer from restrictions which prevent them from redeploying resources more efficiently. For example, in some countries it is impossible to reallocate funds from one budget category to another. Even when there are savings at the end of the fiscal year, the universities cannot use them to purchase items from a different budget category. In addition to changes in administrative and financial procedures, the appointment and training of qualified professionals and technicians to perform the various functions associated with effective management is a key factor. Also important is the establishment of an efficient management information system which can inform university leaders and administrators on the academic and financial performance of the various parts of the institution.

For efficiency reasons, social expenditures should not take precedence over educational expenditures in university budgets. Priority should be given to expenditures on textbooks and other educational materials. From an equity viewpoint, scholarships and student support services should be reserved to the most needy and better performing students. In some countries, it is easier for male students to get a scholarship than for female students. In Sudan, for example, it was observed in 1988 that 22% of male students had their education completely financed by the government versus only 7% of female students¹⁸. Access to overseas scholarships, in particular, should not be biased in favor of the children of well-to-do families. A few countries have attempted to streamline their scholarship schemes to increase efficiency and fairness. China, for instance, has implemented since 1983 stricter rules for higher education grants and living allowances¹⁹.

Resource diversification and mobilization. While public subsidies are likely to remain the main source of funding for higher education in most countries, they are becoming increasingly insufficient to ensure the financial viability of higher education systems which are rapidly expanding under the pressure of the rising social demand. Throughout the developing world, a growing number of tertiary institutions have attempted to diversify their sources of funding to improve their long term financial position and become less dependent on shrinking government budgets.

Even when government funding is forthcoming, it is dangerous to rely on a single financial source, as exemplified by the Jordanian case. Whereas most higher education systems receive their funding predominantly, if not exclusively, from the government budget, Jordanian universities have benefitted from a special financial arrangement entitling them to a direct allocation from earmarked custom duties. For many years, they enjoyed abundant financial resources and a large degree of independence from the government. But when the 1990 Gulf crisis occurred, bringing about a brutal decline in foreign trade income, the universities were unexpectedly faced with

¹⁸. Sanyal, B., and Collins, J.E., Women, Higher Education and Employment in the Developing Countries, IIEP Occasional Paper number 77, Paris, 1988.

¹⁹. Woodhall, M., Student Loans in Higher Education: Asia, IIEP, Paris, 1991.

acute financial difficulties²⁰.

Countries have followed several tracks to diversify funding sources for higher education. Income can be generated by undertaking research and service contracts on behalf of public and private companies. In Chile, for example, most universities have expanded their links with industry to raise revenues through applied research contracts²¹. Organizing short term management and technical courses to familiarize employees with new methods and techniques is also a possibility. In Venezuela, several private universities offer short term management courses to industry. Another approach is to encourage the productive sectors to contribute beyond what they already pay the state through taxation. Donations from industry in kind or in money can be sought as higher education institutions attempt to strengthen their linkages with the productive sectors. Financial support from industrial and commercial firms can be generated in the form of grants or scholarships for specific academic or professional programs whose research activities and graduates are directly relevant for these companies. Direct donations have been strongest in Asia, where the establishment of foundations offering financial support for students has been a common pattern. Private foundations for instance have developed in Indonesia, Thailand and South Korea²². The recent study on cost effectiveness and efficiency prepared by the Association of African Universities gives many examples of positive financial diversification initiatives in a number of African universities.

It is important to note that, even under the most favorable scenario, these additional resources are not likely to represent a high proportion of university budgets. For example, in the case of industry-university linkages, in many countries which are predominantly agrarian or have a small modern industrial sector, the scope for research or service contracts is necessarily limited. Furthermore, new activities imply additional costs for the university. But even marginal increases in resources can have a significant impact on the quality of teaching and research if used to purchase educational materials such as textbooks, didactic equipment or laboratory supplies.

Another way of mobilizing additional resources is to allow for private provision of higher education to complement public sector efforts. In some countries, the majority of students are enrolled in private higher education institutions. For example, the proportion is almost 90% in the Philippines, 75% in South Korea, close to 60% in Brazil, Indonesia, Bangladesh and Columbia²³.

²⁰. Za'rour, G., "Higher Education in Jordan", Education and Employment Division, The World Bank, Washington, D.C., unpublished paper, August 1991.

²¹. Brunner, J., "La Educacion Superior in Chile: 1960-1990 Evolucion y Politicas", Paper presented at the Regional Meeting on Higher Education in Latin America, Buenos Aires, 1990.

²². Papers presented at the Unesco Regional Seminar on Mobilizing Resources for Higher Education, Bangkok, 1987.

²³. Levy, D., Higher Education and the State: Private Challenges to Public Dominance, Chicago: University of Chicago Press, 1986.

At least six African countries have private colleges or universities, the largest number being found in Kenya and Zaire. Advocates of private institutions of higher education point to their comparative advantage in terms of efficiency and flexibility in responding rapidly to changing demands from students as well as employers. Some governments consider the development of a private higher education sub-sector as a component of their diversification strategy. This is the case for example in South Korea, Thailand and Indonesia where some private higher education institutions even get public subsidies²⁴. From an equity viewpoint, it has been observed that, in countries with a selective public university system, the existence of private institutions allows a larger share of the population to have access to higher education. Conversely, limitations on the growth of private institutions have in some cases contributed to the brain drain phenomenon, as in Malaysia for instance²⁵.

However, reliance on the private sector is not without problems. The performance of many private institutions, which usually specialize in low cost disciplines, leaves much to be desired in terms of quality of training²⁶. The end result is a form of aggravated injustice whereby, in countries like Brazil, the most privileged students enter the top public universities which charge no fee while students from low and middle income background pay for the lesser-quality education offered by private institutions. The experience of South Korea has shown that the contribution of private institutions is more positive when the government provides an appropriate policy framework for national accreditation and supervision of the private sub-sector.

Notwithstanding the social and political difficulties involved in the implementation of this type of measure, a number of countries have introduced tuition fees at a modest level to cover some of their recurrent expenditures. In Egypt, for example, students are required to pay a small fee to cover the cost of producing examination papers and running computer labs. Malaysia has just increased tuition fees by 50%, bringing cost-recovery to 15% of total university expenditures. Singapore has a variable cost-recovery policy depending on the relative cost of each discipline: students enrolled in the more expensive fields like medicine or engineering pay a higher fee than those in arts subjects, even though their contribution represents a smaller share of total costs. In Ghana, the recent White Paper on the Reforms of the Tertiary Education System calls for cost sharing between the government, the students and the private sector. In China, tuition fees account for 8.6% of total expenditures²⁷.

²⁴. "Public and Private Sectors in Asian Higher Education Systems", Reports from the Third International Seminar on Higher Education in Asia, Research Institute for Higher Education, Hiroshima University, November 1987.

²⁵ Selvaratnam, V., "Meeting Human Resource Needs of Developing Countries: the Contribution of Overseas Education", Paper presented at the Conference on Overseas Education for Development, Princeton, New Jersey, May 1991.

²⁶. Levy, D., "Problems of Privatization", Paper prepared for the World Bank's Worldwide Seminar on Innovation and Improvement of Higher Education in Developing Countries, Kuala Lumpur, June 1991.

²⁷. Weifang, M., "Higher Education Finance in China: Current Constraints and Strategies for the 1990s", Institute of Higher Education, Beijing University, unpublished paper, August 1990.

Even when the amounts retrieved through burden-sharing measures represent only a small proportion of total expenditures, they are important in a symbolic way because they raise students' awareness of the cost of their studies and of the need for high academic performance. This should eventually contribute to increasing the motivation of students and, as a result, improving internal efficiency.

The search for additional resources and the introduction of income-generation activities should not have detrimental educational consequences and overshadow the primary goal of academic quality and relevance. More importantly, it should not have socially adverse consequences. In particular, the introduction of fees should systematically be accompanied by a carefully targeted grant scheme to assist students from poorer families. The University of the Philippines provides a useful example of this type of approach. In 1988/89, it implemented a steep tuition fee increase but set up, at the same time, a student support scheme to provide financial assistance to needy students who met the academic criteria for admission.

To protect poor students from the rising private costs of higher education, a number of countries -- 35 in the developing world and 15 among industrialized nations -- have established loan schemes with a variable degree of success²⁸. On average, the financial impact has been less positive than anticipated as a result of high hidden subsidies (negative interest rates), administrative costs, and default rates.

Even in industrialized countries with a strong banking tradition, the record of existing loan schemes has been very mixed. While the program in Québec is considered to be quite successful, the US loan program has been plagued with very high default rates. In the UK, where a new loan program was launched in September 1990, only 28% of eligible students actually applied for a loan. After one year of operation, the loan administration agency has come under heavy criticism for its high administrative costs: 8.6 million sterling pounds for a global amount of 70 million pounds disbursed in loans, representing 12.3% of the total²⁹. The results have not been much more impressive in France, where the Government also introduced a new loan scheme in 1990. During the first year of operation, only 30% of the targeted student population actually applied for a loan³⁰.

A few countries, for example Australia, Ghana and Sweden, have explored alternative strategies to replace traditional loan programs. Income-contingent loans and graduate taxes appear

²⁸. Albrecht, D., and Ziderman, A., "Deferred Cost Recovery for Higher Education: Lessons from Experience and Strategies for the Future", Education and Employment Division, The World Bank, unpublished paper, Washington, D.C., August 1991.

²⁹. Tysome, T., "Hardship pressure on loans", The Times Higher Education Supplement, 25 October 1991.

³⁰. Aulagnon, M., "L'an 01 du plan social étudiant", Le Monde, 17 October 1991.

to present many advantages in terms of both efficiency and equity³¹. First, they are easier to administer and do not require heavy government subsidization. Second, they satisfy the ability-to-pay principle since, to reimburse the loans, graduates make payments in proportion to their income. However, to operate in an effective manner, income-contingent loan schemes require well-functioning collection mechanisms such as an efficient taxation system or a comprehensive social security network.

Decentralization for Increased Autonomy and Accountability. It is important to underline that the impact of most measures examined in the previous pages is dependent upon the degree of autonomy higher education institutions enjoy, especially with respect to enrollment growth and resource use. For example, the search for additional sources of financing is a pointless exercise for institutions which have no control over the number of new students. Also, if income diversification is to be effectively promoted, institutions which are successful in raising additional resources must be allowed to keep them rather than being compelled to transfer them to the Treasury, as is standard practice in some countries.

Generally speaking, it has been observed that central planning and control of higher education can result in uniformity and rigidity whereas there is a need for increased differentiation and responsiveness of higher education institutions to evolving demands³². Policy analysts have advocated moving towards a supervisory role of the state as being a more effective way for governments to manage higher education systems³³. In this perspective, the authorities's main role would be to provide an appropriate policy framework and effective suitable incentives to encourage higher education institutions to become more efficient and responsive to meet objectives of quality and relevance.

Along with increased autonomy, higher education institutions need to be made accountable for their academic and financial performance. Recent studies indicate that self-evaluation mechanisms seem to be the most constructive way to promote a sense of real institutional responsibility in higher education³⁴. The African Higher Education Council (Conseil Africain et Malgache de l'Enseignement Supérieur), which regulates teacher recruitment and promotions in francophone universities, provides an interesting example of a well-performing peer review process.

³¹. Barr, N., "Income-Contingent Student Loans: an idea whose time has come", in Essays in Honour of Mark Blaug, G. K. Shaw, ed., forthcoming.

³². Verspoor, A., "Improvement and Innovation in Higher Education", Higher Education Policy, forthcoming.

³³. van Vught, F., "Autonomy and Accountability in Government/University Relationships", Paper presented at the World Bank Worldwide Seminar on Improvement and Innovation of Higher Education in Developing Countries, Kuala Lumpur, June 1991.

³⁴. Neave, G., and van Vught, F., eds., Prometheus Bound: The Changing Relationship Between Government and Higher Education in Western Europe, Pergamon Press, Oxford, 1991.

The Role of Donor Agencies

"In our increasingly interdependent and competitive world, where communications and technological innovation have no boundaries, nations can thrive only with a healthy, literate, well-trained population. Efficient investment in education ... must have the highest priority."

**Lewis T. Preston, World Bank President
Address to the Board of Governors, Bangkok, October 1991**

In terms of resource allocation, the earlier observations about the distribution of funds among education sub-sectors at the national level also apply to external assistance. There are indications that, as a result of the renewed commitment aimed at supporting basic education, the donor community has tended to reallocate funds from higher education to primary education instead of increasing the pool of international resources for human resources development³⁵. Donor agencies should not ignore the complementarity between the different components of the education system. The volume of external assistance to higher education should reflect the critical role of scientific training and research in social and economic development.

Improved donor coordination is also a priority. Too often, there is a tendency among donors to concentrate their assistance funds on flagship projects which can be identified as "country X's project" without necessarily taking national development priorities into consideration. This can lead to situations of duplication and fragmentation between institutions and programs. In many countries, institutions have been established with the support of bilateral or multilateral aid agencies without being fully integrated into the national network of higher education. These cases reflect an approach which could be called "oasis planning", i.e. the creation of well-endowed institutions which are totally isolated from the rest of the higher education system. To avoid this type of outcome, national governments should be careful to impose on donors a common framework to maintain the coherence and homogeneity of their higher education system. Countries which sponsor donor coordination meetings on a regular basis have been able to utilize external assistance in a more synergetic way. The benefits of diversity in terms of sources of external assistance should not take precedence over the need for effective coordination.

Linkage programs, whereby higher education institutions in developing countries have twinning agreements with one or more institutions in industrialized countries, have been one of the most common forms of international assistance at the post-secondary education level. Through staff, students and knowledge exchanges, these programs have made a significant contribution to

³⁵. Eisemon, T., and Kourouma, M., "Foreign Assistance for University Development in Sub-Saharan Africa and Asia", paper prepared for the World Bank's Worldwide Seminar on Innovation and Improvement of Higher Education in Developing Countries, Kuala Lumpur, June 1991.

institution-building. But in a number of cases they have been detrimental, for example when they mainly reflected donor country research priorities which were different from the recipient country's own development priorities, or when they were viewed by recipient institutions only as a short term solution to compensate for scarce local resources³⁶.

As highlighted by the Donors for African Education Working Group on Higher Education, twinning agreements seem to be more effective where there are mutual benefits, where both institutions have the capacity to manage the relationship efficiently, where the link is between similar institutions or departments, and where there is the possibility of a longer term capacity-building commitment³⁷.

Notwithstanding the positive contribution of linkage programs, there is a need to move away from project-specific support to general assistance programs within a coherent framework. In the Chinese case, for instance, the World Bank has cooperated with the government since the early 1980s with eight complementary projects appraised and implemented in rapid succession to support the various components of the higher education development strategy: national research universities, provincial universities, national television university, etc..³⁸. The Tunisian Government has recently asked the World Bank to financially assist in the establishment of a network of two-year technology institutes. Donor funding can also be made available to support structural reforms undertaken by governments intent on improving the institutional environment in which universities operate.

As far as institutional centers of excellence are concerned, donor support for regional cooperation initiatives should not falter. But, rather than promoting the creation or consolidation of new supra-national institutions which have traditionally proven difficult to sustain and have not been very effective, it may be more appropriate to focus on the identification and strengthening of existing national institutions or programs with a convincing record of achievement and the potential to operate successfully as regional centers. Economies of scale benefits would result from this approach, especially for graduate education and research.

Finally, donors should pay more attention to the political dimension of higher education problems. In many instances, the successful launching and implementation of reforms and innovations are conditioned by the ability to have an effective political marketing strategy. Donors can assist in providing positive incentives to help governments create conditions which make

³⁶. Salmi, J., "Educational research on the Third World or with the Third World: a view from the South", Institute of Development Studies Bulletin, special issue on Educational Research: issues in cross-national collaboration, October 1984, volume 14, number 4, Brighton, U.K., pp. 9-11.

³⁷. "Recommendations of the DAE Working Group on Higher Education", unpublished document, 6 September 1991.

³⁸. Hayhoe, R., China's Universities and the Open Door, Armonk, New York, M.E. Sharpe, Inc., 1989.

important changes in higher education policies (admission, financing, governance, management) socially acceptable.

Conclusion

"How did you go bankrupt?" Bill asked.

"Two ways," Mike said.

"Gradually and then suddenly."

(The Sun Also Rises)

Higher education systems in developing countries are assigned conflicting missions. They are expected to offer advanced level programs to train the scientific and professional manpower required to sustain productivity increases and economic growth while accommodating the rapidly rising social demand. At the same time, their resources have become more and more limited. Faced with these multiple challenges, many countries have initiated reforms to strengthen the quality of their higher education system and improve its long run financial viability. This has involved the design of more effective and innovative financial strategies to mobilize, allocate and utilize resources.

But focusing exclusively on the financial aspects has generally not been sufficient. Financial measures appear to be most successful when integrated into system-wide institutional diversification strategies. Often, this calls for difficult decisions regarding the proportion of young people to whom the country can afford to offer good quality programs and the search for more cost-effective modes of delivery to achieve this objective within the prevailing resource constraints. In those countries which have been hesitant to implement reforms challenging established practices and vested interests, there is a need to ponder the risks of choosing protection from short term disturbances in the form of student activism over the prevention of long term negative effects such as falling standards and loss of international competitiveness.