



# ESP Discussion Paper Series

17678

## **Reforming Higher Education Systems: Some Lessons to Guide Policy Implementation**

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*April 1995*

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**REFORMING HIGHER EDUCATION SYSTEMS:  
SOME LESSONS TO GUIDE POLICY IMPLEMENTATION**

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## **ABSTRACT**

Although higher education systems are in a constant state of change, they are difficult for governments to reform. This paper analyzes a wide variety of country experiences in establishing mechanisms to co-ordinate the development of higher education systems, diversifying institutional financing and increasing the efficiency of public investments. Attention is drawn to the need for effective policy structures to manage higher education, to link costs of reforms to benefits such as increased opportunity, to take account of the institutional constraints to change as well as to carefully articulate educational reforms with other public policies that influence the performance of the higher education systems.

## Introduction

Higher education systems are in a state of constant change nearly everywhere. Institutions are being established with new missions and innovative configurations of training, serving populations that previously had little access to higher education. Nevertheless, despite the dynamic characteristics of higher education systems, they are notoriously difficult for governments to reform.

Government influence on the different institutional components of higher education systems varies enormously. At one extreme are many technical and teacher training institutions that are subject to government policies affecting student selection, examination and the employment of their graduates. These are powerful instruments for change. In the case of teacher training institutions, the recruitment of most graduates into state institutions ensures that they are especially responsive to government policies. In contrast, universities are less easily manipulated by government policies even in countries where they are fully financed by the state and most graduates are absorbed into the public service.

Many explanations can be advanced for this. Universities have traditions of autonomy and academic freedom that were established through prolonged conflict with religious authorities and, since the mid-19th century, with the modern national state. Academic communities almost universally assert the right to control those instructional and research activities which are essential to the future preparation of members of the academic profession. In addition, the administration of universities is generally under the control of their teaching staff, although the most senior levels of administration may be appointed by government. In both respects, universities and colleges are unlike other kinds of higher education institutions. For example, teacher training colleges are often staffed and administered by cadres of the civil service and their programs stipulated by ministries of education while university faculties of education usually enjoy greater autonomy in such matters.

Notwithstanding policies governments may adopt to isolate universities from the political system or to place them under state supervision, they are often important arenas of political activity. Public universities require large investments, substantial infrastructure, procure inputs from local sources, employ large numbers of academic, administrative and support staff, purchase many inputs from local sources and, thus, generate important economic "spin-offs". Decisions to establish, locate and/or to expand public institutions have high political impact and prompt close political attention as do institutional procurement and staffing practices. Not surprisingly, this often leads to overt political interference into the affairs of the universities despite whatever legal protection they may enjoy.

In addition, universities in many countries, particularly their students, have a long tradition of political dissent and participation in the political process. Students represent an incipient political elite with claims to an influential, independent role in the political system that are often recognized, implicitly, in negotiations between student groups and ministers (and often heads of state) about campus grievances. In these situations, university students are not passive objects of reform but key political actors in the reform process.

This paper examines strategies for reforming the management and financing of higher education systems. It considers policy reforms of higher education that are undertaken in order to increase the cost-effectiveness of public investments, the responsiveness of institutions to changing labor market conditions and their contribution to national development, generally. The paper focuses on recent reform experiences in developing countries as well as those in transition to a market economy. Attention is drawn to the need for policy makers to carefully consider the incentives provided to higher education institutions to positively respond to government initiated reforms.

## CREATING STRUCTURES TO IMPLEMENT POLICY REFORMS

Higher education systems are the products of successive, often un-articulated government and private initiatives over a fairly long period of time. Higher education planning is a relatively recent policy innovation, coinciding in most developed and developing countries with the application of human capital development theory to educational investments and the assertion of state responsibility for the higher education sub-sector.

The co-ordination of government investments in degree and diploma granting institutions, in public and private institutions, in fundamental and applied scientific training and research, poses complex issues for policy makers to address. Which investments should have the highest priority? What criteria should be used to allocate resources among the competing demands of the institutions and programs that comprise the sub-sector? How should public and private costs be distributed?

Many countries lack effective policy making structures to co-ordinate and plan higher education investments, control growth, foster new initiatives and influence the behavior of students and institutions. These structures are difficult to establish, particularly in countries which have diversified systems of higher education.

### Brazil

Brazil has a long tradition of university education and a large, segmented system of higher education. Public higher education is provided by municipal, state and federal governments which operate parallel systems that are essentially autonomous. Of the more than 1.6 million students enrolled under graduate programs in 1989, about 300,000 were attending 35 federal universities while compared to 150,000 in state and municipal institutions. In addition, there were 39 private universities that accounted for most higher education enrollment (Wolff, Albrecht and Silba 1992, III-1). Government policies since the 1960s have favored concentration of public resources on the development of the federal university sector. More than half (60%) of the Federal Ministry of Education's total budget supports the federal universities. The private universities which have become the government's instrument for expanding access to higher education, are self-financing and generally provide a lower quality of education.

The principal policy device for controlling the system of higher education is the Federal Council of Education whose chief function is to approve the charters of new higher education institutions and accredit their courses of study. Its powers extend to private as well as public institutions and its responsibilities, as legislated, are very substantial. For example, the Federal Council not only has responsibility for approving new courses of study in light of the regional and national manpower needs of the country, it also regulates the tuition and fees private institutions may charge and their level of enrollment.

Nevertheless, the Federal Council does not possess sufficient staff resources to exercise these wide powers. Nor, more importantly, does it have any responsibility for directing resources to the institutions which are placed under its supervision that would give real authority to its statutory powers. The costs and financing of the federal universities are subject to legislation affecting the wages and salaries of public employees and a federal constitutional prohibition against imposition of tuition. The private colleges and universities do receive indirect support from the federal government in the form of

loans to students attending the institutions. Nevertheless, only about a fifth of students in private universities and colleges avail themselves of loans provided through commercial banks (Albrecht and Ziderman 1991, 15). The scheme is administered by a unit of the Federal Ministry of Education and not by the Federal Council of Education which has accrediting functions and, thus, could use this policy device to improve the low standards of many private institutions.

#### Jordan

The joining of regulatory and financing functions does not necessarily ensure effective government control of a higher education system. Jordan's Council for Higher Education allocates funding and intake among the country's five public universities which had a total enrollment of 38,711 students in 1990-91 (Za'rour 1991, 4). According to a 1985 higher education law, the powers of the boards of trustees of the public universities were transferred to the Council. As well, the Council acquired responsibility for registering and accrediting the rapidly expanding number of private colleges and universities that do not receive any public support. Although the Council's legislative mandate gives it the powers of a university grants commission, the effectiveness of the Council as an intermediary body between government and the universities--assessing their needs, monitoring the quality and demand for their programs, and guiding their growth--is limited for many reasons.

The sixteen members of the present Council include four university presidents and four ministers, i.e. the providers and recipients of support for public higher education. The Council has a financial committee to review university budget requests. But funds for recurrent costs are shared according to a 1987 formula which fixes the proportion of allocations to each public university, the amount varying from year to year depending on what resources are available to support the public university system. The resource allocation process provides few incentives for institutional innovation, controlling costs, raising efficiency, strengthening programs or long term academic planning. The Council, an autonomous self-standing body, is housed by the Ministry of Higher Education whose activities focus on the country's public and private community colleges, the latter registered by the Ministry of Industry and Labor as corporations of private shareholders. The Minister of Higher Education serves as the Council's chairman. The Council lacks its own secretariat and relies on this ministry for professional support services.

Neither the Council nor the Ministry of Higher Education are able to effectively manage the higher education system. This is the result of the complex power sharing arrangements between the Council and the Ministry, on the one hand, and between the universities and the Council, on the other. The Ministry of Higher Education, entrusted with co-ordinating human resource development policies, has limited involvement in university education and its responsibility for the community colleges is shared with the Council and other sectoral ministries. The Council has substantial powers with respect to university education but weak implementing capacity and little independence from the institutions it supervises. While the public universities have lost some of the autonomy they once enjoyed, they gained significant representation on the Council as well as control of the distribution of resources.

#### Nigeria

Created in the 1962, the Nigerian Universities Commission initially performed a useful role in recruiting expatriate staff for the expanding federal and state university systems, Sub-Saharan Africa's largest. In the 1970s, the Commission's powers were ostensibly strengthened through being made a

statutory parastatal body, though it continued to serve mainly as a conduit for the block grants to the universities.

The Nigerian Universities Commission became much more powerful with the country's worsening economic situation in the mid-1980s. The public universities were forced to expend all of their discretionary funds held over from the period of prosperity. A 1985 decree of the Federal Military Government gave the Nigerian Universities Commission powers to set minimum academic requirements and by 1988 it had formulated an ambitious plan for "rationalizing" the undergraduate and postgraduate programs offered by the 37 federal and state universities which now enroll about a quarter of a million students. To discharge its new responsibilities for university planning, budgeting and accreditation, the Nigerian Universities Commission has tipped its staff since 1988.

A 1990 World Bank loan provided the Nigerian Universities Commission with foreign exchange for staff development, purchase of library materials, laboratory equipment and consumables to be allocated to the federal universities on a discretionary basis if they adhered to its norms and directives requiring abolition of programs, staff retrenchment and introduction of cost recovery measures. The loan, small in comparison to the funding that will be needed to rehabilitate Nigeria's universities, sparked widespread protest from the academic community that has still not subsided. So far, only about a third of the federal universities have complied with the least stringent cost and efficiency criteria which all institutions were predicted to be able to comply with.

Through expanding the powers of the Nigerian Universities Commission, the federal government has been able to obtain greater academic and financial control over the university system, reversing a process of devolution that gave the states increasing responsibility for higher as well as primary and secondary education, and still not succeeded in enticing many universities to change their behaviors. Part of the explanation is that public universities tend to become less rather than more efficient as the resources to support them diminish. This is particularly likely to happen when universities lose both academic and financial autonomy and, thus, lack the flexibility they need to implement controversial reforms.

There are several lessons that can be drawn from these cases. First, governments cannot exercise effective direction of higher education systems unless the mechanisms of control are linked to the financing of institutions and/or their students. The costs of controlling a higher education system like Brazil's with large private higher sector may be unaffordable, requiring governments to be selective about the domains of training, level of instruction, or kinds of institutions they wish to influence. Second, powers to manipulate the behavior of institutions must be reinforced by the availability of discretionary funding. However, third, as the experience of the Nigeria suggests, incentives will not be successful unless the universities have the autonomy to reform themselves.

### IMPLEMENTING FINANCING REFORMS

Financing reforms may involve reducing the size or the rate of growth of the commitment of public resources for higher education, re-distributing the public and private costs of higher education and/or manipulating the criteria used to allocate public resources to institutions and students. Implementation is necessarily controversial and for this reason, financing reforms are normally undertaken under conditions of near system collapse. They are seldom introduced in anticipation of a crisis when the long term benefits might be greater but the need for reform is less compelling, and the political costs

of implementation are unacceptable. Financing reforms are reactions to events that are recognized by government and the academic community to require significant interventions. Subsequent discussion focuses on three countries where the financing of public higher education has been or is being radically reformed.

### Chile

Facing a crisis in financing its university system producing a severe reduction in per student expenditures in the late 1970s, the Chilean military government swept aside the political autonomy of the universities and the tradition of free higher education to all students who qualified for entry, and embarked a comprehensive series of structural and financial reforms. In the early 1980s, the government diversified and stratified the higher education system into several tiers, required public institutions to impose fees. It greatly expanded the number of tuition charging private universities and colleges, instituted a loan scheme for students in public institutions, gave "vouchers" to the most talented secondary school graduates negotiable at either public or private institutions. It changed procedures for financing public universities to encourage income generating activities and cost saving, awarded research funding to institutions on a competitive basis and abolished the civil service status of employees of the public universities.

By the end of the decade, university enrollments had more than doubled with almost all of the increase being absorbed by private colleges and universities (Brunner and Briones 1992, 16). The costs of operating the country's higher education were re-distributed with the result that the private sources funded nearly all of the expansion. Public expenditures declined by 40% in real terms though per student expenditures rose. In 1990, a little more than a quarter (27%) of the costs of the higher education system were borne by the state.

The reforms introduced by the military government did not remedy all the problems educational planners hoped to correct. For instance, improving internal efficiency remains a serious problem. Though the present methods of financing institutions and students should reduce the time needed to produce graduates, the number of years has actually increased since the 1970s. In the older elite public and private universities, it increased from seven to ten years, twice the stipulated length of most under graduate programs (Brunner and Briones 1992, 32). Enrollment of many students who hold jobs may be a contributing cause.

Nor are the social benefits of the reform as large as the increase in enrollment rates imply. While more students have opportunities to acquire higher education, upper income groups, predictably, have been the primary beneficiaries, particularly of the expansion of private higher education and the student loan scheme. Insofar as the equity effects of public expenditures on higher education are concerned, "the top 20% income group obtains around 53%...while the bottom 20% only captures 6%" (Safuentes 1989 in Brunner and Briones 1992, 36). The latter are mainly the very bright students from poor families whose secondary school leaving examination scores qualify them for scholarships and who chose to attend a high quality public university.

Nevertheless, impressive changes have occurred in Chile's higher education system. They can not be easily dismissed as the accomplishments of an often brutal military government involved in political conflict with an academic community loyal to the previous regime. Military governments in other countries have failed to implement much less ambitious higher education reforms in more favorable

circumstances. Significantly, the reforms introduced by the Chilean military government have not been reversed or weakened by the present elected government.

There are various factors that may explain the success and sustainability of Chile's higher education reforms. The country's small, well funded higher education system rapidly deteriorated in the late 1970s together with the resource base to support public spending. Although the military government anticipated being able to raise real support for higher education through out the 1980s (which continuing austerity prevented), it understood that the burden of financing higher education would have to be shifted in any case.

What sets Chile apart is that private financing of public higher education was introduced in the context of increasing higher education enrolments, thus, conferring opportunities as well as costs. In stratifying the higher education system through the multiplication of public and private institutions with different missions, the reforms expanded student choice which was essential to the implementation of tuition and student loans. For many academic staff and administrators of the public universities, the benefits of institutional self-financing were greater than whatever might have been sacrificed by loss of civil servant status. The older universities lost their political autonomy but gained control over their costs and opportunities to generate income which, in turn, made the reform of procedures to allocate public resources to institutions practicable.

#### Viet Nam

Viet Nam illustrates a different approach to implementing financing reforms aimed at increasing the role of private financing of public higher education. Far reaching reforms are being undertaken prompted by the transition to a market economy which began in 1986 (Albrecht 1992).

Until 1987, the state supplied and financed all higher education, determined and assigned student intake, and employed graduates. In that year, it began to allow some institutions to admit a few fee paying students, any funds obtained augmenting the meager operating budgets of the institutions. Lately, the government has liberalized restrictions on generating private financing from fees or sale of services, though public institutions still may not charge tuition to most students who receive government scholarships based on examination results. Less than a fourth of students enrolled in higher education institutions pay fees. But income from student fees and other activities now accounts for more than a third of operating budgets.

In 1989, the government withdrew the automatic guarantee of employment to university graduates and adopted a policy of toleration toward the establishment of private higher education institutions. Several private universities have begun operation despite the fact that there is as yet no statutory framework for the registration and accreditation of such institutions. Most, like Lotus College in Ho Chi Minh City (Saigon), provide instruction in foreign languages, business studies and computer science and are entirely self financing. The new institutions include an Open University established with assistance from the municipal government in Ho Chi Minh City. The rapid growth of private institutions has encouraged public institutions to found and expand the activities of service centers that offer part-time programs in fields of high student demand (and, presumably, high employment opportunity). These are beginning to generate significant income to supplement the very low salaries of academic staff.

Unlike Chile where financing reforms were articulated with re-structuring the higher education system and removing impediments to financial autonomy, in Vietnam changes in the organization of higher education and devolution of state control are taking place very slowly. Only in 1990 did the Ministry of Education and Training acquire responsibility for most of the higher education system. Previously, higher education institutions providing professional programs in law, agriculture and other subjects were the responsibility of these ministries. The Ministry of Finance allocated funds to the various ministries operating higher education institutions on a per student basis. They, in turn, funded institutions on the basis of expenditure needs and historic operating costs, resulting in wide variations in unit costs for institutions and programs administered by the same or by different ministries.

The government still sets staff salaries and staff can not be dismissed. But the importance of this budgetary constraint has been considerably reduced by inflation and increasing salary supplementation from private financing. Intake remains a responsibility of the national government which as noted above, prevents institutions from assessing fees for scholarship students. It also regulates fees institutions may charge for boarding and accommodation which account for a large share of costs. However, the parallel enrollment of fee-paying students and incentives for income generation has led to differential fees reflecting institutional and program costs and, consequently, to some changes in budgetary and resource allocation processes at the institutional level. Finally, the nascent private higher sector is still an experiment lacking the legal recognition needed for its expansion. In brief, the government has been slow to grasp the policy implications of the market oriented financial reforms it has introduced.

#### Hungary

The market oriented economic transformations that are taking place in Viet Nam are more advanced in many Eastern European countries, particularly in Hungary where a major reform of higher education is being implemented that will change the way most higher education institutions are financed, including research institutes providing advanced scientific training. In contrast to either Chile or Vietnam, the reform process is being compressed--i.e. the financing and associated policy reforms are to be introduced as a package and implemented concurrently. A new Higher Education Law was presented to the national parliament in 1992 and adopted in 1993, re-organizing the public higher education system, legitimating the establishment of private institutions, allowing public institutions to levy fees, changing the procedures for allocating state support to students and institutions, creating funds to support research, institutional rehabilitation and innovation and new policy structures to direct the growth of the higher education system (COHE 1991; Tas 1993). The reforms are being supported by a World Bank loan (1991).

The Higher Education Law brings all public and private higher education within the authority of the ministry responsible for higher education which will be advised by a Committee for Higher Education and Research comprised of representatives of the various ministries concerned with higher education, university rectors and administrators of scientific institutions, and local and even foreign experts. The Committee will formulate norms for financing public and private institutions and make recommendations to parliament on public expenditures for higher education through the ministry.

Although higher education will continue to be supplied primarily by the state, public and private institutions, several of the latter being Church affiliated, will compete for state support. Support will be distributed to institutions and students through various funds. Students will receive payments from the state Student Fund for part of the costs of accommodation, boarding and textbooks and in addition, loans

to pay these and other costs interest free for ten years. A Tuition Fund will provide support to institutions based on their efficiency and other parameters of performance as well as the costs of the programs they offer. Budgetary incentives will foster qualitative improvements and curricular innovations. The Higher Education Research Fund will selectively support proposals from institutions that fall outside the mandate of other national research councils while the Facilities Fund can be accessed by institutions for extraordinary capital expenditure needs. Universities and colleges will be allowed to determine and allocate intake except in the case of certain professional faculties (e.g. medicine, dentistry, veterinary medicine, etc.) whose enrollment will be controlled by the Committee for Higher Education and Research. The institutions will be allowed to obtain additional income from private sources without reduction of their operating budgets, set salaries and wages of academic and non-academic staff and manipulate other aspects of their cost structure subject to minimum accrediting standards adopted by the Committee for Higher Education and Research to determine eligibility for support from the Tuition Fund.

In all three countries, financing reforms have been explicitly linked to expanding opportunities for higher education. In Hungary, the government's plan is to eventually double the proportion of the 19-22 year old age group enrolled in higher education to raise the participation rate to the average for Western European countries (COHE 1991, 41). As in Chile and Viet Nam, most of this expansion will have to be financed from private sources and creation of a private higher education sector is essential to augmenting the training capacity of public institutions. To re-distribute costs and realize their growth plans, governments have had to transfer many responsibilities affecting the cost-structure of higher education to the institutions and develop policy structures to control development of the system from a greater distance.

#### IMPLEMENTING REFORMS TO IMPROVE EFFICIENCY

While improving the performance of higher education systems is an important policy concern for all governments, what this implies is often ambiguous. There is little agreement on indicators of the performance of higher education systems or individual institutions. Those which are most commonly used by educational planners are subject to multiple, sometimes contradictory interpretations.

##### Measuring Internal Efficiency

The causes and remedies for internal inefficiency are seldom obvious, and improving efficiency can have unintended consequences. In international comparisons, most higher education systems in Sub-Saharan Africa are noteworthy for their apparent inefficiency as evidenced by high failure and repetition rates, lengthening the time and increasing the cost of producing graduates. At the University of Dakar in Senegal, for instance, about 40% of the student population is estimated to be made up of repeaters (Salmi 1991). Students who fail are allowed to repeat without limitation. Examinations given at the end of each year of study are marked on a pass/fail basis. Pass rates from the first to the second year of study range from 42% in medicine to between 10% and 12% in programs supervised by the Faculty of Science.

The combined effect of high repetition and high drop out rates is that the average number of student years necessary to graduate from the four year undergraduate program is strikingly high: 18 student years in Economics, 21 in Humanities and 27 in Science. Unit costs calculated on a per graduate basis reach \$17,500. for a science graduate!

These data create a *prima facie* case for intervention to improve internal efficiency at the University of Dakar. Nevertheless, the causes of high repetition and drop out are complex and reforms directed to changing university practices may not be the most effective solutions. All secondary school graduates are entitled to admission to the University of Dakar. Moreover, few restrictions are placed on their selection of a course of study. Thus, the high failure rates are likely to reflect the poor qualifications of many students at entry for the programs they elect to study.

Attempts to increase internal efficiency without addressing its underlying causes--by, for instance, adoption of output based institutional funding---might have deleterious consequences for the high standards of performance that the University has apparently sought to maintain. They would exacerbate the country's growing graduate unemployment problem as well: "Cynical as it may appear, it should be noted that the very low internal efficiency at the University is a blessing in disguise for the authorities. The number of graduates could easily be three to four time higher if internal efficiency was improved" (Salmi 1991, 18).

The relatively low student to staff ratio typical of higher education systems in Eastern Europe provides another illustration of the difficulties in interpreting efficiency indicators. In Romania, for example, the student to staff ratio in 1992/93 was 7.5:1, which is somewhat higher than in Hungary but slightly below Russia (6:1 and 8:1 in 1992/93, respectively) (World Bank estimates, 1994). This is sometimes presented as an important source of inefficiency in expenditures on public higher education to be remedied by increasing university enrollments. But the low student to staff ratio is results from the high number of compulsory instruction in undergraduate programs rather than from staffing norms and student numbers. Students are required to attend 36 to 38 hours of classes per week in Romania and many other countries in the region. That is about 30% to 40% higher than the coursework requirements in universities in most OECD countries (Eisemon *et al.*, forthcoming). Consequently, improving efficiency in utilizing staff will involve a radical reduction in the number of hours of instruction, effecting the organization instruction as well as methods of teaching and student assessment.

#### Shock Therapy and Internal Efficiency Norms

A strategy favored by many developing countries experiencing austerity is to sharply reduce to aggregate level of funding for university education. In Chile, discussed above, the number of public and private institutions receiving government support and amount of core funding was decreased to encourage private financing (Brunner and Briones 1992, 8 & 9). In Ghana, the government has recently agreed to hold the higher education share of the budget to 17% to increase cost-recovery (World Bank 1992). However, provisions of Ghana's new constitution greatly limit the freedom of government institutions to raise additional resources from tuition, forcing them to increase charges for overcrowded poorly maintained student residences and refectories. In Brazil, as noted earlier, there are similar constitutional restrictions on the revenue generating activities of the federal universities. In brief, the administration of "shock therapy" to motivate universities to become more efficient presupposes that the institutions have an important measure of control over their costs as well as the capacity to raise income by imposing charges that can be justified by the services they are able to offer.

Governments that place high priority of retaining control of their higher education systems often impose efficiency "norms" to change the behavior of institutions. Since the early 1980s, China's State Education Commission has been requiring universities and colleges to "rationalize" (amalgamate or eliminate) small departments and programs, reduce the number of specialties they offer in many

professional fields like engineering, increase student-staff ratios in universities and colleges below a critical size, raise the number of hours per day that classroom and laboratory space is used, and has even begun to merge some small institutions with larger ones (Weifang 1991, 50-51). Teacher/ student and student/support staff ratios are reported to have risen considerably while average real per student expenditures have dropped.

The Nigerian Universities Commission has been even more prescriptive in its efforts to improve the internal efficiency of the country's universities seeking to qualify for World Bank funds for rehabilitation. Guidelines have been formulated to determine the number of excess non-academic staff, half of whom must be retrenched to establish eligibility for support to satisfy the first year minimum criteria (Bako 1990, 30). Institutions having more than the prescribed number of academic staff, must release half of these staff according to norms for each discipline to obtain second round support. But any department that has offered programs for more than ten years with less than one third of the staff the Nigerian Universities Commission has determined that it should require must be phased out to qualify for discretionary funding.

Although norms may be formulated with the advice of members of the local academic community and, as in China and Nigeria, with the assistance of international subject experts (e.g. International Advisory Panel & Chinese Review Commission 1991), they are necessarily invasive of institutional autonomy and, consequently, are actively resisted where academic decision making is consensual. The low level of institutional compliance with the Nigerian Universities Commission's guidelines is indicative of the problems associated with the application of internal efficiency norms. Administrators are accountable to the powerful academic senates of Nigerian universities and are often unable to manage the institution's resources in ways that seem to be efficient.

#### Improving External Efficiency

Improving external efficiency is a high priority for many governments. States like Egypt and Yemen that provide free higher education to all students who qualify for entry, place few restrictions on a student's choice of a course of study and guarantee jobs for university graduates have few instruments to improve external efficiency in periods of slow labor market growth. In Yemen, rapidly increasing university enrollments has led the government to re-direct graduates into school teaching to replace expatriates (Selvaratnam and Regel 1991). This will only provide some short-term relief, however.

The long term consequences are evident in Egypt where high graduate unemployment is a continuing legacy of Nasser's educational reforms. The government's principal response in the 1980s has been to control the supply of graduates to the labor market by reducing the growth of university enrollments through raising entry requirements (Richards 1992). It has also frozen public sector wages and salaries and recently taken more extreme measures including suspending the hiring of university students upon graduation. Nevertheless, the government has not formally abrogated its responsibility to employ graduates and it commits substantial resources to various self-employment schemes such as programs to distribute reclaimed land to graduates. Because of the higher graduate unemployment among students in the humanities and social sciences, the government has invested in expansion of costly engineering and technical training.

The government shows no intention of wavering from its commitment to provide free public higher education either. High cost private higher education accounts for a very small share of university

enrollment. While there is increasing demand for entry into private institutions, the possibilities for expansion and differentiation are constrained by poverty, on the one hand, and by subsidies to the public universities, on the other. Solutions to the low external efficiency of Egypt's higher education system and wastage of public expenditure require more fundamental reforms.

In Eastern Europe, de-linking of higher education from automatic employment has supplied the impetus for the proliferation of a large number of innovative private higher education institutions, a development analogous to the spontaneous evolution of medieval universities. Unlike countries such as Chile, Indonesia or Thailand that have deliberately expanded private participation to accommodate much of the social demand for higher education and diversify training for the labor market, in Eastern Europe this has largely happened in the absence of any public policy on private higher education apart from tolerance.

Private higher education can be useful in signalling changes that are occurring in the labor market to government and to the public universities as well, increasing the external efficiency of the higher education system, generally. At some point, as Hungary has now realized, the state must create a legal structure for the development of private institutions. A balance must be struck between suffocating private initiatives with government regulations and permissive policies that place the proprietary interests of these institutions ahead of the important training role they can play. At one extreme is a country like Zimbabwe. It passed legislation in 1991 to accredit private institutions under which the country's only independent private college, Solusi College (a well respected Seventh-Day Adventist institution), was made illegal. At the other are countries like Indonesia and the Philippines that have mass systems of private higher education where public regulation has not led to effective supervision but to expansion of poor quality education and many abuses (Geiger 1986; Levy 1991). In between, are countries like Kenya whose Commission for Higher Education has assisted the development of private colleges in that country by, for example, preparing model curricula for core programs of study such as commerce and education and facilitating their evolution into autonomous universities (Eisemon 1992).

Many of the labor market signalling benefits of private higher education can be obtained through increased private financing of public higher education, not only through greater cost-recovery from students (assuming sufficient student choice of courses of study and curricular flexibility), but also through income generating activities such as part-time studies and continuing education. Still, insofar as public higher education is concerned, government has a legitimate proactive role in managing the supply and characteristics of students entering the labor market.

#### Labor Market Forecasting

Educational planning based on manpower requirements forecasting has a long history of well documented failures that policy makers would be ill-advised to ignore. Yet almost all governments undertake some form of manpower planning to guide investments in higher education. What matters is how large a role the government plays and the degree of articulation of government policies affecting public higher education with those that influence the structure of educational opportunity, especially in the private sector. Some of the "best practice" illustrations of manpower planning are to be found in the Newly Industrialized Countries of Far and Southeast Asia.

Korea, perceiving a need to increase the supply of science and engineering graduates, began in 1962 to manipulate the intake of public and even private institutions which were subject to enrollment

quotas--several years before there was substantial evidence of a high private or public sector demand for such graduates and in accordance with the First Five-Year Economic Development Plan launched at a time of graduate unemployment (Lee 1989, 39). By 1965, enrollment in science and engineering courses accounted for 44% of total undergraduate enrollment, rising to 48% in 1980 before dropping to 36% in the late 1980s as the absorption rate increased (Kim 1992, 43).

Having supplied sufficient number of first degree scientists and engineers to the labor market, the government focused on increasing the production Master's and doctoral degree holders--the first American model graduate programs were established only in the 1960s. In financing the expansion of graduate studies also, the government was anticipating a demand for graduates that hardly existed. As recently as the mid-1980s, Korean public and private investment in R&D amounted only about 1% of GNP and the country ranked poorly on most S&T indicators in comparison to others in the region (Lee 1989, 51).

By the end of the 1980s, this situation had improved considerably as a result of a plethora of government policies to stimulate industrial dynamism chiefly through incentives to firms involved in technology intensive exports, coupled with generous tax exemptions for research and development investments (Westphal 1978; Westphal *et al* 1981; Lee 1989, 51 & 52). In brief, Korea was creating a private sector market for the products of its higher education and science and technology systems while it was expanding its capacity for advanced scientific training and research through government investment. However, because no comparable efforts were made to increase employment opportunities for graduates in humanities and social science fields, government high level manpower expansion policies actually reduced the external efficiency of the higher education system as a whole through out the 1980s (Kim 1992, 43). The lesson for successful implementation is that manpower planning of university enrollments must be very selective, accompanied by positive measures to create demand for graduates and then discontinued when government intervention is no longer warranted.

## SUMMARY

Effective policy structures are needed to reform higher education systems. Mechanisms of control must be linked to financing, supervisory powers reinforced by discretionary funding and institutions must have flexibility to reform themselves. Reforms of the financing of public higher education, especially introduction of tuition and other fees, are difficult to successfully implement without expanding educational opportunity. They also require significant devolution of government control in matters affecting institutional costs as well as incentives for institutions to engage in cost-saving and income generating activities.

Efficiency reforms can be encouraged through resource allocation processes where resources to support higher education are stable and increasing. Under conditions of austerity, many governments apply coercive internal efficiency norms which often provokes strong resistance where academic decision making is traditionally consensual. Moreover, these may not address the underlying causes of inefficiency which often have their origin in methods of instruction and assessment or standards of pre-university education. A well regulated private higher education sector, and introduction of fees for public

higher education, improve external efficiency by encouraging institutional responsiveness to student perceptions of employment opportunities. Governments have an important role to play in anticipating labor market requirements and guiding educational investments. However, government involvement in determining the supply of graduates to the labor market must be limited, supported by policies particularly to expand private employment and discontinued when intervention is no longer warranted.

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