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Public Economics

Country Economics Department
The World Bank
August 1989
WPS 240

The Public Role in Private Post-Secondary Education

A Review of Issues and Options

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Should private educational institutions be encouraged, through financial incentives and constraints, to play more of a role in post-secondary education? What public policies, subsidies, and regulations should be used to influence them?

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Can private educational institutions, responding to financial incentives and constraints, play more of a role in helping society provide efficient and equitable post-secondary education? This question is important because budget constraints are forcing developing countries to look for alternatives to heavily subsidized public services. The authors review the literature, focusing on how public subsidies can be used to meet social objectives when education is privately provided.

The appropriate level of public subsidy to private post-secondary education hinges in part on the extent to which social exceed private benefits.

In recent years there is increasing evidence in many developing countries of a growing problem of graduate unemployment and tendencies toward "credentialism" in the allocation of desirable jobs in the public sector and elsewhere. Higher education is also perceived as a socially unproductive but privately profitable screen or signalling device. The authors argue that public subsidies should be targeted toward disciplines that have high social returns. They call for more empirical work to allow policymakers to distinguish among activities.

If subsidies are to be used to make private higher education more accessible to the poor, a strong case can be made for targeted subsides such as scholarships and/or loan guarantees available only to students from low-income families (and only to low-income students with good marks, if one goal is efficiency).

A general subsidy to all post-secondary students, designed to allow low-income students to attend school, might have a regressive impact because children from higher-income families are more likely to use the subsidy than children from low-income families — all the more so if the subsidy is rationed by good marks.

The paper also discusses ways to promote quality among private institutions. Certain government policies may influence higher education at least as much as various forms of direct regulation or subsidy. The most efficient way to make schools better is probably to design an incentive system that rewards institutions on the basis of how their graduates perform — although this might favor students from high-income families.

In addition, inappropriate labor market legislation and government behavior as an employer may have contributed to problems of graduate unemployment, credentialism, and a generally swollen bureaucracy in some countries.

This paper is a product of the Public Economics Division, Country Economics Department. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Ann Bhalla, room N10-059, extension 60159 (42 pages with tables).

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The authors acknowledge comments on an earlier draft by Beth King, George Psacharopoulos, and Don Winkler. Professor Blomqvist's work was financed partly by a line of credit extended to the World Bank's Economic Development Institute by the Canadian International Development Agency (CIDA). All views expressed herein are the authors' own and should not be attributed to the World Bank, CIDA, or any other institution.

EXECUTIVE SUMMARY

The fundamental question considered in this paper is whether private educational institutions, responding to financial incentives and constraints, can play an expanded role in helping attain society's objectives with respect to the efficiency and equity of the system of post-secondary education.

With respect to the efficiency issue, the key question is whether the social benefits of higher education tend to exceed or fall short of the private benefits. Traditionally, the presumption has been that factors such as capital market imperfections, and the general scarcity of educated manpower in many developing countries, have led to a situation where the social exceeded the private benefits. However, in recent years there has been evidence in many developing countries of a growing problem of graduate unemployment, and tendencies toward "credentialism" in the allocation of desirable jobs in the public sector and elsewhere. In addition, the perception of higher education serving as a socially unproductive but privately profitable screen or signalling device may be as relevant in some developing countries as in the industrialized nations for which the screening theories were originally developed. If so, the private benefits for many types of higher education are higher than the social. This clearly would have important implications for the question whether higher education should be subsidized. Because this question is so important, more empirical work on these issues should be a high priority.

Private post-secondary education also raises several important equity issues. In some respects, there is no conflict between the equity and efficiency objectives: policies that counteract the effects of capital market imperfections, especially for low-income families, are an example. On the other hand, there are other types of equity-oriented policies that do pose a conflict with the efficiency objective. An example is a general subsidy to all post-secondary students as a means of allowing low-income students access to universities. Such a subsidy is likely to have a regressive impact because children from higher-income families are more likely to make use of the subsidy than children from low-income families. This impact may be exacerbated if access to the subsidy is rationed by marks, for similar

reasons. If higher education serves primarily as a screen or signalling device, the regressive impact may be even worse, since an education subsidy will then in effect reduce the cost to individuals who are fortunate enough to have high productivity to begin with. In addition, when education primarily serves a screening function, its private profitability is likely to be considerably higher than its social profitability. Thus, general subsidies to post-secondary education will be inconsistent with the efficiency objective as well.

On the whole, the general subsidization of higher education may be a highly inefficient, or even counterproductive, way of redistributing income from rich or poor. If subsidies are to be used to create more equitable access, a strong case can be made for targeted subsides, e.g., scholarships and/or loan guarantees available only to students from low-income families. In this context, a combination of targeted subsides and rationing access by marks may represent a sensible way of promoting both equity and efficiency (if secondary school marks are correlated with a student's ability to gain productivity through education).

The subsidy issue arises also with respect to educational quality. Here we argue that the most efficient way of raising quality is probably to design an incentive system which rewards institutions on the basis of the performance of their graduates. This would give institutions an incentive to make efficient use of all inputs into the production of education services, while a strategy of subsidizing quality by means of subsidies to particular inputs will create distortions in the production process. A problem with a performance-based strategy, however, is that it may have a regressive distributional impact, since students from high-income families are more likely to perform well in examinations and therefore indirectly benefit from such subsidies.

Finally, there are certain important government policies which do not directly effect the education system, but which are likely to have a very significant indirect impact because they affect the labor market for graduates

from the post-secondary system. These policies involve such things as labor market legislation, and the behavior of the government as an employer. Inappropriate policies with respect to this market may have contributed to problems of graduate unemployment, credentialism, and a generally swollen bureaucracy in some countries. In turn, these factors have contributed to creating a wedge between the social and private profitability of higher education, with consequences that have been outlined above. Government policies in these areas may be at least as important in influencing the functioning of the higher education system as various forms of direct regulation or subsidy.

I. INTRODUCTION

Tertiary education in developing countries confronts a number of critical problems today. One is the availability of resources. Many developing countries have tighter budgetary constraints as they adjust to macroeconomic conditions. This has impinged on higher education since the public sector plays a predominant role in its financing and provision.

Another problem concerns the public sector's effectiveness in providing the type and quality of education needed for economic development. Quality is often considered to be low and deteriorating.[1/] Moreover, many educational systems cannot match its graduates with the economy's labor force requirements. Some countries confront a worsening problem in graduate unemployment; others cannot fill the demand for skills in some disciplines; and in many countries, both phenomena can be observed.

Finally, public subsidies to higher education may have a regressive distributional impact. Despite massive expansion, higher education in many countries continues to be relatively inaccessible to students from poor families.[2/]

One approach to these problems is to seek improvements in the financing, efficiency and equity of publicly-provided higher education. These issues have already been discussed in other World Bank documents.[3/] Another approach, which is the one considered in this paper, is to expand the role of the private sector in the production of education. Although there are no

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1/ For general discussions of the problem of educational quality in developing countries, see World Bank (1985), Ch. 4; Psacharopoulos and Woodhall (1985), Ch. 8.

2/ There is now an extensive literature on the relationship between educational policy and equity. For general surveys see Psacharopoulos and Woodhall (1985), Ch. 9; Fields (1980; Jimenez (1986).

3/ For comprehensive discussions of pricing policies and cost recovery in public education, see Jimenez (1987) and Psacharopoulos, Tan, and Jimenez (1986).

private institutions of higher learning in most developing countries, they are prevalent in some, particularly in Asia and Latin America. In these countries, their role and importance vary substantially. What lessons can be learned from these countries regarding the role of the private sector in higher education? More importantly, what types of government policies should be used in order to make the operation of the private-sector subsystem consistent with the social objectives for the post-secondary education system as a whole?

This paper discusses these issues and reviews the relevant literature. It is organized as follows. In Section II, we give a brief descriptive overview of the role of private-sector post-secondary education in developing countries. In Section III, we review various factors that influence demand and supply in a system of private higher education, and discuss different ways in which a system driven by private demand and supply may conflict with the goals of society as a whole in the post-secondary education area. This discussion serves to pinpoint a number of areas where there is a *prima facie* case for government intervention to influence the operation of the private higher education sector (through subsidies, quality regulation, and so on). Section IV discusses policy issues when private education does exist. In this context, we do not try to derive precise prescriptions, which we believe to be country specific. Rather, we discuss general issues that are relevant when forming policy. Finally, Section V contains a brief summary.

II. OVERVIEW OF PRIVATE HIGHER EDUCATION IN DEVELOPING COUNTRIES

How extensive is the role of the private sector in providing higher education in developing countries? Although systematic data are unavailable, this section presents a summary of available information in a selected group of countries in East Asia and Latin America. It is based on a review of published or unpublished works dealing with the functioning of higher

education systems in developing countries, and on World Bank staff appraisal reports for projects relating to higher education.[4/]

To differentiate between public and private higher education institutions we use UNESCO's definitions. A public sector educational institution is defined as: "... a school operated by a public authority (national, federal, state or provincial, or local) whatever the origin of the resources." A private school is defined as: "... a school not operated by a public authority, whether or not it receives financial support from such authorities. Private schools may be defined as aided or non-aided, respectively, according as they derive or do not derive financial support from public authorities." "Higher education" is used to refer to universities and equivalent institutes with programs leading to a bachelor's or graduate degree. This excludes colleges and certain post-secondary institutions below the university level.

Data about student enrollment in private and public institutions providing higher education in a group of twenty Latin American countries, and from a select group of five Asian countries (Indonesia, Korea, Philippines, Malaysia, and Thailand) are presented in Table 1 and 2 respectively. The data show a very mixed pattern in terms of the private-public composition of total enrollment, and in the relative growth rates of the two subsectors.

In the case of the Latin American countries included in the sample, there is a clear trend toward a growing importance of the share of private institutions. Enrollment in private universities has grown especially rapidly since the mid-1960s, increasing from around 20% to about one-third of the total enrollment at the end of the 1970s and the beginning of the 1980s.

4/ This section is based on an unpublished working paper prepared by Ruben M. Suarez-Berenguela for the World Bank Education and Training Department, January 1987. Among the published works, the book by Levy on private higher education in Latin America stands out.

Table 1
Enrollment in Private Post-secondary Institutions
in Latin America (Percent of total enrollment)

	Latin America	Excluding Brazil
1955	14.2	7.3
1960	15.4	9.2
1965	20.0	14.7
1970	29.6	19.6
1975	33.7	19.1

Source: Based on Levy (1986)

Even excluding Brazil, the country with the largest population and largest proportion of students enrolled in private sector institutions, a general trend toward a greater role for private institutions is apparent. In Colombia in 1981, enrollment in private universities accounted for approximately 60% of the total enrollment in universities and equivalent institutes. Around 1980 the share of student enrollment in private universities represented 39% in Chile, and around 30% ir Paraguay and Peru. However, in other Latin American countries the private sector shares are lower: in Cuba, Bolivia, Nicaragua, Panama, and Uruguay, enrollment in private sector institutions is less than 5% of the total enrollment.

Among the Asian countries in the sample (Table 2), there are three in which enrollment in private higher education institutions represents more than 50% of the total: Indonesia, Korea, and the Philippines. On the other hand, in Malaysia and Thailand the share of private enrollment is less than 25%. In Malaysia in 1984 approximately 50% of the enrollment in post-secondary institutions was in universities and equivalent institutes. Enrollment in private-sector institutions represented only around 23% of the total in this type of higher education institutions. In the case of Thailand, enrollment in private sector institutions represented around 4.1% of the registered enrollment in higher education institutions under the supervision of the Ministry of University Affairs. However, it is not clear from the

sources whether or not the data include students enrolled in "open universities." Thus, the estimate for this case may be misleading as well, since a large proportion of post-secondary enrollment is in open universities.

Table 2
Asian Countries, Share of Private Institutions in Total Enrollment

Country	Year	Type of Institutions	Private enrollment as % of the total
Indonesia	1982	HEI	52.9
Korea	1983	HES	75.0
Philippines	1975	HE	90.1
Malaysia	1984	Univ. & Equiv. Inst.*	22.9
Thailand	1982	HEI-MUA	4.1

HEI: Higher education institutions, including tertiary institutions: universities, colleges, academies and institutes.
HES: Higher education sector: junior colleges, university colleges, and post graduate programs.
HE: Higher education institutions seem to refer to universities and equivalent institutes.
(*) Approximately 50 percent of the enrollment in post-secondary highereducation institutions.
HEI-MUA: Higher education institutions under the supervision of the Ministry of University Affairs (MUA). Private or Public nature of "open" universities is not well defined.

Sources: Based on data from various World Bank reports.

Table 3 summarizes the trends and actual shares of enrollment in private higher education institutions in the Latin American and Asian countries discussed above.

Table 3
Trends and/or Actual Share of Enrollment in Private Higher Education Institutions. Selected developing countries (circa 1980)

Non-existent, Minor and/or not growing	More than 10% but less than 50% Not growing	Growing Rapidly	More than 50% of total enrollment
Cuba, Bolivia, Nicaragua, Panama, Costa Rica, Haiti, Honduras, Uruguay,	Chile, Mexico, Venezuela	Argentina, Ecuador, Colombia, Dominican Republic, Guatemala, Peru, Indonesia	Indonesia, Korea, Philippines, Brazil, Colombia

Sources: Same as for Tables 1, 2

Table 4 presents information on the fields of specialization offered by public and private institutions in selected Latin American countries. As the Table indicates, private universities in these countries tend to specialize in offering degrees in the areas of economics, business administration, and humanities. Public institutions, on the other hand, tend to specialize in fields where education is relatively more expensive, such as those that require many years of schooling, and more investment in capital equipment. Examples are medicine, natural ("exact") sciences, and engineering.

More detailed data on enrollment by fields of specialization in Latin American universities are, by and large, consistent with the picture provided by Table 4. Student enrollment in medicine, engineering, and natural sciences is a considerably higher proportion of total enrollment in public than in private universities. Within private universities, a large proportion of students are enrolled in the humanities, and in commercial, social and behavioral sciences programmes.

Table 4
Enrollment by Field of Specialization Selected Countries
Percent of Total Enrollment, Private/Public Universities

	Com.	Hum.	Law	Med.	Sci./Eng.
Bolivia	58/10	12/2	0/8	0/21	0/38
Colombia	37/10	5/7	16/4	4/9	21/38
Ecuador	23/18	9/6	6/6	1/11	11/22
Mexico	35/20	1/2	6/9	20/20	18/28
Peru	47/23	7/0	5/4	1/7	14/33

"Com.": Economics, Business Administration and Communications
"Hum.": Humanities
"Law" : Law
"Med.": Medicine
"Sci./Eng.": Exact sciences and Engineering

III. THE ROLE OF GOVERNMENT IN PRIVATE HIGHER EDUCATION

Social goals for the educational system may be defined in somewhat different ways.[5/] To what extent can we expect a private system of post-secondary education to operate in a way that is consistent with these social goals? In other words, would an unregulated and unsubsidized system of private higher education automatically be efficient, that is, provide the right kinds of educational services (in terms of both quantity and quality)? Would it operate in a way consistent with society's equity objectives?

With respect to efficiency, government intervention is needed when there is a conflict between the private profitability, and the profitability from the viewpoint of society as a whole, of investments in higher

5/ See James (1986a).

education.[6/] Such a conflict can arise for a number of reasons on both the demand and supply side. Many of these issues are discussed in an earlier paper (Blomqvist 1986) and are only summarized here.

A. Imperfections on the Demand Side

Externalities, imperfect credit markets, and risk. These characteristics cause social and private returns to diverge. Positive externalities arise when a graduate's contribution to national well-being is greater than his/her wage. The conclusion that this was the case appeared especially warranted in newly independent countries of the 1960s where the departure of many expatriate educated workers had exacerbated the shortage of such manpower.[7/] Moreover, a large proportion of manpower with higher education was employed in the public sector. Therefore, its contribution to national income took the form of government administrative services and other "public goods" which are necessary for a society to function, but which are not bought and sold in the market and therefore cannot be given a very precise monetary value.

The implicit discount rate used by prospective students and their families in comparing the cost of an education today with the prospects of increased future earnings, may not be the same as the social discount rate. Decisions in the area of education and career choice require forecasting far into the future. Since the degree of uncertainty associated with predicting the future is likely to increase with the time horizon involved, this means that such investment choices will be perceived as risky, especially in fields

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[6/] A set of international estimates of both private and social rates of return to education at all levels is provided in Psacharopoulos (1981). Psacharopoulos (1982) focuses on the returns to post-secondary education in particular.

[7/] The excerpts from two early essays by Harbison in Meier's anthology of readings in development economics (Harbison, 1984) represent a clear statement of the view that emphasizes the critical importance of highly educated manpower for the development process.

where the human capital acquired during training is very specific.[8/] Thus risk-averse students (or students from risk-averse families) may be reluctant to finance education even if it has a high expected value from society's point of view: this is the equivalent of students' using a higher discount rate in their private profitability calculation than would be appropriate from society's point of view.

Even when students are willing to take the risk, they may find it difficult to raise the necessary funds. Since human capital cannot be used as collateral for a loan, lenders are likely to be more reluctant to lend for human capital formation. Also, a student's success in school cannot be perfectly predicted, thus dissuading risk-averse individuals from particular types of human capital investment, even those that have a high social value. The factors discussed above would all tend to make social profitability exceed private, and hence lead to a general tendency to underinvestment in post-secondary education in the absence of government intervention.

Education and heterogeneity of individual ability.[9/] The interdependence between individual abilities and the prospective return to education is likely to create complications for the design of policy toward private higher education, especially if we recognize that an individual's personal characteristics are known only imperfectly, and can sometimes only be ascertained at high cost and over a long period of time. Suppose it is true that many of the skills and abilities that explain the superior productivity and higher incomes of educated individuals in particular jobs are innate, rather than acquired through education. This does not necessarily mean that education is a waste from the individual's point of view. For one thing, education may contribute to the student's ability to identify the particular

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8/ The problems caused by the long time horizon in educational investments are emphasized in Musgrave (1966) and Harbison (1984).

9/ The empirical and theoretical problems that arise for human capital theory when individual heterogeneity is recognized, are stressed in Blaug (1976); see also the survey in Blomqvist (1986).

job for which his or her particular characteristics would be best suited, if jobs are heterogenous as well as individuals. Or, the diploma and other evidence of performance the individual obtained in the educational system maybe interpreted by employers as evidence of the person's superior ability for a given job, and therefore make them willing to offer the person a higher wage. In either case, education would have had a payoff to the individual, even though it might not in itself have created most of the individual's productive skills: the production of information about individual characteristics would still mean that there would be a private demand for education even if no skills were acquired through it.

In either of these two examples, the idea that it is costly and difficult to get information about individual characteristics in other ways than through education, is central to the argument. If it were possible to accurately measure individual's abilities through a simple test, or if they could be accurately ascertained by employers on the basis of a short period of probationary employment, there would be no need to use the educational system as a way of measuring these abilities. However, if reliable testing methods are not available, and costs of labor turnover are high so that probationary employment is a costly measurement method, then the formal education system may substitute for these other methods as a mechanism for producing this information. Because the information is valuable to employers, individuals who have had their abilities certified through the educational system could generate better wage offers in the labor market, so that education would continue to be privately profitable.

However, even though there would continue to be a demand for education because of its private profitability, the economy as a whole might derive little or no benefits since individuals' productivity would (by hypothesis) depend only on pre-existing abilities that would be present even without education. This type of divergence between social and private profitability is the central one in the so-called "screening" or "signalling"

approach to the economic analysis of education that emerged in the 1970s as an alternative to the human capital approach.[10/]

Graduate unemployment, credentialism, and the demand for higher education. In many developing countries, the rapid expansion of post-secondary education in recent years has been accompanied by a growing problem of unemployment of the graduates of post-secondary institutions. Furthermore, there has also been considerable evidence in many places of so-called "credentialism"; that is, a tendency toward increases in the minimum educational qualifications for particular jobs so that, for example, a university degree is now required for jobs previously filled by secondary school graduates.[11/] Finally, there have been suggestions that in some countries there is "hidden unemployment" of post-secondary graduates, as a result of government employment of graduates in unproductive jobs created primarily for the purpose of alleviating the problem of graduate unemployment.[12/]

Phenomena such as credentialism and graduate unemployment are indicative of inflexibilities in the markets for educated labor. Such inflexibilities in turn suggest that there may be a divergence between the private profitability of education and its productivity from the viewpoint of society as a whole. Again, this would suggest that an unregulated private education system might expand more than would be in society's interest, calling for restrictive policies.

[10/] Early contributors to this literature were Arrow (1973) and Spence (1973). For a further review see Blomqvist (1986).

[11/] Dore (1976) presents an extensive discussion of the credentialism phenomenon. A careful analysis of its economic effects is contained in Bhagwati and Srinivasan (1977).

[12/] Blomqvist (1982) analyzes a model in which the government is assumed to act as the residual employer of educated labor.

Private demand and the quality of education. Is there a tendency for the private and social benefits of educational quality to differ?

The significance of the quality dimension differs substantially depending on whether education is regarded as a process of human capital accumulation, or as a process whose primary purpose is to generate information about inherent individual characteristics. Consider first the case where education is seen primarily as human capital accumulation. There may be differences between students in terms of the quality-cost combination they prefer. For example, the value of additional institutional inputs (such as instruction time), in terms of improved performance and future productivity, may be higher for students with greater ability. If this is so, there may be a systematic tendency for inherently better students to gravitate toward high-quality institutions, and vice versa. Moreover, students learn from each other. Other things equal, this may reinforce the tendency for students to naturally get sorted into institutions according to their differential ability. Such an outcome--that there is a range of institutions offering educational services of different degrees of quality and cost--may be economically efficient.

When education is seen primarily as providing information about pre-existing abilities, the valuation of the inputs provided by the institution does not depend on the productivity of these inputs in creating human capital. Instead, their value (from the student's point of view) depends on their contribution to the institution's reputation as a "screen". Factors such as student-teacher ratios, the qualifications of the instructors, etc., will, presumably, improve the accuracy of the screening process (the signal). At the same time, an institution that provides large amounts of inputs into the education process (e.g., by maintaining a low student-teacher ratio) may suffer: it may lead to an interpretation of its students' performance as being due to the high quality of the school's inputs, rather than to the inherent ability of the students.

The question of what is appropriate government policy with respect to quality regulation becomes quite complicated in this case. Since the private benefit of resources spent on screening is likely to be considerably greater than the social benefit, the object of policy should be to reduce the amount of resources spent on education. It is possible that quality regulation can accomplish this, as discussed below.

B. Imperfections on the Supply Side

In order for a system of private higher education to function efficiently, the private cost of education must be close to its cost to society as a whole. Thus, the prices (tuition fees) at which educational services are offered must reflect the opportunity cost of the resources being used to produce them. This requires both that these prices reflect the cost of production, and that educational services are produced efficiently, at the least possible cost. There are various reasons why these conditions may not be met.

Competition and economies of scale. If there are many different institutions in the market, and free entry of new ones, there will be competition in the system, both for students and for teachers. Competition for students would tend to reduce the tuition fees being charged; it might also take the form of raising the quality of the education being offered at given fees. In either case, excess profits (over and above a normal rate of return on invested capital) would tend to disappear.

However, there are a number of factors that may significantly weaken competition among private post-secondary institutions. In some cases there may be formal or informal collusive agreements regarding pricing, etc. In other cases, government regulations on pricing, quality standards, and admissions criteria may indirectly have the same effect.

A particularly important issue in this context is whether there are substantial economies of scale in the provision of post-secondary education.

Substantial economies of scale may act as an effective barrier to entry of new institutions, especially in an economy with highly imperfect capital markets, and this would render the system less competitive. While there has been some empirical work on the economies-of-scale issue for education at the primary and secondary levels, less is known about post-secondary education in this regard, particularly because there are multiple outputs. However, the aggregative evidence that does exist, points to the conclusion that for higher education as a whole, there may be substantial economies of scale, particularly for technical fields.[13/]

Research-teaching interaction. Another factor that complicates analysis of the cost of providing higher education is the interaction between the teaching and research functions at some post-secondary institutions. The demand for research is largely a demand that stems, directly or indirectly, from the public sector, and it is likely that the bulk of that demand will be channeled to public-sector institutions. For this reason, most private institutions in developing countries will be primarily oriented toward teaching. As we will discuss in more detail below, the policy case for delegating a significant part of the research function of higher education to the private sector is considerably less strong than the case for delegation of the teaching function.

Problems of monitoring quality. The difficulty of assessing quality has an important influence on the competitive process, and on the supply of educational services from a private system. For one thing, it is likely to imply a tendency for private for-profit institutions to supply educational services of lower quality than would be efficient. At the same time, the difficulty of quality assessment can be thought of as indirectly creating an entry barrier for institutions seeking to provide high-quality education. In order for it to be profitable to offer high quality, an institution must

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13/ A thorough review of the general economies-of-scale issue is given in Psacharopoulos and Woodhall (1985), Ch. 7. Psacharopoulos (1982) presents some macro-level evidence relating to the post-secondary level; his conclusion is that there are substantial economies of scale in post-secondary education.

acquire a reputation for high quality, so that prospective students will be willing to pay for the inputs necessary to provide it. But building up such a reputation may be a long and costly process, and the large amount of funds necessary to finance this process will act as an additional entry barrier. As we will discuss below, the government may play a useful role through policy measures that indirectly reduce this barrier.

The role of non-profit institutions. The economic behavior of non-profit institutions may be similar to that of for-profit institutions in many ways.[14/] For example, a religious organization that operates a post-secondary institution in order to expose students to their religion, presumably has the same incentive as the owners of a for-profit institution to produce its educational services at minimum cost. In some cases, non-profit institutions may contain individuals (for example, the president or the faculty) who are able to claim at least a share of any residual "profits" as bonuses, salary increases, or perquisites such as subsidized housing, etc.[15/] If these individuals have substantial control over the decisions governing the institution, they are likely to behave similarly to profit-seeking owners.

In other respects, however, non-profit institutions might behave differently from profit-seeking ones even as producers of conventional education services. For example, the non-economic objectives of religion-based non-profit institutions may lead them to concentrate on high-quality education to elite students. Depending on their objectives, non-profit institutions may also choose to subsidize the cost to the students they educate, in the form of either a subsidy to quality or quantity, depending on the organization's objectives. Such subsidies would generally be available only to a limited number of students.

14/ Non-profit educational institutions are extensively discussed in James (1986a, b). For a general discussion of the non-profit organizational form, see James (1987) and James and Ackerman (1986).

15/ James (1986a) suggests that this is especially likely to be true for the case of secular non-profit organizations.

A precise analysis of the possible role of non-profit organizations in providing private sector higher education is difficult. There are a large number of objectives that such organizations may be interested in pursuing, and predictions concerning their behavior can only be made if one is prepared to make very specific assumptions concerning these objectives.

C. Private Higher Education and Equity

Most of the preceding discussion of the need for policy intervention in private higher education has related to the efficiency objective. However, in the debate over post-secondary education policy in developing countries, the equity objective probably plays at least as important a role as efficiency.

A major reason why governments intervene to improve equity is that capital markets are far from perfect: students from low-income families are likely to find it difficult to borrow the funds necessary to finance the full cost of post-secondary education. In addition, even if they were able to, many low-income families are risk-averse and would be more reluctant than high-income families to take the risk associated with financing post-secondary education for their children. In the absence of offsetting government policy, there would thus be a strong tendency for investment in higher education to be more common among children from high-income families.[16/] Thus, government policies (such as loan guarantees) to counter the effects of imperfections in the capital market may improve efficiency, as well as equity.

16/ Even with government subsidies to facilitate access to higher education for students from low-income families, students from high-income families are disproportionately represented in higher education. Since most countries subsidize students from all families, the result is that a large share of the benefits from such subsidy schemes tends to accrue to high-income families. For a review of the evidence, see Jimenez (1987), Ch. 5.

If high-income families provide a better environment for early intellectual development, or are better able to afford high-quality secondary school training for their children, thereby improving their ability to benefit from post-secondary education, then a system in which all individuals have access to the services of post-secondary institutions on similar terms will tend to reinforce income inequality.[17/] Moreover, differences in individual ability in combination with problems such as inadequate access by poor families to the capital market may give rise to both inequity and inefficiency, if it results in a tendency for able individuals from poor families to not invest in post-secondary education while less able ones from better-off families do.[18/] Policies to improve access to higher education for able students from poor families would tend to improve both equity and efficiency. On the other hand, other government policies aimed at promoting equity may give rise to a conflict between equity and efficiency. For example, a policy of preferential subsidies to facilitate access by all students from low-income families may, on average, cause resources to be diverted to the education of individuals with relatively low ability. This might mean that productivity (from the viewpoint of society as a whole) would be increased by less than if the same resources had been used for education of individuals with relatively higher ability. Or consider the case of job allocation by educational credentials. Equity-promoting policies intended to facilitate access by low-income students to post-secondary education (thus increasing their chances of being allocated to a high-paying job) could exacerbate the resource waste inherent in this type of credentialism.

[17/] Psacharopoulos and Woodhall (1985), Ch. 9, provide a brief review of the evidence concerning the effects of educational expansion and income inequality, and find that it is mixed. In some countries, improved accessibility to education appears to have been associated with increased inequality.

[18/] Jimenez and Tan (1987) report such a tendency in Colombian data.

IV. POLICIES TOWARD PRIVATE HIGHER EDUCATION

This section discusses the implications of the preceding analysis for practical policymaking. The policy measures fall into two broad categories. The first consists of measures affecting the financing of private higher education, while the second relates to various forms of government monitoring and regulation of post-secondary education. The discussion does not derive specific prescriptions; instead, it reviews issues that should be considered when forming policy in specific situations.

As argued above, the productivity of the post-secondary education system depends crucially on the effectiveness with which the economy can make use of the graduates from the system. Therefore, we also briefly consider policies to enhance the functioning of the labor markets for graduates.

One important issue that is not discussed in detail is what the relative role of public and private institutions should be. This is partly a question of relative cost-effectiveness. Case study evidence suggests that there generally is a tendency for private-sector institutions to have lower average costs-per-student than public-sector ones.[19/] However, this does not take into account the differences between the two sectors in terms of the mix of fields of specialization offered, nor possible differences in the quality of educational services. Clearly, further research is needed on this issue.[20/]

19/ James (1986b).

20/ For an interesting attempt at comparing educational efficiency of public and private institutions at the secondary level, see Jimenez, Paqueo, and de Vera (1987). In their comparison they sidestep the problem of output heterogeneity by focusing on student achievement in three relatively narrowly defined subjects (Mathematics, English, and Filipino). They also refine their output measure by correcting for the effect of student background. The problems with quality measurement are further discussed below.

A. Financial policies towards private institutions

This subsection discusses current trends in financing. It then presents pros and cons of alternative financing policy options.

Financing patterns: government transfers and fees. Levy's (1986) analysis of the evolution of private higher education in Latin America classifies private institutions into two categories with respect to financing: private institutions receiving direct government transfers and/or subsidies, and private institutions for which the main or only source of revenue is students' tuition and fees.

In general, with the exception of Chile, the class of private universities receiving transfers from the government includes only a small number of "elite" universities, with a relatively small number of students, stringent admission requirements and high tuition and fees. Several of the catholic universities and a small number of non-denominational universities would be classified in this group.

Among the self-financed universities, a further distinction can be made between small "elite" private universities, with relatively high tuition and fees, and a large number of less expensive "demand absorbing" private universities, with a large number of students, and relatively lenient admission requirements. Most of these "demand absorbing" universities are technically organized as non-profit institutions, but have full cost recovery in the sense that their only source of revenue is tuition and fees. While the quality of education in the self-financed "elite" private universities might be compared with that of the government-sponsored universities, the quality in the "demand absorbing" private universities is often perceived as lower.

Table 5 presents a summary of the financing structure of a group of 61 private and 130 public Latin American universities. "Own Income," which consists mostly of students' fees, represents the main source of financing for private universities, accounting for approximately two-thirds of their total

income. Government contributions represent a little more than one-fourth of total revenue for private institutions. For public institutions, on the other hand, Own Income was no more than about 6%, while government funds contributed about 90%.

Table 5
Sources of Finance in Latin American Universities
(Percent of total revenue)

Sector	State	Private Donors	Own Income	Other
Private	27.9	0.6	62.8	8.7
Public	87.3	2.3	6.4	4.0
Total	79.9	2.0	13.4	4.7

Source: Levy (1986) p. 222

The financing pattern in individual countries may differ substantially from the average pattern in Table 5, and may also change over time. The private sector in Chile relied, until the mid-1970s, to a large extent on transfers from the central government. Since the mid-1970s, on the other hand, both public and private institutions have been forced to rely more on private contributions and student fees. In the case of Mexico, financing of private universities comes entirely from private sources (fees and private contributions), with no direct transfer of financial resources from the state; a similar pattern is observed in Argentina, Panama, and Venezuela. In the case of Brazil, state aid to private institutions is for the development of plant facilities and research at post-graduate educational levels; there is no government finance for basic undergraduate education.

In Latin American countries where the government does contribute financial support to private institutions, this support has been going mostly to catholic universities. This has been the case in Peru, Ecuador, and some Central American and Caribbean countries. In the case of Peru during the early 1970s, state contributions to the catholic university represented more

than 50% of the university budget. In Ecuador government transfers to the catholic university represented around 30% of the university budget.

On the other hand, few of the secular or non-catholic private universities in various countries receive transfers from the state; for most of these institutions fees and private contributions represent almost the only source of financing. This pattern of government intervention in the financing of private institutions seems to be more the result of the historical relation between the state and the church in Latin America rather than a deliberate policy with respect to the financing of private institutions.

Data about financing patterns of private institutions for the Asian countries are more scattered and incomplete than for Latin America. Table 6 summarizes some of the qualitative information that is available. Most of the financing for the private institutions comes from tuition fees set on a full-cost recovery basis. Government transfers of financial resources to private universities are minimal. Tuition and fees in private higher education institutions in the Philippines, Malaysia, and Thailand represent more than 80% of the budgets of these institutions. In the Korean case, an important part of the revenue of both private and public universities comes from student fees. Fees in private universities are from 40 to 70% higher than the fee charged in public institutions. With the exception of Korea, public institution tuition fees in the Asian countries in the sample are nominal and account for only a small proportion of the budgets of these institutions. Revenue from sources other than government transfers and fees, a minor source of income, include items such as income from endowments, private business sector contributions, contributions from private individuals and alumni associations, from local governments, citizen associations, etc.

Table 6
Sources of Finance in Private Higher Education Institutions in Selected Asian Countries

Country	Year	State Transfers	Tuition & Fees
Indonesia	1983/84	Only for development ("seed" money)	Norm: Full-cost recovery
Korea	1983	Several government supported institutions	Generally, fees are 40 to 70% above those of public institutions
Philippines	1980	Minor	Almost all funding, 9/10 of students pay full-cost fees.
Malaysia	1984	Less than 6% of the budget	80% of the budget
Thailand	1980	Small proportion	Approx. 93% of the revenues

Sources: Based on information in World Bank reports.

The fundamental question facing government decisionmakers with respect to the funding of higher education is the extent to which the private cost of education should be subsidized. As discussed previously, the answer may be important both from the viewpoints of efficiency and equity. While the focus here is on subsidies to private-sector education, the issues that arise with respect to the subsidization of the private cost of education in public-sector institutions are similar in many respects.

Subsidizing private higher education. Large general subsidies to students in private higher education--that is, subsidies regardless of student's academic discipline, need, and ability--will likely improve neither efficiency nor equity. The extent of externalities that may justify subsidies

depend upon the discipline involved and labor market conditions. Screening, wage rigidities creating graduate unemployment, or "job rationing" through credentialism, cause more resources to be devoted to education than would be efficient, even if there were no subsidies. The effect of subsidizing education in areas affected by this would be to exacerbate the problem, since it would further raise the private profitability. General subsidies to private education justified by equity considerations might, in this situation, seriously conflict with the efficiency objective. Put differently, subsidies to higher education would be an exceptionally costly method for redistributing income to low-income people.[21/] Also, as previously discussed, there is evidence from many countries that general subsidies to higher education will, in fact, be regressive rather than progressive. In this situation, such subsidies may thus be counterproductive from the point of view of both equity and efficiency.

Some caveats should be emphasized however. First, while the suggestion that factors such as screening and credentialism cause private profitability to exceed social in many countries sounds plausible, systematic evidence supporting it is still scarce.[22/] Further empirical work on this issue in the context of post-secondary education would therefore appear to be a high priority. Second, when social profitability is less than private, there is a prima facie case for restricting the amount of resources flowing into higher education. But this can be done through direct enrollment restrictions, and/or restrictions on establishment of new private-sector

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21/ Similar considerations would also apply to public-sector higher education: attempts to expand the number of places in the public system in response to private demand would be inefficient, especially if the private demand had been enhanced by a policy of implicit subsidies through low fees.

22/ With respect to primary education, existing evidence appears on balance to lend more support to a human-capital interpretation of education than to a screening interpretation; see Jamison and Lau (1982); Berry (1980). Based on studies of the evolution of income differentials over time between those with differing amounts of education, and of public-private pay differentials, Psacharopoulos (1980b, 1983) also concludes that there is little or no support for the screening hypothesis.

institutions, rather than through a general withdrawal of subsidies. Thus if there is a strong case for subsidies (especially for students from low-income families) on equity grounds, such schemes need not be incompatible with efficiency if they are combined with other measures which restrict enrollment expansion.

In cases where general subsidies to higher education cannot be justified on efficiency grounds, there are nevertheless various special kinds of subsidies that can be used to promote more specialized objectives. For example, while general subsidies to higher education may be both inefficient and inequitable, subsidy schemes specifically targeted on students from low-income families may still be appropriate. Such schemes will clearly be more consistent with equity. Furthermore, since capital market imperfections are likely to have a disproportionate impact on the private cost of education for low-income families, subsidy schemes specifically targeted at such families are less likely to be inconsistent with the efficiency objective. Finally, subsidizing poor students to attend private higher institutions will mitigate the possibility of a segregated system, where only poor able students attend the state-run systems while the rich go to private schools.

In practice, targeted schemes are likely to involve the use of scholarships or various kinds of loan subsidies and guarantees. A drawback of such programs is that they may be complicated and costly to administer. For example, mechanisms must be designed for ascertaining family income, and for getting repayment of loans. If applicants are to be screened according to academic ability, reliable methods of testing must be devised. Nevertheless, scholarships and loan schemes have been successfully used in many high-income countries, and they should be given serious consideration in developing countries as well.[23/]

[23/] The case of loan schemes is discussed in Psacharopoulos and Woodhall (1985), Ch. 6 and Ch. 9; see also Jimenez (1987), Ch. 7. For an extensive review of developing countries' experience with such schemes, see Woodhall (1983).

Particular kinds of subsidies can also be used to encourage quality of education in private institutions, in circumstances where private costs of quality monitoring are high.[24/] For example, if academic qualifications of instructors are an important quality determinant, public subsidies for private institutions that use qualified teachers may be appropriate. In this situation there could also be a case for a subsidy to students seeking to acquire the qualifications that would make them effective post-secondary teachers (including training in foreign countries). However, subsidies to the employing institutions have the advantage that there is less likelihood that the subsidies will be "wasted" in the sense that those receiving post-graduate training will obtain non-academic employment, or employment in foreign countries. When subsidies to students (for example, for foreign training) are used, bonding schemes can be constructed to reduce this leakage. Other quality-enhancing subsidies may involve textbooks or other teaching materials.

Public subsidies for academic research may also be used to indirectly subsidize the quality of private higher education. Because research output to a large extent has the characteristics of a public good, it generally has to be heavily subsidized in any case. However, in addition to yielding knowledge that is useful in itself, research activity is likely to have other benefits: instructors with experience in research are better teachers in post-secondary institutions. Therefore, the possibility that some of the manpower trained in research will end up teaching in post-secondary institutions, constitutes an additional argument for government subsidies to research.

[24/] As previously argued, if students and their families can monitor the quality of education reasonably effectively, the case for subsidies or regulation is less strong, since there would then be less likelihood of a divergence between the social and private profitability of supplying quality. James (1986a) devotes considerable attention to the case where it is difficult for students and their families to monitor quality. However, her discussion in this respect emphasizes regulation rather than subsidies.

Finally, another possible way of encouraging educational quality through subsidization is to tie institutional subsidies to students' performance in examinations.[25] As several authors have emphasized,[26] educational institutions would have an incentive to favor admission of students from high-income families, who are likely to perform better, under such a subsidy scheme. In addition, it is not clear that the incremental productivity of a given amount of education has been greater for students who score high marks on exams than for those who score low marks. In spite of these objections, subsidies based on students' performance may have a useful role to play in countries with a substantial private academic sector. The potential equity impact may be partially offset by specific subsidy schemes for students from low-income families. Furthermore, performance-based subsidies have the advantage of requiring little or no compliance monitoring (beyond ensuring that reliable examination procedures are used), and hence may be less costly to administer than subsidies for particular types of inputs. We will further discuss these issues below, in the context of considering different methods of quality regulation.

B. Government regulation of private educational institutions

Subsidies and other financial incentives represent one way in which the government can attempt to make a private educational system perform in a way that is consistent with social objectives. In most cases, direct regulation provides an alternative way of promoting the same objectives as those justifying subsidy policies; in other cases, regulation may provide the only workable method to achieve particular goals.

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[25] Under such a scheme, there clearly has to be some form of government regulation of academic standards and examination procedures in private institutions. But we will argue below that there is a strong case for such standards in any event.

[26] See James (1986a); Jimenez (1987), Ch. 5.

The present situation. In most countries, both private and public post-secondary institutions are formally under the jurisdiction of ministries of education. In practice, however, the extent of regulation of both types of institutions is relatively limited. In Latin America, for example, post-secondary institutions are usually autonomous in the sense that they elect their own governing bodies. While there is legislation which prescribes conditions for establishing new public-sector institutions and programs, and which specifies rules for accreditation and the granting of degrees, once an institution is established, there is relatively little direct government regulation of the way it operates. In some cases, guidelines are given for such things as student/teacher ratios and qualifications of instructors. On the other hand, under the principle of academic freedom, public universities usually have the responsibility for the design of curriculum and course content with little or no direct government supervision. There is, however, generally government regulation of the (usually low) fees charged by public-sector institutions, reflecting the fact that public institutions derive most of their funding from government transfers.

Government regulation of private-sector institutions is even more limited, especially in those countries where there are relatively small amounts of government financial support (direct or indirect) of private schools. Again, while there are some formal controls over the establishment of new institutions and programs, subsequent supervision of such things as teaching staff qualifications, exam systems, and curriculum design in private institutions is often delegated to a public-sector university (a "national university"), and enforcement of government guidelines may be spotty.[27/] In most countries, private-sector institutions are free to set their own fee schedules, although some countries attempt to enforce regulations requiring some minimum proportion of students to be given "need-based" scholarships, and in some cases (Korea) the government tries to enforce fee ceilings in private institutions.

27/ The variability of the extent to which existing regulations are enforced is a factor stressed in the discussion of regulation in James (1986a).

On the whole, the little information available indicates that, in those countries where private post-secondary education is important, government regulatory policy is geared toward creating a legal framework which facilitates establishment and expansion of private institutions. However, once they have been established, the extent of regulation is limited.

When should more regulation be encouraged? An important determinant of the relative effectiveness of financial incentives and regulation as policy instruments is the degree of competitiveness in the private education industry. If the industry can be expected to approximate the perfectly competitive ideal reasonably well, then financial incentives will have predictable effects and work well. On the other hand, if competition is weak, the case for direct regulation is stronger.[28/]

Entry and enrollment restrictions. In conventional micro-economic analysis, the usual conclusion is that restrictions on the output of existing firms, or on entry of new ones, reduce efficiency rather than raise it. Furthermore, when it is in society's interest to limit the expansion of an industry (for example, because of external costs which make private profitability exceed social), this may be more efficiently accomplished by imposing a tax on the industry.

As argued previously, when higher education is used as a signalling device, or as a basis for credentialism, private higher education should, in principle, be taxed. Taxation of education, however, is likely to be politically unacceptable as well as inconsistent with the equity objective. Therefore, a policy of direct restrictions on the expansion of education may represent the only way in which the efficiency objective can be met,

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[28/] One factor that influences the degree of competitiveness in an industry is the cost and difficulty for buyers (students) to accurately assess the quality of the output of different firms. Thus the question of the difficulty of quality assessment becomes important in this context as well.

especially if education continues to be subsidized to some extent for reasons of equity.

Several important issues arise in the design of this type of policy. First, effective restrictions would require limits both on the number of institutions allowed to offer post-secondary education, and on the number of students in each institution. If there are economies of scale, individual enrollment limits should be set high enough to permit minimum cost production; this may pose problems in terms of regional distribution objectives. Second, overall enrollment limits would tend to cause an excess demand for educational services (especially if students were subsidized), thereby allowing private institutions to charge high fees. To preserve the intent of the equity objective, some type of controls would then have to be imposed on the fees that institutions would be allowed to charge. Admissions would therefore have to be rationed in some other way, for example by secondary school performance. Third, with a private excess demand for higher education, private institutions would have little incentive to devote resources to maintaining high standards of quality, so that specific quality regulations might have to be used as well.

Regulatory management in a situation of generalized excess demand is a complex task, whether in a private or public educational system. This conclusion strengthens the case for a policy in which the equity objective is addressed primarily through targeted subsidies (perhaps in combination with regulation of minimum academic admission standards, as discussed below). By limiting public subsidies to students from low-income families, the extent of excess demand is reduced. Note that this argument can be taken to apply to the issue of implicit subsidization of education in public-sector institutions as well as private ones.[29/]

29/ The effects on efficiency and equity of a strategy of reducing excess demand for public-sector education through increased use of fees, are extensively discussed in Psacharopoulos, Tan, and Jimenez (1986), and in Jimenez (1987).

Regulation of fees. Setting maximum limits on the fees that private institutions are allowed to charge is sometimes justified by appeal to the need for preventing "profiteering" by private institutions. The argument implies that there is inadequate competition in the private education market, since competition, if it is sufficiently effective, will tend to drive fees down until they reflect production costs.

The assumption that competitive forces are weak may well be justified in many cases, especially in areas of study where large economies of scale create barriers to entry, or where entry of new institutions or expansion of existing ones are subject to restrictive government licensing. However, one problem with using fee ceilings as a way of overcoming the effects of ineffective competition is that institutions may respond by reducing educational quality. Thus fee ceilings may have to be accompanied by some form of quality regulation. Since effective quality regulation is difficult and costly, this can again be considered as an argument against relying on fee ceilings as a way of resolving the equity issue.

It is sometimes suggested that regulation should also be used to prescribe minimum fee levels.[30/] In the absence of regulation, competition among institutions to attract students may lead to very low fee levels coupled with deteriorating quality standards. However, if the need for such regulation arises from a presumed inability of students and employers to adequately monitor the quality of educational services, then a minimum fee level is unlikely to be effective. Unless quality can be observed and monitored, institutions will have little incentive to raise it, no matter how high the fees they charge.

Regulation of other admissions criteria. Another possible form of public regulation of private institutions is specification of minimum academic standards of admission to private institutions. As noted above, this is a common way of coping with potential excess demand for places in public-sector

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30/ James (1986a) discusses this policy.

post-secondary institutions, and may be used for similar reasons when education in private-sector institutions is heavily subsidized. It can also be seen as a way of protecting academically weak students (and their families) who overestimate the expected profitability of enrolling in a course of post-secondary education.

"Rationing by marks" (i.e., observed secondary school performance) does at first glance appear to be a "fair" and efficient way of coping with a situation of private excess demand for subsidized post-secondary education. However, several qualifications must be noted. First, it presupposes some type of standardization of the evaluation methods used to assess the performance of graduates from different secondary schools, to prevent artificial "grade inflation" in response to the enhanced private profitability of improved secondary-school grades. Second, from an efficiency point of view, "rationing by marks" will be most appropriate if it is true that the "value added" (from society's point of view) of post-secondary education is correlated with the absolute level of achievement in secondary school. Third, "rationing by marks" may conflict with the equity objective in several ways. For reasons previously noted, students from high-income families are more likely to be able to obtain good secondary-school grades than students from lower-income families. An implication of this is that when admission to post-secondary education is "rationing by marks", general subsidies will have a regressive impact. That this is so has been confirmed by empirical studies in a number of countries.[31/] In addition, "rationing by marks" also to some extent implies a directly regressive effect, since it favors those with greater innate ability over those with less, regardless of initial family income and wealth.

In spite of these qualifications, "rationing by marks" could have a useful role to play as one component of an overall policy package toward post-secondary education. The objection that it tends to be inequitable would be mitigated if it were used in combination with a program of targeted subsidies,

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31/ See, for example, Mingat and Tan (1985), Fields (1980), and Blaug (1982).

in the form of scholarships or loan guarantees for students from low-income families. Furthermore, if it were true that the expected productivity gain from post-secondary education is positively correlated with secondary school performance, a combination of targeted subsidies and "rationing by marks" could lead to a substantial efficiency improvement. On one hand, it would make it easier for talented students from low-income families to invest in post-secondary education; on the other hand, it would discourage investment by less talented individuals from high-income families.[32/] In addition, rationing access to post-secondary education may also promote efficiency when education serves as a signalling device or as the basis for credentialism. In these circumstances, the social profitability of education is relatively low to begin with, so that any policy that reduces resource use in the educational sector would tend to improve efficiency.

As noted earlier, academically weak students and their families may also have a tendency to overestimate the expected profitability of post-secondary education, simply as a result of inadequate information concerning the intellectual prerequisites necessary to benefit from post-secondary training. If this is so, a case can also be made for regulating admission standards in private institutions on the grounds that there is a need to deter such individuals from investing resources in post-secondary education. This argument can be construed primarily as being based on efficiency considerations: it can be seen as a second-best response to a situation where it is costly and difficult for individuals to acquire the information that would be required in order for them to make choices that would be "better" both for themselves and for society as a whole.

[32/] A variant of this strategy is to impose no regulations on admission requirements of private institutions, but instead to ration educational subsidies both by family income level and secondary school performance. This type of strategy could also be applied in the context of policies toward public-sector institutions.

Regulation of educational quality. There appear to exist large quality differentials within both the private and public sub-sectors in a given country, based on what little evidence exists. As noted earlier, there are some countries (especially in Latin America) where the private sub-sector contains small elite universities that apply stringent admissions criteria and offer educational services of high quality. In other countries (such as Brazil and the Philippines, for example), the highest quality of education is offered in elite universities in the public sector. At the same time, mass education of relatively low quality is offered in either or both of the private and public sectors in different countries.

Ideally, quality regulation in the education sector should refer to the output produced by educational institutions, i.e., the education services themselves. However, these services cannot be easily measured or monitored.[33/] Therefore, regulation will, in practice, focus on either certain inputs (such as academic qualifications of teaching staff, student-teacher rations, etc.), or relate to the contents of the courses being taught (curriculum regulation), or the standards used in evaluating student performance and/or granting of degrees.

There are several problems with input regulation. First, some inputs may be difficult for regulators to monitor, just as they are for students and parents. This would be true, for example, for such inputs as "personal attention by instructors to students' problems," etc. Second, compliance with regulations concerning quantitatively defined input standards (such as student-teacher ratios, proportion of teachers with advanced degrees, and so on) does not guarantee that the inputs covered by these standards are effectively used. Similar problems arise under a strategy of curriculum regulation.

[33/] This is emphasized by James (1986a). In addition to constituting an argument for quality regulation, monitoring difficulties may also explain with both governments and students may have a preference for non-profit educational institutions: they may be less inclined than profit-making ones to exploit the costly monitoring situation by reducing quality.

Regulations specifying degree requirements and the standards of the evaluation procedures that are used in the degree-granting process do not in themselves guarantee that institutions will maintain high quality in the educational services they provide. However, in a situation where it is difficult for employers to directly monitor the quality of the training received by students at educational institutions (as well as the on-the-job performance by graduates), standardized examinations may serve as an indirect guarantee concerning the ability and skills of students who are able to pass them, thereby making graduates more valuable to employers. The ability of an educational institution to increase a student's chances of passing such examinations (by providing educational services of high quality) will therefore be valuable to students. As a result, students will be willing to pay more for the services of such institutions, indirectly providing an incentive for them to supply high-quality services.

One important advantage with this type of quality regulation is that decisions on how quality will be maintained (through provision of more and better inputs, or through attempts at using educational inputs more effectively) are left to school managers, rather than to regulators. For this reason, there is, in our view, a strong case in favor of government regulation of evaluation standards in private institutions. In practice, such regulation may simply take the form of a government-organized system of common examinations for candidates in particular courses of study, and/or a government-organized system of external examiners overseeing the evaluation procedures in post-secondary institutions. Regulations of this type already exist in public systems of post-secondary education in many parts of the world, and would not be difficult to organize in systems with a substantial private sector.[34/] In fact, one would expect that voluntary adherence to externally set evaluation standards would be in the interest of those private

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34/ For a careful review of an attempt to use standardized examinations as an instrument to improve efficiency and equity in primary education, see Somerset's (1983) description of the 1976 examination reforms in Kenya.

post-secondary institutions that wish to attract students by acquiring a reputation for high educational standards.

Finally, it is sometimes suggested that requiring all private educational institutions to be run on a non-profit basis would indirectly tend to raise educational quality.[35/] While it is possible that funds which would otherwise be distributed as profits would be expended in such a way as to raise quality, it is far from certain that this would occur: they may instead be spent in ways which raise the real income of school managers or teachers. Furthermore, a non-profit requirement will, if effective, reduce the incentive for new entrants to the industry, thereby reducing competition. Since competition tends to raise quality (as well as reduce price), it is even uncertain whether such a rule would have a positive or negative net effect on educational quality.

C. Government policies in the markets for educated labor.

While government policies affecting the markets in which graduates are employed do not directly influence the market for the services of post-secondary institutions, they clearly have an important indirect influence. The private demand for education depends heavily on employment opportunities and expected incomes of graduates.[36/] Moreover, in most developing countries, the public sector is a leading employer of graduates of post-secondary institutions. Therefore, the government's policies with respect to hiring practices, wage offers, and job security play a major direct role in this labor market; they also tend to set the pattern for similar policies in the private sector.

[35/] See James (1986a). According to James, sever 1 countries with a large private post-secondary sector (Brazil, Colombia, South Korea) have such a requirement, at least for those schools that are publicly subsidized.

[36/] For a more detailed discussion and a literature review, see Blomqvist (1986).

Inflexibility in the wage rates for graduate labor has often been cited as one reason for graduate unemployment and the consequent divergence between the private and social profitability of education. Indirectly, such wage inflexibility may also contribute to credentialism which introduces a further source of private-social divergence. Earlier we have discussed what kinds of policies toward the private education sector are appropriate if one wants to partially offset the effects of this type of divergence. The point to be made here is that the need for such policies can be reduced if wage inflexibility is avoided in the first place.

Obviously, there are limits on the extent to which governments can vary wage rates for educated labor in response to fluctuations in supply and demand. For example, a pattern in which such labor receives regular increments to reflect seniority may be necessary in order to reduce labor turnover. There may also be limits on the extent to which the salaries offered to potential recruits can fall short of those recently hired. Nevertheless, some flexibility remains to use public-sector wage rates as a signal which responds to changes in the supply-demand balance for educated labor. Furthermore, government policy can be used to discourage the phenomenon of credentialism in the labor market. This can be done simply by following a principle of not selecting among applicants for a given job on the basis of educational qualifications, and to pay someone hired for a given job the same wage rate regardless of educational qualifications. Finally, in some developing countries there may be a tendency for the public sector to become a de facto employer of last resort for post-secondary graduates.[37/] Such a policy is not only expensive to the government and inequitable (especially when post-secondary education is subsidized): it also contributes powerfully to making the private profitability of education exceed the social profitability, and to creating an uneconomic expansion of both the private and public education sectors.

37/ For an analysis of the effects of such a policy, see Blomqvist (1982).

V. SUMMARY AND CONCLUSIONS

The extent and type of private higher education in developing countries certainly indicated that there is a potential for private institutions to play a major role. The experience in several nations in Latin America and Asia clearly shows that when the legal framework is there, private institutions will flourish. While private institutions in some countries specialize in providing relatively low-cost (and low-quality) education in particular fields (such as business or commercial studies, or general arts programs), there are other countries in which they function as elite universities at the high end of the quality spectrum.

With respect to the efficiency issue, the key question is whether the social benefits of higher education tend to exceed or fall short of the private benefits. Since market supply and demand in a private incentive-driven system tends to reflect private profitability, a situation where social benefits exceed the private tends to imply an underallocation of resources to education (both in terms of quantity of enrollment and quality of educational services), and conversely for cases where private profitability exceeds social.

Traditionally, the presumption has tended to be that factors such as capital market imperfections, and the general scarcity of educated manpower in many developing countries, has led to a situation where the social benefits exceeded the private. However, in recent years there has been evidence in many developing countries of a growing problem of graduate unemployment, and tendencies toward credentialism in the allocation of desirable jobs in the public sector and elsewhere. In addition, it has been suggested that the perception of higher education serving as a socially unproductive but privately profitable screen or signalling device may be quite as relevant in some developing countries as in the industrialized nations for which the screening theories were originally developed. If these factors are important, a situation may be emerging in which the private benefits for many types of higher education are higher than the social. This clearly would have

important implications for the question whether higher education should be subsidized. Because this question is so important, more empirical work on these issues should be a high priority.

From an equity point of view, private post-secondary education raises several important issues. In some respects, it is relatively easy to design an appropriate policy strategy because there is no conflict between the equity and efficiency objectives: policies that counteract the effects of capital market imperfections, especially for poor families, are an example. On the other hand, there are other types of equity-oriented policies that do pose a conflict with the efficiency objective. An example is a general subsidy to all post-secondary students as a means of allowing poor students access to universities. Such a subsidy is likely to have a regressive impact because children from well-to-do families are more likely to make use of the subsidy than children from poorer families. This impact may be exacerbated if access to the subsidy is rationed by marks, for similar reasons.

If higher education to a significant extent serves a function as a screen or signalling device, the regressive impact may be even worse, since an education subsidy will then in effect reduce the cost to individuals who are fortunate enough to have high productivity to begin with, of raising their market earnings. In addition, when education primarily serves a screening function, its private profitability is likely to be considerably higher than its social profitability. Thus, general subsidies to post-secondary education will be inconsistent with the efficiency objective as well.

On the whole, the conclusion that follows from the above analysis is that general subsidization of higher education may be a highly inefficient, or even counterproductive way of redistributing income from rich to poor. If subsidies are to be used to create more equitable access, a strong case can be made for targeted subsidies, e.g., scholarships and/or loan guarantees available only to students from low-income families. In this context, we also argue that a combination of targeted subsidies and rationing access by marks may represent a sensible way of promoting both equity and efficiency (if

secondary school marks are correlated with a student's ability to gain productivity through education).

The subsidy issue arises also with respect to educational quality. Here we argue that the most efficient way of raising quality is probably to design an incentive system which rewards institutions on the basis of the performance of their graduates. This would give institutions an incentive to make efficient use of all inputs into the production of education services, while a strategy of subsidizing quality by means of subsidies to particular inputs will create distortions in the production process. A problem with performance-based strategy, however, is that it may have a regressive distributional impact, since students from high-income families are more likely to perform well in examinations and therefore indirectly benefit from such subsidies.

When general subsidies are used for distributional reasons, one way of reducing the overall cost to the government is to limit access to subsidized education through direct enrollment restrictions. In order to avoid "profiteering", however, this strategy has to be combined with regulations involving fee ceilings as well as minimum quality standards. We argue in the paper that such a strategy for controlling an excess demand for education will be difficult to enforce in comparison with a strategy of lower and/or more "targeted" (on low-income students) subsidies. However, we also argue that a case can be independently made for specific quality regulation, on the basis that the government may be better able than students and employers to monitor quality. In this context also, one can make a distinction between regulation that focuses on quality control over the output (graduating students) rather than on inputs. Thus one can make a strong case for government regulation governing exam marking and evaluation of students.

Finally, there are certain important government policies which do not directly affect the education system, but which are likely to have a very significant indirect impact because they affect the labor market for graduates from the post-secondary system. These policies involve such things as labor

market legislation, and the behavior of the government as an employer. Inappropriate policies with respect to this market may have contributed to problems of graduate unemployment, credentialism, and a generally swollen bureaucracy in some countries. In turn, these factors have contributed to creating a wedge between the social and private profitability of higher education, with consequences that have been outlined above. Government policies in these areas may be at least as important in influencing the functioning of the higher education system as various forms of direct regulation or subsidy.

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