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Education and Social Policy Department
The World Bank
July 1994
ESP Discussion Paper Series
No. 33

12612

Public and Private Secondary Schools in Developing
Countries:
What are the differences and why do they persist?

Marlaine Lockheed
and
Emmanuel Jimenez

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Abstract

This paper presents the results of recent research comparing the relative effectiveness and efficiency of private and public secondary schools in five developing countries, which show a robust private school advantage in terms of student achievement and unit costs. The paper explores the effect of school-based management and autonomy and finds that principals of private schools were more likely to use their decision making power to improve the conditions for learning in their schools. The study has important implications for public education policy, insofar as it suggests how gains in public school efficiency may be achieved by enabling public schools to adopt the management practices of private schools.

Public and Private Secondary Schools in Developing Countries:

What are the differences and why do they persist?

Marlaine Lockheed and Emmanuel Jimenez

I. Introduction

Most developing countries provide public education free or at minimal cost to their citizens. Across the Third World, public schools enroll approximately 90 percent of all primary and 70 percent of all secondary students. But because fiscal constraints have been increasing recently, in many countries the public sector's ability to expand the provision of free public education has been limited. In particular, this has created a serious problem for the poorest countries where the demand for schooling is projected to increase dramatically over the next decades.

One way around this problem is to charge tuition fees for public education services, and many countries have adopted this policy. Another option is to rely on private schools to handle at least part of the expansion. Governments can encourage this development by relaxing restrictions on private schools, by providing loans to and information about them and by restricting the number of places available in public schools. Some reports suggest that, if governments were to adopt such policies, not only would more resources for education be generated but also standards of efficiency and quality would increase (World Bank 1986). Because private schools compete for students and are accountable to parents who pay the bills, they have an incentive to adopt teaching practices and to use staff and educational materials effectively and economically. An additional benefit might be that, if public schools were forced to compete with private schools for students, they too might become more efficient.

What is the scope for allowing private providers to play a larger role in handling educational expansion in developing countries? This chapter addresses this question in the following ways.

- o We review basic facts and figures on the public-private balance in education and the policy debate surrounding it (Section 2). These facts show that, while the share of private enrollment in primary education is uniformly small across world regions, there is much more variability in secondary education, with some regions having 25-50% of enrollment in private schools.
- o We present the results of recent research comparing rigorously the relative effectiveness and efficiency of private and public secondary schools in five developing countries that are educationally diverse -- Colombia, the Dominican Republic, the Philippines, Tanzania and Thailand. (Section 3). These studies point to a robust private-school advantage in terms of achievement-test indicators and unit costs, after controlling for student background and selection.
- o We also peer into the "black box" of private-public school practices to try to explain the observed differences in the 5 country case studies, focusing on differences in school inputs, processes and management in two ways (Section 4). First, we examine the existing data sets for relevant information; although each of the studies used data that were collected for other purposes they contained similar core information.¹ Second, we returned to each country and gathered more detailed information from a small sample of public and private schools. We found that it may be possible to identify private-school practices that could boost performance in public schools.

In the final section of this chapter, we briefly discuss the role of public and private schools and explain why such a discussion is important for policy.

II. Some Facts and Figures on the Public-Private Role in Education

As pointed out by Roth (1987), "the concept of free compulsory education, for which the state

¹The data on Colombia and Tanzania were generated from a World Bank study of diversified education (see Psacharopoulos and Loxley 1985). The Philippines data were collected by the Ministry of Education as part of its Household and School Matching Survey. The Thailand data were obtained from the Second International Mathematics Study conducted by the International Association for the Evaluation of Education Achievement (IEA) (see Robitaille and Garden, 1989). The Dominican Republic data came from a survey modeled after the IEA (Luna and Gonzalez, 1986).

should be responsible, originated in Europe and North America but was not widely promoted until the nineteenth century. It is thus of comparatively recent origin. Private education has had a much longer history..." (p. 16).

What is the situation today? Recently, UNESCO has again begun to publish data on the role of private schools in education. These data are largely self-reported by countries and reflect the huge variety in types and financing of private schools.² In particular, while most schools in the database are considered to be private on the basis of ownership, the degree of government regulation and subsidization varies widely. Nevertheless, Table 1 offers some rough orders of magnitude on the breakdown of public versus private schools in the 1980s.

There are several findings to highlight. One is that primary and secondary enrollment is predominantly in public. While the overall numbers obscure the data of individual countries, nearly all the (unweighted) regional averages for both primary and secondary education show a public sector share higher than 60 percent. Another finding is that there is significant disparity across levels. The share of public education at primary level is substantially higher than that at secondary level. In Asia, for example, in 1975 the average share of public enrollment was sixteen percentage points higher in primary than in secondary education. Also, there is a large variance across regional groupings, particularly at the secondary level.

At the primary level, the share of public education has remained at 80-90% for all regions other than Africa since 1965. At the secondary level, however, public education shares grew until 1980; more recent anecdotal evidence suggest they have declined since then.

² Definition of Private Education: "The International Classification of Education defines private education as that provided in institutions managed by private persons. This definition covers a wide variety of situations. Some private institutions are wholly funded by the State, others are state-aided to a wide variety of degrees while others again receive no state aid at all. In any one country, the situation may vary over time or according to level or type of education". (OECD 1990, p.40).

Tables 1: Percentage Share of Public in Primary and Secondary Education

	Primary			Secondary		
	1965	1975	1985	1965	1975	1980
OECD	87	88	89	n.a.	n.a.	n.a.
Asia	86	87	88	56	71	78
East Africa	47	57	80	64	55	52
West Africa	74	82	84	59	70	72
Middle East & North Africa	92	94	98	82	92	91
Latin America & Caribbean	86	87	88	61	67	75
Low-Income	75	81	95	n.a.	n.a.	n.a.
Middle-Income	80	85	84	n.a.	n.a.	n.a.

Note: Figures for low-income and middle-income countries are incorporated from Table A-10 in Lockheed and Verspoor (1991). All other 1965 and 1975 primary education data and all secondary education figures are from Tan, as quoted in Roth (1987) Table 2-1. OECD data and 1985 data for Asia, East Africa, West Africa, Middle East and North Africa and Latin America and Caribbean are from the UNESCO data base official enrollment series. The figures do not reflect averages of constant cases.

The figures in Table 1 mask tremendous differences among schools across (and within) countries. In particular, to discern how the role of the private sector affects educational outcomes, it is important to have information about at least three critical characteristics: financing (the extent to which private schools are subsidized), regulation (how strict is government control over the way the schools are run) and ownership (whether the private schools are sectarian, religious or for profit).

There is very little systematically gathered evidence on these characteristics. The most comprehensive is probably a recent review by James (1991) of the experiences of some 35-50 developing and developed countries. Her study indicates a large variance in experience among countries. In general, private schools are heavily subsidized (to the extent of 80 percent or more of costs) in those countries (most of which are in Europe) where teacher salaries are paid by the state.³ These are also the most heavily regulated schools. A wide variety of countries provide indirect (through tax breaks) or partial

³Some developed countries, such as Lesotho, Togo and Chile, and the state of Kerala in India also support their private schools in this way.

subsidies (less than 25 percent of costs) to private schools. These include countries as diverse as Japan, the U.S., the U.K., Indonesia, Kenya and several Latin American countries. These governments tend to have only a moderate amount of control over individual schools. On the other hand, some governments which offer neither indirect nor partial support, still attempt to regulate their private schools.

The quality of private schools and the type of subjects they emphasize also varies depending on their role vis-à-vis the public sector. The next section analyzes this important relationship.

Public and Private Schools: The Policy Debate

It is generally accepted that education is a responsibility that is shared between the family (or student) and the state. The role of the state is important for a number of reasons. First, when one individual's consumption of a good affects others (an externality), the individual must be induced to consider the social as well as the private costs and benefits of his behavior. It is often argued that this is relevant in many aspects of education, particularly at the primary level. Second, government intervention may be necessary because financial markets are too limited to allow students to borrow enough to cover their current costs on the basis of their likely future earnings. Third, if making human resource investments is accepted as a principal strategy for alleviating poverty then this also implies the need for government action (World Bank, 1990).

These objectives provide an economic justification for the most common financing practice found in most countries -- the reliance on general revenues to finance public education. But what is the role for private education in this setting?

First, private education must fill the inevitable gaps in public education provision. A lack of firm political support can sometimes limit the degree to which governments can assist public schools to develop (see James and Birdsall, 1991; Birdsall and James, 1992). Even when they are politically motivated to do so, as in many developing countries, governments are often under such severe financial constraints that they cannot afford to finance even a high return activity such as education (World Bank,

1986). The result is an excess demand for public places. James characterizes two other different motivations for the establishment of private schools -- a differentiated demand arising from a deep-seated religious or linguistic diversity and an offer on the part of an entrepreneur or organization, often religious, to start the schools on a nonprofit basis. She hypothesizes that, in many developing countries, it is excess demand that prompts the development of private education, whereas it is differentiated demand that has the same effect in developed countries. This situation may change as countries develop and differentiated demand becomes a bigger motivator of private education (James 1988, 1989a, 1986b, 1986c).

A second role that private education can have is in fostering greater efficiency by requiring public schools to compete for students. Although there are many types of private schools, analysts have argued that they possess general characteristics that differentiate them from public schools. These characteristics include a greater flexibility in the way they operate and in the way they are funded, a direct accountability to those who use their services and a greater tendency for those in charge of individual schools to make critical educational decisions (Coleman, Hoffer and Kilgore, 1982). It is often argued that these characteristics enable private schools to provide education more effectively, in other words, to provide the type and quality of education students and their parents demand. Moreover, even when the quality of the provision is the same, private schools have the incentive to provide an education at a lower cost than do their public school counterparts.

Third, private schools can serve as a laboratory for alternative models of school-level management, which, if effective, could be adopted by public schools. Theoretically, private schools are free of the bureaucratic constraints that encumber public schools, and are able to control many more decisions at the school level. It is argued that the greater school-level autonomy of private schools could be employed by public schools to boost achievement. Not all analysts agree that public schools would be able to emulate private schools, because of the differences in their sources of support. They reason

that private schools emphasize learning because parental funding makes private schools accountable to parents and to their demands for effective instruction. By comparison, public schools pay less attention to learning because they need to balance professional accountability to parents against fiscal accountability to the centralized funding source.

If correct, these theories have substantial policy implications for developing countries. At present, private schools play only a peripheral role as a conduit for educational expansion. Can this be changed? Should private schools be deregulated? Should they be subsidized? Some analysts have argued that these schools are only for the elite. Others have said that private schools should not be allowed to proliferate because they will provide low quality education at high cost to gullible parents and students. Like all good theories, these lead to the following questions we explore in the rest of this chapter:

- o Are private schools more effective than public schools?
- o Are private schools more efficient than public schools?
- o Is the greater effectiveness and efficiency of private schools due to differences in school-level management?

III. Effectiveness and Efficiency⁴

What is the empirical evidence regarding the relative efficiency of private and public schools? In the United States, the provocative Coleman, Hoffer, and Kilgore (1982) report had concluded that attending private schools improved the performance of students as measured by standardized tests of verbal and mathematical skills. Although there are outstanding questions of selectivity bias and the magnitude of effect (see, for example, American Sociological Association 1982; Murnane 1985; Murnane, Newstead and Olsen 1985), the conclusion that the average student does better in private than in public

⁴This section draws heavily from Jimenez, Lockheed and Paqueo (1991).

schools is widespread (Hanushek 1990).⁵

For developing countries, the recent evidence is much more recent. We present here the results of a research project we managed which compared rigorously the relative effectiveness and efficiency of private and public secondary schools in five developing countries that are educationally diverse -- Colombia, the Dominican Republic, the Philippines, Tanzania and Thailand. We focused on secondary schools because this is the level at which private participation is most significant.⁶

All the case studies address the following question: Would a high school student, selected at random from the general student population, do better in a public or private school? In the absence of experimental data, the studies compare students' performance on standardized tests in a cross-section of public and private schools, with student background, motivation and innate ability and prior performance controlled through the use of various statistical techniques. These techniques purge the influence of background factors from the achievement scores. They also ensure that there is enough overlap in the distribution of characteristics of the students so that the subsamples are truly comparable. Other statistical techniques are then used to control for possible selection bias.

Because it is difficult to measure many nonschool or family background effects (for instance, innate ability), we supplement the cross-sectional studies with studies using panel data that compare the differences in the achievement of public and private school students over two time periods. Nonschool effects that do not change over that time are netted out. In the studies of the Dominican Republic and Thailand, changes in achievement across two time periods are used rather than the level of achievement in a given time period. As far as we know, this type of value added analysis of private schools has

⁵The magnitude of this advantage has been disputed (Williams (1985)). Levin (1987) claims that the estimated gain in student achievement, particularly in longitudinal data sets, would have very little effect on enhancing the chances for college admission in the U.S. or on wages.

⁶Other recent studies, such as Roth (1987), James (1987) and Samoff (1987), look at the private sector's role in providing education in developing countries but do not compare costs or achievement in private and public schools. Also see Jimenez and Lockheed (1991) for studies that examine public and private schooling issues more broadly.

previously only been done on a data set from a developed country (for data on U.S. high schools, see Coleman, Hoffer, and Kilgore 1982; Lee and Bryk 1988; and Hanushek 1986). Table 2 summarizes the salient features of the case studies.

To examine the comparative efficiency of public and private schools, we also compare differences in achievement with differences in costs. Although the results described in this chapter are unique in that they combine both effectiveness and cost comparisons, the few studies that apply only parts of the methodology corroborate our results (Luna and Gonzalez 1986; Psacharopoulos 1987; Tsang and Taoklam 1990.)

Table 2: Summary of Studies

	<i>Year data collected</i>	<i>Number of</i>		<i>Grade</i>	<i>Indicator of achievement</i>	<i>Data base</i>
		<i>Students</i>	<i>Schools</i>			
Colombia	1981	1,471	35	11	Average scores on math and verbal tests	Special survey
Dominican Republic	1982-83	2,472	76	8	Mathematics test	National school survey
Philippines	1983	446	—	7-10	Mathematics test English test Pilipino test	National household survey
Tanzania	1981	1,025	13	11	Average scores on math and verbal tests	Special survey
Thailand	1981-82	4,030	99	8	Mathematics test	National school survey

Relative Effectiveness of Public and Private Schools

Do private schools provide a better education than public schools? A principal finding in all five

countries is that, given student background, students in private schools generally outperform their public counterparts on standardized mathematics and/or language tests. We reach this conclusion after carrying out the following analyses. The predicted scores in each type of school are obtained from the regression equations relating background to achievement, as evaluated at the level of background characteristics of the average public school student. This holds constant for the effects of background. Table 3 shows the ratio of a student's predicted score in a private school to his or her score in a public school. For example, in Colombia, a student with the background of the average public school student would score 1.13 times (13 percent) better in a private school than in a public school. This ratio varies considerably across countries but is consistently greater than one for all subsamples and achievement tests (with the possible exception of mathematics achievement in the Philippines, where the differences are insignificant). In terms of standard deviation units, or "effect size", the private school advantage is large and meaningful in all cases, ranging from one-half to two standard deviations (Cohen 1969). These differences in the effect size associated with private schools cannot be dismissed as trivial (Levin 1987).

Table 3: The Private School Advantage: Predicted Test Score in Private Schools as a Multiple of Predicted Test Score in Public Schools and in Standard Deviation Units

<i>Country</i>	<i>Indicator of Achievement</i>	<i>Relative Advantage</i>	<i>Effect Size</i>
Colombia	Average math and verbal	1.13	0.55
Dominican Republic ^{a/}	Mathematics (O-type)	1.31	0.89
	Mathematics (F-type)	1.47	2.16
Philippines	Mathematics	1.00	-0.09
	English language	1.18	0.33
	Filipino language	1.02	0.25
Tanzania	Average math and verbal	1.16	0.97
Thailand ^{a/}	Mathematics	2.36	1.69

Note: The table shows the proportional gain in achievement score if a randomly selected student, with the characteristics of the average public school student, attends a private rather than a public school, holding constant that student's background.

a/ For the Dominican Republic and Thailand, the test score before the school year began was included as a regressor in the equation explaining achievement at the end of the year.

The phrase "given student background" is critical here. It is generally not valid to infer differences among types of schools based simply on comparing achievement on standardized tests because students' backgrounds vary so much between types of schools, reflecting differences in choice. Because the private schools in our case study countries charge tuition while the public schools are almost free, the most important factors in the household decision are income (or income related variables such as parents' education and occupations) and the relative cost of schooling. According to Table 4, in Colombia and the Philippines, average income indicators for students in private schools are about twice as high as are those for students in public schools. Interestingly, in Tanzania, this difference is much lower, which suggests that public schools attract students from higher income families. These findings are corroborated by data showing that private school students in Tanzania tended to come from families where the father had a white collar job and the mother had some education. In both Thailand and the Dominican Republic, private school students come from families with more educated mothers and with fathers who were employed in white collar occupations. The range in income, however, is only slightly higher for

private than for public school students in Colombia and lower in Tanzania and the Philippines, which suggests a substantial overlap in the income categories of the public and private school samples.⁷

Table 4: Background Indicators for Private School Students as a Multiple for Public School Students

	Colombia	Dominican Rep. ^{a/}		Philippines	Tanzania	Thailand
		O-type	F-type			
Income (of household head or father)	1.94	—	—	2.07	1.20	—
Coefficient of variation of income	1.24	—	—	0.72	0.83	—
Mother's education (percentage beyond primary)	1.87	1.62	2.21	1.23	1.27	1.61
Father's occupation (percentage white collar)	1.09	1.69	2.52	—	1.50	1.94
Percentage male	1.04	1.29	1.78	0.98	1.07	0.91

Note: The table shows the extent to which an indicator for private school students exceeds that for public school students. For example, in Colombia, the average household head income of students in private school is 1.94 times (almost twice) that of students in public school. A figure close to one implies that an indicator for private school students is equal to that for public school students.

a/ F-type schools are authorized to give Ministry of Education examinations. O-type schools are not so authorized.

After we hold the background effects constant by measuring achievement at the average characteristics of public or private school students, we find that the advantage conferred by private schools is greater for the two countries with the best controls for student background—the Dominican Republic and Thailand. The data sets for these students contained test scores measured at the beginning and at the end of the school year, and the ratios measure change the achievement over the course of the academic year (with controls for possible sample selection bias).

Do these results hold for students from different socioeconomic groups? Qualitatively, the answer is yes. The private school advantage persists even when the computations in Table 3 hold constant the background of the average private school student, whose status is higher than that of the average public school student. The Philippines study is the only one that looked at the sensitivity of the private-public

⁷In all cases, the analyses controlled for selection bias — choice — through statistical methods which are fully explained in Jimenez, Lockheed and Wattanawaha (1988).

differential to a wider range of socioeconomic indicators, variations in socioeconomic status, within a reasonable range, did not reverse the private school effect. But the magnitude of the private school advantage substantially decreases with lower socioeconomic status. This is consistent with the fact that the more elite private schools in the Philippines tend to emphasize the development of English language skills and that advantaged children have more exposure to English and better access to English language media. Among children who speak Filipino, on the other hand, there is no relationship between socioeconomic status and attending private school. And in mathematics, there is a virtual tie between public and private schools.

Can peer group characteristics affect student achievement? In the Dominican Republic and Thailand, the only two countries for which data were available, peer group effects (the academic background or social class of students in each school) were very important.

Relative efficiency of public and private schools.

What about efficiency? Preliminary calculations based on school expenditure data indicate that, on average, the unit costs for private schools are lower than those for public schools (Table 5, column 1)). Thus for the same unit cost, private schools provide as much as three times more learning as the public schools do (Table 5, column 2). Conversely, the same amount of learning in private schools can cost as little as 15 percent of its cost in public schools (Table 5, column 3). These results indicate that private schools are more efficient than public schools, at least in secondary schools in the sample countries. But there are some important caveats. First, the orders of magnitude are rough. The cost estimates for Colombia and Tanzania are not precise because a number of private schools did not provide the necessary information. Second, in the Philippines, we used the average cost for a nationwide sample of schools (based on World Bank sector work), rather than the actual cost of the schools in the study. By comparison, in the Dominican Republic and Thailand, we had school-by-school cost data for the sample. Third, the cost figures generally do not include educational expenditures, such as books, supplies

and uniforms, that are not paid to schools. We do not, however, expect these data to cause the qualitative results to change significantly. Generally, nonschool educational expenditures, such as books, supplies and uniforms, are higher in private schools. And interviews in the countries studied reveal that even religious private schools tend to use lay teachers rather than priests and nuns. Moreover, subsistence and other nonsalary personnel costs are covered in the cost data.

Finally, there is considerable variability within each school type, as noted in the data on private schools in the Dominican Republic. Philippine public schools (say, those that are primarily locally funded) have lower unit costs than some types of private schools (the elite schools). Unfortunately, the survey data did not distinguish student achievement among types of public schools. It would be interesting in any subsequent analysis to explore this comparison.

Table 5: *Relative Average Cost and Efficiency of Public and Private Schools*

<i>Country</i>	<i>(1) Ratio of private cost to public cost</i>	<i>(2) Ratio of relative effectiveness to cost^{a/}</i>	<i>(3) Ratio of relative cost to effectiveness^{a/}</i>
Colombia	0.69	1.64	.61
Dominican Republic			
O-type	0.65	2.02	.50
F-type	1.46	1.01	.99
Philippines ^{a/}			
Math	0.83	1.40	.83
English	0.83	3.17	.70
Filipino	0.83	1.20	.82
Tanzania	0.69	1.71	.59
Thailand	0.39	2.62	.15

^{a/} Figures from Table 2 divided by column 1 of Table 3.

^{a/} Column 1 of Table 4 divided by figures from Table 2.

^{a/} Public cost estimates, weighted average of national and local costs. Costs are assumed to be the same for all three subjects and are based on World Bank estimates.

IV. Looking into the Black Box

Why are private schools more effective than public schools in boosting student achievement? This section explores the effects of school-level resources and inputs and goes "inside" public and private schools to examine how they are organized and managed. Here, we raise the question of whether it is possible for public schools to reorganize themselves along lines developed by private schools.

One reason that private schools may be more effective than public ones is that they have more resources to bring to the classroom: better educated teachers, more instructional materials, a larger stock of institutional resources such as libraries, laboratories, or subject rooms. Another explanation is that they are more likely to choose the mix of inputs that accelerates student learning, economizing on those

inputs that have little impact on student learning. We have seen that per-student expenditures in private schools are lower, not higher, than those in public schools, which suggests that the explanation for their greater effectiveness does not lie in the greater abundance of resources in general. We now compare the types of resources available in public and private schools, to see what, if any, differences emerge in the mix of inputs each choose.

One reason that private schools may be more effective than public ones is that they have more resources to bring to the classroom: better educated teachers, more instructional materials, a larger stock of institutional resources such as libraries, laboratories, or subject rooms. Another explanation is that they are more likely to choose the mix of inputs that accelerates student learning, economizing on those inputs that have little impact on student learning. We have seen in previous chapters that per-student expenditures in private schools are lower, not higher, than those in public schools, which suggests that the explanation for their greater effectiveness does not lie in the greater abundance of resources in general.

The case studies were able to supply some information regarding differences in resources between public and private schools. We have already noted that the overall level of resources available in private schools is lower than that available in public schools. In addition, although it is not possible to infer causality from Table 6, it shows some interesting comparisons. In all countries, private schools tend to choose slightly higher student-teacher ratios and to use the savings to purchase other inputs. For example, in Thailand, private schools make more efficient use of teachers by recruiting candidates with slightly lower qualifications, giving them more in-service training and by promoting better teaching processes (homework, tests and orderly classrooms). In the Dominican Republic, the most striking difference is that students in private schools have better access to textbooks.

Table 6: Average Private School Input and Management Characteristics as a Multiple of Average Public School Characteristics

Variable	Colombia	Dominican Republic O-type F-type	Tanzania	Thailand	Mini- Survey
<i>Input Mix</i>					
Teacher salary	0.52	-	-	1.15	-
Student-teacher ratio/class size	0.85	1.00	1.00	1.07	1.05
Teacher's years of education	-	.95	1.02	-	-
Minutes spent on maintaining class order	-	.38	1.21	-	1.24
Proportion of students with textbooks	-	3.11	3.50	-	-
Proportion of teachers					
Qualified to teach math					
in student's school	-	-	-	-	0.17
With in-service training	-	-	-	-	2.29
Teaching enriched math class	-	-	-	-	1.54
Total resources	-	-	-	-	0.97
Total instructional materials	-	-	-	-	1.11
<i>Management</i>					
Total school-level autonomy	-	-	-	-	1.61
Instructional time	-	-	-	-	1.08

Private schools may also be more effective and efficient because of their internal management. Hannaway (1991) argues that schools and school systems organize themselves to enhance the objectives of their resource providers. In the case of private schools, these are parents; in the case of public schools, they are local, regional and national authorities. The result is that private schools adopt an organizational structure that is flexible with respect to the needs of individual students and that is aligned with the professional interests of school level personnel. By comparison, public schools adopt an organizational structure that serves to promote internal compliance with the multiple objectives of not only individual parents and students but also the wider society. Hannaway also argues that so long as public schools receive their financing directly from "central" sources, they will not be able to adopt the more flexible organizational structure chosen by private schools in response to parental sources of funding.

Efforts at decentralization have attempted to shift the responsibility for resource provision to local levels, in an attempt to encourage greater school-level responsiveness to local needs. However, in many cases, shifting financial responsibility has been viewed as a means of relieving a burden on the central budget, not as a means of providing greater autonomy to local schools. The result has been that decentralization has neither supplied more material resources at the school level nor enhanced school-level autonomy over decision making (Lockheed and Zhao, 1992).

School-level autonomy is a key difference between public and private schools. In her research on Catholic and public schools in the United States, Hannaway found that school autonomy was higher for Catholic schools than for public schools, even with a number of adjustments for student characteristics, organizational context, and principal characteristics. She notes that "even if we changed public schools in terms of their clients, their organizational and political contexts, and the characteristics of their principals, these schools would still not be managed the way private schools are managed" (Hannaway, 1991, p. 473). The reason is that as long as public schools are accountable to central bureaucracies, they will be organized in a management structure that limits school-level autonomy.

To answer the question regarding the cause of the observed greater effectiveness and efficiency of private school relative to public ones, we undertook a "mini-survey" of public and private schools in the five case-study countries. This survey was undertaken from a distance. We invited a senior researcher in each country to gather systematic data about a variety of institutional practices in public and private schools, using a survey instrument we provided. In each country, the researcher was asked to identify three schools in each of the following categories: private elite, private nonelite, public elite and public nonelite schools. This made a total of 12 schools per country. All of the schools were visited by the researcher or a representative of the researcher, who interviewed the headmaster or principal teacher. Although twelve surveys were returned from each country, for a total of 60 schools, all types of schools were not represented equally. We received returns from 14 private elite schools, 17 private nonelite

schools, 13 public elite schools and 16 public nonelite schools.

The results from the mini-survey confirmed much of what we have observed previously with respect to student selectivity and resource similarities among schools in the two sectors. The private schools in this survey were not systematically more advantaged than the public schools in terms of the material resources available to them, although their students may have been more capable than those in the public schools. The mini-survey also confirms what we had suspected, that private schools are more advantaged in terms of their ability to manage themselves and make educational decisions at the level of the school site.

Resources

In many respects, the public and private schools in the mini-sample were similar (Table 7). The majority of both the private and the public schools were coeducational (81 percent and 86 percent respectively) day schools, with only 20 percent having any type of boarding facility. Approximately the same proportion (45 percent) were classified as "elite" schools (a consequence of the instructions issued to the researcher). However, despite these similarities, there were significant differences between the public and private schools in our mini-survey. Public schools admitted more applicants (36 percent) than did private schools (23 percent) and were less likely than public schools to admit students on the basis of test performance (55 percent and 65 percent respectively). Second, a higher proportion of teachers in public schools were "fully qualified" than in private schools. Third, the public schools were larger, enrolling more students and employing more full time teachers; possibly as a result, the public schools were more likely to operate on two shifts. Fourth, the public schools taught fewer different grades than the private school (5.8 grades and 8.5 grades respectively). While public schools differed from private schools in terms of the numbers of students and teachers they had and in the number of grades offered, they had only one more administrator, on average, than private schools had. The picture that emerges here is of administrators in private schools managing somewhat more able students in physically small

but educationally complex organizations, and administrators in public schools managing somewhat less able students in physically large but educationally simple organizations.

Table 7: General Characteristics of Public and Private Schools in Mini-sample, Colombia, Dominican Republic, Philippines, Tanzania and Thailand 1990

<i>Characteristics</i>	<i>Private</i>	<i>Public</i>
Percent coeducational	80.6	86.2
Percent residential	19.3	20.7
Percent elite	45.2	44.8
Number of shifts	1.4	2.0
Number of students	1113.1	1917.0
Number of grades	8.5	5.8
Number of full time teachers	43.5	85.1
Percent fully qualified teachers	89.7	104.0
Number of administrators	7.0	8.0

Physically, the public and private schools in the mini-survey differed very little and both sectors appeared relatively advantaged (Table 8). In particular, the conditions for teaching did not differ significantly between public and private schools. Most students were accommodated in regular classrooms; most classrooms had seats and desks for both students and the teacher. Virtually all classrooms had blackboards. Both public and private schools reported having an average of 11 of 13 important physical resources -- file cabinets, telephone, typewriter, television, computer, radio, duplicating machine, school library, science laboratory, subject rooms, storage facilities for books, staff room, office for school head and a kitchen. The only difference between public and private schools was that more private schools than public schools reported having a school library (93 percent and 79 percent respectively), whereas more public schools than private schools reported having a copying machine (85 percent and 61 percent respectively).

The physical plants of public and private schools were also similar with respect to selected "modern" amenities. All private schools and 83 percent of public schools reported having water piped to the schools, and about three quarters of both public and private schools reported having electricity that worked regularly. Most schools reported having flushable toilets for students (74 percent of private schools and 83 percent of public schools). Both public and private schools attempted to protect the building from vandalism, although more public schools than private schools employed someone to guard the school at night, on weekends and over holidays (90 percent and 77 percent respectively). Private schools reported greater concern with on-going maintenance; three quarters of the private schools employed a regular maintenance man, whereas only 43 percent of public schools employed such a person. From this description it seems that the schools in the mini-sample may not represent typical secondary schools in developing countries.

Reflecting the similarities in the overall physical plant and resources available at the school level, the number of instructional materials available to teachers in public and private schools were approximately the same (Table 9). Teachers in both types of schools had about five out of a list of eight important instructional materials – chalk, writing implements, paper, instructional guides, illustrations, science kits, textbooks and dictionaries. However, more private school teachers (66 percent) than public school teachers (52 percent) had a storage cupboard in which to store these supplies. Students in private schools appeared slightly more advantaged than those in public schools. While most students in both public and private schools had writing implements and paper, private school students were more likely to have dictionaries (63 percent) and a complete set of textbooks (70 percent) than students in public schools (40 percent and 66 percent respectively). The differences could reflect the differences in student selectivity between public and private schools or could reflect investment choices on the part of the schools.

Table 8: Physical Characteristics and Facilities of Public and Private Schools in Mini-sample, Colombia, Dominican Republic, Philippines, Tanzania and Thailand 1990

<i>Characteristics</i>	<i>Private</i>	<i>Public</i>
Student-teacher ratio	24.2	22.1
Number of classrooms	27.0	29.6
Number of resources [#]	11.2	11.5
Percent students that have class outside	0.9	5.2
Percent students with seats & desks	99.7	95.7
Percent classrooms with teacher desk	90.4	81.8
Percent classrooms with blackboard	100.0	99.8
Percent with health facility	50.0	50.0
Percent with regular electricity	79.3	75.9
Percent with piped water	100.0	82.8
Percent with flushable toilets	74.2	82.8
Percent with building guard	77.4	89.7
Percent with maintenance person	74.2	42.9

[#] File cabinets, telephone, typewriter, television, computer, radio, duplicating machine, school library, science laboratory, subject rooms, storage facilities for books, staff room, office for school head, kitchen.

Official instructional time was also relatively similar for public and private schools (Table 10). Both types of schools reported having a school year of approximately 200 days, a school day of seven or eight periods, and periods lasting about 50 minutes. However, public schools were closed for nearly four times as many school days (fifteen) as private schools (four).

The overall resources available in public and private schools in the mini-survey were remarkably similar. However, where differences emerged, they suggest a decision on the part of private schools to invest in resources more closely aligned with instructional goals: libraries, dictionaries, textbooks, classroom storage areas for instructional materials, instructional time. By comparison, public schools tended to invest in personnel: teachers and building guards, and to pay for teacher qualifications.

Table 9: Instructional Materials in Public and Private Schools in the Mini-sample, Colombia, Dominican Republic, Philippines, Tanzania and Thailand 1990

<i>Characteristics</i>	<i>Private</i>	<i>Public</i>
Number of materials ^{a/}	5.0	4.5
Percent of teacher with storage cupboards	65.7	51.9
Percent of students with pen/pencils	96.7	99.1
Percent of students with paper/notebooks	96.6	96.4
Percent of students with complete sets of texts	70.0	66.3
Percent of students with dictionaries	63.2	40.1

^{a/} Chalk, writing implements, paper, instructional guides, illustrations, science kits, textbooks and dictionaries.

Management

Public and private schools differ significantly in terms of their management organization. In most developing countries public schools are financed and managed by the central government. Teachers are hired and deployed by a central agency, curriculum is set nationally, and admission to secondary school is often controlled by national examinations with students placed in schools through central agencies. As a result, neither the local community nor the school principal exercises much control over key decisions. Unlike centrally controlled public schools, private schools in both developed and developing countries exercise managerial control over a wide range of decision. For example, research has found that in U.S. Catholic private schools, principals, teachers and parents have significantly greater control over decisions about the curriculum, instructional methods, allocating funds, hiring teachers, dismissing teachers, and discipline policies than do their counterparts in public schools (Hannaway 1991). Hannaway concludes that "there is something about public educational institutions that restricts their adaptation to local conditions" (Hannaway 1991, p. 122). Similar differences in patterns of control were found in the Philippines (Lockheed and Zhao, 1992).

Table 10: Instructional Time in Public and Private Schools in the Mini-sample, Colombia, Dominican Republic, Philippines, Tanzania and Thailand 1990

<i>Characteristics</i>	<i>Private</i>	<i>Public</i>
Number of days in school year	202.0	203.0
Number of periods in school day	7.2	8.0
Length of instructional period in minutes	47.0	48.0
Number of days school was closed	4.3	15.1

In the mini-survey large differences between the public and private schools emerged in two regards: (a) the degree of influence exercised by the principal over school level decision making and (b) the importance apparently placed on academic achievement. Private school principals reported more influence over school level decisions and greater attention to matters of teaching and learning.

We listed 13 areas of school level decisions – selecting teachers, selecting nonteacher staff, dismissing school personnel, selecting teachers for in-service, evaluating teacher performance, adapting the curriculum, establishing standards for student promotion, improving instructional practice, choosing textbooks, purchasing equipment, establishing homework policies, selecting students, setting and spending school fees. Then, we asked principals to indicate which of five groups (head office or Ministry of Education, school board, headmaster or principals, teachers, parents or PTA) exercised the most influence over each area.

Principals of private schools were more influential over these areas than principals of public schools in two respects (Table 11). First, principals of private schools influenced more areas of decision making than principals of public schools (5.5 areas versus 3.4 areas respectively). Second, principals of private schools influenced more of these decisions than did any other group, including the head office. Principals of private schools influenced over five times as many areas (5.5 areas and 1.1 areas, respectively) as did the head office. By comparison, principals of public schools influenced fewer of

these school level decisions than did the head office (3.4 areas and 3.9 areas respectively). As a consequence, the head office or Ministry of Education influenced nearly four times as many decisions in public schools as they influenced in private schools.

Table 11: Influence Over 13 School level Decisions^{a/} in Public and Private Schools in the Mini-sample, Colombia, Dominican Republic, Philippines Tanzania and Thailand 1990

<i>Characteristics</i>	<i>Private</i>	<i>Public</i>
Head/Office Ministry of Education	1.11	3.92
School Board	1.88	1.44
Headmaster/Principal	5.46	3.40
Teachers	3.23	3.56
Parents/PTA	0.00	0.16

^{a/} Decisions over: selecting teachers, selecting nonteacher staff, dismissing school personnel, selecting teachers for in-service, evaluating teacher performance, adapting the curriculum, establishing standards for student promotion, improving instructional practice, choosing textbooks, purchasing equipment, establishing homework policies, selecting students, setting school fees, spending school fees.

We also looked at each specific decision making area. Principals were the most influential group in at least 40 percent of the private schools for eight areas-- selecting teachers for in-service, purchasing equipment, evaluating teacher performance, selecting nonteaching staff, selecting students, dismissing school personnel, selecting teachers and spending school fees. By comparison, in the public schools, principals were most influential over only two areas – evaluating teacher performance and selecting teachers for in-service (Table 12).

Another explanation for the higher achievement in Catholic private schools versus public schools in the United States is that they place greater emphasis on engagement in academic activities, including higher rates of enrollment in academic courses. This, in turn, translates into such differences in student behavior as spending more time on homework (Coleman, Hoffer and Kilgore 1982). In developing countries, curricula are typically set nationally, and students have little choice over course selection. However, differences in the emphasis placed on academic achievement may vary between schools, and this may translate into differences between public and private schools in the level of effort

spent by students on academic activities.

In the mini-survey, we found that private school principals not only had significant influence over what occurred in their schools, but also established a school climate that promoted learning and rewarded those that contributed to its success. The mini-survey showed that private schools emphasized teaching and learning more than public schools did and that they provided rewards that were contingent on good performance (Table 13). Both in-service training and regular staff meetings were more likely to be designed to strengthen teaching methods than were similar activities in public schools. Virtually all private schools offered monetary incentives for good teachers, in comparison with only about half of public schools.

While both public and private school principals ensured that teaching materials were available in the school, principals of private schools also ensured that teaching materials were readily available to teachers by providing them storage cabinets in their classrooms. They also protected the school building and its content by ensuring regular maintenance and by taking precautions against vandalism. In short, they used their decision making powers to improve the conditions for learning in the schools.

Table 12: The Decisions over which the Principal has the most Influence in Public and Private Schools in the Mini-sample, Colombia, Dominican Republic, Philippines, Tanzania and Thailand, 1990 (Percent of Schools)

<i>Area</i>	<i>Private</i>	<i>Public</i>
Selecting teachers	41.9	27.6
Selecting nonteacher staff	51.6	17.2
Dismissing school personnel	45.2	37.9
Selecting teachers for in-service	63.0	40.7
Evaluating teacher performance	54.8	57.1
Adapting the curriculum	16.1	13.8
Establishing standards for student promotion	16.1	6.9
Improving instructional practice	25.8	17.2
Choosing textbooks	16.7	0.0
Purchasing equipment	58.1	34.5
Establishing homework policies	6.5	10.7
Selecting students	45.2	27.6
Selecting school fees	29.0	14.8
Using school fees	41.9	34.6

One reason that private school principals may have paid more attention to teaching and learning is that they, themselves, were more likely to be involved in teaching. On average, private school principals spent 7.2 hours a week teaching a regular class, compared with public school principals who spent on average only 4.8 hours teaching per week. Private school principals also spent significantly fewer hours on fundraising, communicating with the head office and performing general administrative duties than did public school principals (17.1 hours and 24.2 hours respectively). Thus, more of their time was available to attend to matters more directly related to teaching.

Table 13: Attention to Teaching and Learning in Public and Private Schools in the Mini-sample, Colombia, Dominican Republic, Philippines, Tanzania and Thailand 1990 (Percent of schools)

<i>Characteristics</i>	<i>Private</i>	<i>Public</i>
Staff meeting devoted to "specific pedagogical practices"	33.3	17.2
Monetary rewards for good teaching	100.0	45.4
In-service training devoted to "better" teaching methods"	67.9	50.0
"Critical thinking and reasoning skills" identified as most important educational goal	9.7	13.8

V. Significance for Policy

The findings from our research have important implications for public education policy. Although some gains in efficiency may be achieved by mimicking the mix of resources of private schools (such as teacher/student ratios and teacher qualifications), this is not likely to be enough to equalize the two systems. A more effective, albeit less transparent, measure would be to adopt the management practices of private schools, thereby mimicking their incentive structure. This school-level reorganization would not be possible, however, without significantly changing the source of their resources and the bureaucratic structure in which they are embedded.

These findings should not be interpreted as a call to abolish or privatize public schools. The findings are preliminary and need to be tested with other data sets in other environments. Also, the marginal differences found in the studies may not persist if many students moved from public to private schools. Still, the studies do offer initial empirical evidence on an issue that has to date been subject largely to speculation, often in the context of highly emotional debates.

One immediate implication for policy is that over-restrictive regulations on private schools (including outright prohibition in some countries) may be suppressing an efficient way to provide education.

Another implication for policy is that, in some cases, governments could encourage greater private sector participation in education. It should be stressed, however, that the relative efficiency of private schools is highly dependent on the institutional regime and structure of the incentives under which they currently operate. Government subsidies, for example, may not necessarily lead to greater efficiency in the educational system. Such subsidies will be effective only if they are not linked to restrictions on the schools' ability to choose a suitable input mix and to strive for greater efficiency. The exact nature of those reforms that lead to improved efficiency and equity is beyond the concern of the present book. They might involve contracting for educational services, as is now being done in the Philippines, or even some form of voucher system, as in Chile. Restrictive rules and regulations intended to protect consumers could be modified or tax exemptions could be granted for private schools. All such measures will have to be discussed in the larger context of the political economy of specific countries (James 1987).

A final implication for policy is that public schools could emulate at least some of the teaching and administrative practices of their private counterparts. The usual assumption in considering government policies toward private schools is that the quality of education they provide is not commensurate with what is being paid by the consumers, due to the asymmetry of information between consumers and providers. This widely held assumption is complemented by the view that bureaucrats have better information regarding the technology of education. The evidence, however, is that private schools, which are more autonomous and responsive to students and their parents, will deliver education in a cost-effective way.

Although the rigorous methodology we have used in comparing public and private schools has allowed some clear advances in the literature, additional work is warranted. First, the databases were not strictly comparable across countries and it is not possible to make cross-country generalizations. Second, the scope of countries covered is also limited. Third, better information, particularly regarding the social and private costs of different kinds of schools, needs to be gathered. Fourth, it would be useful

to compare results across the entire distribution of students rather than just for the average student. And finally, the studies covered only secondary schools. In Latin American and East Asia, the critical level for the future will be universities, which are the highest cost components in many budgets for public education. In Africa and the Indian subcontinent, the issue is also being discussed at the primary level.

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