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Jere R. Behrman
Anil B. Deolalikar
Lee-Ying Soon

September 2002

ERD Working Paper No. 23

**PROMOTING EFFECTIVE SCHOOLING
THROUGH EDUCATION DECENTRALIZATION
IN BANGLADESH, INDONESIA, AND PHILIPPINES**

**Jere R. Behrman
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September 2002

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Foreword

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Abstract

Among developing member countries (DMCs), Indonesia and the Philippines rank fairly high in the distribution of real GDP per capita in PPP dollars while Bangladesh ranks much lower. In terms of aggregate schooling, the Philippines has secondary and tertiary enrollment rates that are substantially higher, while Indonesia has rates that are substantially lower, than that predicted based on all DMCs and their respective real products per capita. The Philippines also has expected grades for synthetic cohorts that are substantially above the overall mean for DMCs. In terms of public expenditures on education, all three countries have about the same percentage of GNP invested in education, a little over 2 percent, which is significantly below the level predicted by the experience of all DMCs given their respective real products per capita. There has been considerable public pressure for decentralization of education in DMCs in recent years. This pressure has been driven largely by fiscal constraints but has also been motivated by concerns over the effectiveness of a centralized system for delivering education services. The three country studies provide a rich characterization of the evolving—and in certain respects, rapidly changing—education systems in these DMCs.

INTRODUCTION

This is the second of three Economics and Research Department working papers on the Asian Development Bank (ADB) project “The Role of Education Decentralization in Promoting Effective Schooling in Selected DMCs.” The selected developing member countries (DMCs) are Bangladesh, Indonesia, and Philippines. It covers part of Phase Two of a larger ADB project (RETA 5617) whose Phase One addressed the issue of “Financing Human Resource Development in Asia.”

As part of the project, consultants from the three DMCs, working with ADB staff and international consultants, undertook three country studies. Their tasks were to gather secondary data and information, to include conducting purposive surveys if necessary, and to prepare a country report. This working paper is a synopsis of the three country reports.

The three DMCs selected for the project differ significantly in the progress made in the education sector. The Philippines, for instance, has long had high levels of education compared with other DMCs at the same level of per capita income. For Bangladesh, in contrast, universal primary schooling remains elusive, despite substantial progress. In Indonesia, access to primary schooling was by the mid-1980s no longer an issue and priority had shifted to expanding universal schooling up to junior secondary level. However, the 1997 financial crisis and subsequent events have raised concerns that some of the gains in education may be reversed. In all three countries, the low quality of schooling is acknowledged as critical and has been given priority. In all three countries decentralization, or further decentralization, is expected to shape policies in the education sector in the years ahead.

In the three DMCs, the quality of education has been cause for serious concern. Among measures undertaken to alleviate this state of affairs, as well as maximize the impact of scarce fiscal resources on overall development objectives, has been the decentralization of government functions in the education sector. Such decentralization is at various stages of completion. This working paper presents summaries of the three country studies that have been conducted on the impact of decentralization on the education sector. Section I begins by providing perspectives concerning the overall level of economic development and aggregate aspects of education and the distribution of education in the three countries in the context of all DMCs. Section II summarizes the Bangladesh study, Section III the Indonesia study, and Section IV the Philippines study. Details are contained in the complete reports in Masum (2000), Triaswati (2000), and Manasan (2002), respectively. Section V presents some conclusions.

This working paper follows on from the conceptual (background) paper for the three country studies, which identified issues in education and the role that decentralization plays (Behrman et al. 2002). A full version of the Philippines country report (Manasan 2002) is to be published as ERD Working Paper No. 24.

I. EDUCATION IN BANGLADESH, INDONESIA, AND PHILIPPINES IN PERSPECTIVE

In the late 1990s, ADB undertook detailed studies of education trends and patterns in its DMCs. This section summarizes some of the basic points about the current level of development, aggregate education activities, and the distribution of education in the three DMCs selected for the present study—Bangladesh, Indonesia, and Philippines—based on data presented in two ADB studies (Bray 1998, Lee 1998). These data are subject to definite limitations because different countries do not use the same definitions and because some important concepts, for instance those related to quality of education, are very poorly measured or not measured at all.¹ Nevertheless, they provide some perspectives about economic development and education in these three countries.

A. Population and Level of Economic Development

Table 1 and Figure 1 present basic population and development statistics for the three project DMCs and, for comparison, basic summary statistics for all DMCs for which these data are available (Appendix Table A1 gives the individual country data). For each of four variables—namely, population, GNP per capita (in dollars at official exchange rates), GDP per capita (in purchasing power parity [PPP] dollars), and the Human Development Index (HDI)—a striking feature is the considerable variance among DMCs. The distribution of each of these four variables across the DMCs is now summarized, with emphasis on where in this distribution the three project DMCs are located.

¹ These issues in using such data are discussed, for example, in a special symposium in the *Journal of Development Economics*. See Srinivasan (1994) for an overview.

Figure 1. **Basic Characteristics of the Three Sample Countries**

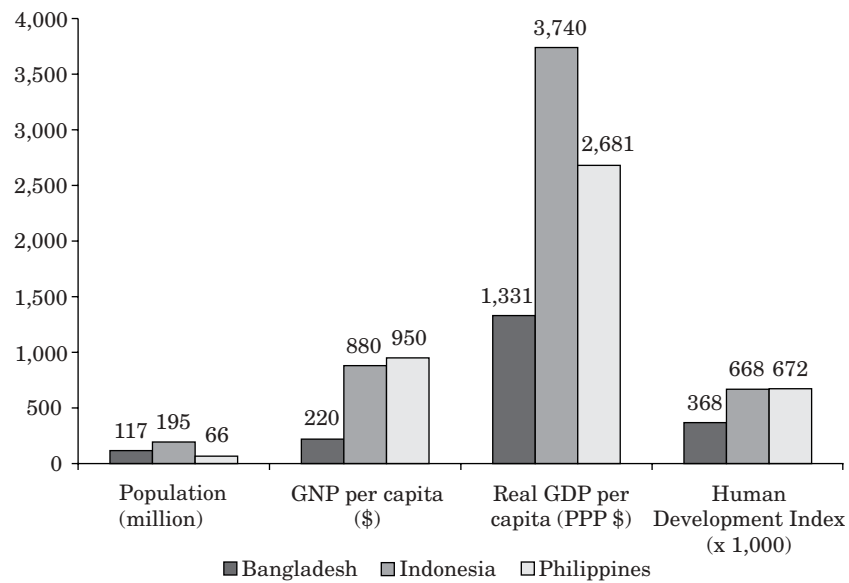


Table 1. **Basic Population and Development Statistics for Project Developing Member Countries and Summary Statistics for All Developing Member Countries**

Country	Population (million)	GNP per Capita (\$)	Real GDP per Capita (PPP \$)	Human Development Index
Bangladesh	116.5	220	1,331	0.368
Indonesia	194.5	880	3,740	0.668
Philippines	66.4	950	2,681	0.672
All Developing Member Countries				
Mean	82.0	3,007	4,381	0.61
Median	9.8	950	2,461	0.63
Standard Deviation	243.5	5,483	5,423	0.18
Range	.007–1,208.3	200–22,500	750–22,310	0.34–0.91
Number of Countries	37	34	28	27

Sources: Calculated from Appendix Table A1. Original sources for country data are UNDP (1997) and various national sources as presented in Bray (1998, Table 1). Data refer to the most recent year available to Bray (1998).

1. Population

The range of population is enormous, from 7,000 in Nauru to 1.2 million in the People's Republic of China (PRC). The mean population is 82 million, but the distribution is weighted toward

countries with small populations, with 13 countries having fewer than 1 million inhabitants, so the median population is only 9.8 million. The three project DMCs all are relatively high in the distribution of DMC populations: Indonesia (third largest population among DMCs), Bangladesh (fifth), and Philippines (seventh). Together they account for about an eighth of the total population of the DMCs or over two fifths of the total DMC population outside of the PRC and India.

2. Product per Capita

There are two measures of product per capita: GNP per capita in dollars based on official exchange rates and GDP per capita in PPP dollars that incorporate differences in price structures among countries. For both measures the ranges are large: from \$200 (Nepal) to \$22,500 (Singapore) for GNP per capita based on official exchange rates and from \$750 (Samoa) to \$22,310 (Hong Kong, China) for GDP per capita in PPP dollars. For countries with lower products per capita, the latter tends to be higher because of the relative cheapness of nontraded products that are intensive in unskilled labor in such economies, so the range is a little less if PPPs are used. But the patterns across DMCs are very similar, with the correlation between the two measures equal to 0.97 for the 27 DMCs for which both measures are available (Appendix Table A1). The three country study DMCs are below the means for both measures. But the distribution again is relatively concentrated among lower values in both cases so that the Philippines is at the median and Indonesia only slightly below the median for the first measure, and both Indonesia and the Philippines are above the median for the second measure. All three of these countries rank higher in the distribution of the PPP measure than in the distribution of the exchange rate-based measure (and Indonesia has higher product per capita than the Philippines for the PPP dollars measure, though the opposite is the case for the official exchange rate-based indicators). For real GDP per capita in PPP dollars, among all DMCs, Bangladesh is at the 25th percentile, the Philippines is at the 60th, and Indonesia is at the 75th. Thus Indonesia and the Philippines (but not Bangladesh) are fairly high in the distribution of real product per capita among DMCs, though far below Fiji Islands; Hong Kong, China; Republic of Korea (hereafter Korea); Malaysia; Singapore; and Thailand.²

3. Human Development Index

The HDI, proposed by the United Nations Development Programme (UNDP), is a frequently used alternative to product/income per capita measure of development, which, while it includes income per capita (with a declining weight as income per capita increases), gives equal weight to direct human resource measures, including schooling. The HDI ranges from 0.34 (Bhutan) to

² And probably far below Taipei, China for which PPP dollar estimates are not available.

0.91 (Hong Kong, China) among the 27 DMCs for which the index is available. The HDI varies much less among DMCs than do the product per capita indicators.³ The HDI is positively correlated with the two product per capita measures, which is not surprising because one of the components used to make this index is income/product per capita and the other components are positively correlated with per capita income; the correlation with GNP per capita using exchange rates for the 26 countries that have observations on both is 0.61 and the correlation with GDP per capita using PPP dollars for the 27 countries that have observations on both is 0.74.⁴ That these correlations are significantly less than one, however, reflects the fact that the HDI is measuring something different than per capita product. Among the 27 DMCs, Bangladesh is at the 15th percentile, Indonesia is at the 67th, and the Philippines is at the 70th. The HDI suggests, thus, similar rankings of the three project DMCs among all DMCs as do the income/product per capita measures (though with some slight shifts, such as between the Philippines and Indonesia).

B. Aggregate Aspects of Schooling

Table 2 presents basic aggregate statistics on selected aspects of schooling for the three project DMCs and, for comparison, basic summary statistics for all DMCs for which these data are available (Appendix Tables A1 and A2 give the individual country data). The summary statistics for all DMCs include the mean, median, standard deviation, and range (first column), and the consistency (R^2 adjusted for degrees of freedom, which indicates how much of the variance in each variable is consistent with the variance in real GDP per capita) of each variable with real GDP per capita in PPP dollars among the DMCs for which data are available (last column). For the three project DMCs, for each variable the top entry is the actual value of the variable for that country and the bottom entry is the value predicted on the basis of a regression for all DMCs and the real GDP per capita in PPP dollars for that country (with the percentage discrepancy between the actual and the predicted values relative to the actual value in parentheses).⁵ The

³ The coefficient of variation (i.e., the ratio of the variance to the mean) is 0.053 for the HDI, \$6,713 for GDP per capita in PPP dollars, and \$9,998 for GNP per capita at real exchange rates.

⁴ The differences between these two correlations reflect that controlling for prices better leads to a higher correlation between income/product per capita than that obtained with real exchange rate GNP per capita.

⁵ For example, the first row indicates that for preprimary enrollment rates for all 17 DMCs for which data are available, the mean is 31.5 percent, the median 23.0 percent, and the standard deviation is 28.1 percent, and that a regression of preprimary enrollment rates on the real GDP per capita in PPP dollars among the DMCs for which data are available is consistent with about half (0.498) of the variation in preprimary enrollment rates for these DMCs. For Bangladesh, no data are available on preprimary enrollment rates, but the predicted value based on Bangladesh's real GDP per capita in PPP dollars is 19 percent. For Indonesia, the actual preprimary enrollment rate is 19 percent and the predicted value based on its real GDP per capita in PPP dollars is 28 percent, so the difference between the actual and the predicted value is negative and equal to 49 percent of the actual value.

Table 2. Summary Statistics for Aggregate Schooling Indicators for all DMCs and Actual and Predicted Values and Percent Discrepancy for Three DMCs

Variable	Mean, Median (standard deviation), and Range for all Developing Member Countries ^a	Project Country (actual values and predicted values and percent discrepancy between actual and predicted) ^b			R ² /N ^c
		Bangladesh	Indonesia	Philippines	
Gross Enrollment Rates, 1995 (%)					
Preprimary	31.5, 23.0 (28.1) 1–90	— 19	19 28 (-49%)	13 24.1 (-85%)	0.498 17
Primary	101.8, 103.0 (17.9) 49–134	— 108	114 103 (10%)	116 104 (10%)	0.018 ^d 27
Secondary	54.3, 52.0 (25.3) 14–101	— 46	48 58 (-21%)	79 54 (25%)	0.092 ^d 26
Tertiary	15.3, 10.9 (13.9) 1.5–52	— 7.1	11.1 16.5 (-49%)	27.4 13.5 (51%)	0.333 ^d 20
Expected Grades of Schooling for a Synthetic Cohort ^e	9.6, 9.4 (1.8) 5.6–13.2	— 9.2	9.7 9.8 (-1%)	12.0 9.6 (20%)	0.008 ^d 19
Public Expenditures on Education as % of GNP	3.9, 4.0 (1.5) 1.0–6.8	2.3 3.4 (-48%)	2.2 3.7 (-67%)	2.2 3.6 (-63%)	0.000 ^d 23
Public Expenditures on Education as % of Total Government Budget	14.9, 17.0 (4.5) 7.4–23.1	8.7 12.2 (-40%)	— 15.0	— 14.1	0.221 ^d 19
Percent Distribution of Recurrent Expenditures, 1992					
Primary	45.2, 43.5 (9.5) 26.9–63.9	44.2 48.2 (-9%)	— 46.3	63.9 47.1 (26%)	0.149 17
Secondary	29.3, 29.1 (9.9) 10.1–43.5	43.3 26.1 (40%)	— 30.8	10.1 29.3 (-190%)	0.130 ^d 17
Tertiary	14.7, 14.7 (7.9) 3.2–30.0	7.9 13.7 (-73%)	— 14.3	22.5 14.3 (37%)	0.029 17
Private Enrollment as Percent of Total Enrollment					
Preprimary	56.9, 53.0 (40.8) 0–100	— 38	100 57 (43%)	53 51 (5%)	0.057 ^d 15
Primary	10.7, 4.0 (21.1) 0–96	— 6.9	18 12.9 (28%)	7 11.0 (-57%)	0.000 ^d 20
Secondary	23.4, 6.0 (28.8) 0–87	— 14.6	42 18.2 (57%)	35 17.0 (51%)	0.000 ^d 21

— means not available.

Notes: Calculated from data in Appendix Tables A1 and A2. Data refer to the most recent year available to Bray (1998), in most cases the mid-1990s.

^a These summary statistics are for all the DMCs for which the data are available in Appendix Table A1, with the number for each row indicated in the last column. The standard deviation is in parentheses.^b The first item in each cell for the three DMC project countries is the value reported in Appendix Table A1. Beneath the actual data is the value predicted by a regression on the real GDP per capita in PPP terms for all DMCs for which data are available for that variable (see last column for some details of the regressions).^c This column gives the adjusted R² for the regression among all DMCs for which data are available for the regression used to predict the values for the three project countries conditional on their respective real GDP per capita in PPP terms and the number of observations used in the regressions. The underlying relation is linear or semilog (the latter indicated by ^d) depending on which is more consistent with the variance in the variable being predicted.^d The right-side real GDP per capita PPP variable is in *ln* terms so that the relation is in semilog form.^e The expected grades of schooling for a synthetic cohort is the number of grades of schooling that would be expected for individuals with the reported enrollment rates for the three schooling levels, assuming that there are six grades in the primary level, five in the secondary level and four in the tertiary level.

distribution of each of these variables across DMCs is now summarized, with emphasis on where in this distribution the three project DMCs are located.

1. Gross Enrollment Rates for Different Schooling Levels

The ranges of gross enrollment rates are considerable for all four schooling levels: 1-90 percent for preprimary, 49-134 percent for primary, 14-101 percent for secondary, and 1.5-52 percent for tertiary school.⁶ The means for all DMC gross enrollment rates are 31.5 percent for preprimary, 101.8 percent for primary, 54.3 percent for secondary, and 15.3 percent for tertiary school. Thus there is an inverted U with the highest enrollment rates for primary school, followed by secondary school. The medians are quite similar for primary and secondary school, but are substantially lower for preprimary and tertiary school—implying that for the latter two levels the distributions are skewed relatively to the right due to some very high enrollment DMCs (namely Hong Kong, China, with 90 percent and Korea with 85 percent for preprimary, and Korea at 52 percent for tertiary). For the preprimary level the variation across countries is relatively large while for the primary level it is relatively small, with the secondary and tertiary levels in between.⁷ The preprimary and tertiary enrollment rates (more so the former) are fairly strongly associated with per capita income, but the primary and secondary enrollment rates much less so.

Both Indonesia and the Philippines have the same general inverted U pattern of enrollment rates across schooling levels as occurs on average across all DMCs, and both have primary enrollment rates 10 percent above the predictions based on the experience of all DMCs (there are no data for Bangladesh). But there are some differences from the experience of all DMCs in the details of the experiences of these two countries. Both (particularly the Philippines) have relatively low preprimary enrollment rates, substantially below what would be predicted on the basis of all DMCs (with discrepancies of -49 and -85 percent of the actual rates). These relatively low preprimary enrollment rates raise the question of whether children in these two countries are disadvantaged in comparison with other DMCs when they enter primary school. Indonesia also has secondary and tertiary enrollment rates that are substantially below the predictions based on all DMCs (with discrepancies of -21 and -49 percent of the actual rates). In contrast, the Philippines has secondary and tertiary enrollment rates that are substantially above the predictions based on all DMCs (with discrepancies of 25 and 51 percent of the actual rates). If schooling at the secondary and tertiary levels is likely to become more important in dealing with market and

⁶ The gross enrollment rates give reported enrollment as a percentage of the population in the normal age range for that school level. They may exceed 100 percent if there are students who are younger or older than those in the normal age range for that school level.

⁷ The coefficients of variation for the four levels are 25.1, 3.1, 11.8, and 12.6.

technological changes, as some experts predict, the Philippines would seem to be much better positioned than Indonesia.⁸

2. Expected Grades of Schooling for a Synthetic Cohort

This is a summary measure of the enrollment rates and is calculated by asking how many grades of schooling would a cohort of students get if the enrollment rates are those that are currently experienced (not including preprimary schooling). The range of expected grades of schooling among DMCs is considerable, from 5.6 for Papua New Guinea to 13.2 for Korea, though there is not a significant association with per capita income. The mean and median are about the same at 9.6 and 9.4 grades, respectively. The expected grades of schooling for a synthetic cohort in Indonesia is 9.7, at about the overall mean for DMCs and at about the predicted level for the country based on the overall experience of DMCs. In sharp contrast, the expected grades of schooling for a synthetic cohort in the Philippines is 12.0, substantially above the overall mean for DMCs and substantially above the predicted level for the country based on the overall experience of DMCs. This way of summarizing the enrollment rates thus again emphasizes the considerable difference between the extent of schooling investments in the Philippines and Indonesia.

3. Public Expenditures on Education

Public expenditures on education are an important source of resources for education in most countries. As a percentage of GNP they vary considerably among DMCs, from 1.0 percent in Cambodia to 6.8 percent in the Kyrgyz Republic, but without a significant association with per capita income. The mean and median are about the same at 3.9 and 4.0 percent, respectively. The three project countries all have about the same percentage of GNP devoted to public expenditures on education—2.3 percent for Bangladesh and 2.2 percent for Indonesia and the Philippines. These all are considerably below the percentages predicted by the experience of all DMCs given their respective real products per capita—with discrepancies from -48 to -67 percent. Such comparisons raise the question of whether sufficient public resources are being expended on education in the three project DMCs, though the underlying question of more fundamental interest concerns total resources, whether public or private.

Public expenditures on education as a percentage of total government budgets range from 7.4 percent in Viet Nam to 23.1 percent in the Kyrgyz Republic. The mean for all 19 DMCs for which data are available is 14.9 percent, somewhat below the median at 17.0 percent, which reflects

⁸ But it should be noted that the Philippines long has had high schooling in comparison with other DMCs controlling for per capita income, but that has not led to a better development experience over the past three decades (see Behrman and Schneider 1994).

the concentration of about a third of the DMCs with data of 17–18 percent in combination with five countries spread out in the lower tail below 12 percent (Viet Nam 7.4, Sri Lanka 8.1, Bangladesh 8.7, Bhutan and Cambodia 10.0 percent). In contrast with public expenditures on education as a percentage of GNP, these expenditures as a percentage of total government budgets are significantly positively associated with real product per capita. Thus DMCs with higher per capita income tend to spend larger shares of their government budgets on education but also tend to have smaller government shares of total product.⁹ Information on this variable is available, unfortunately, only for one of the three project DMCs. Bangladesh is reported to allocate 8.7 percent of its government budget to education, which is substantially below the 12.2 percent predicted on the base of the experience of all DMCs, given Bangladesh's GDP per capita in PPP dollars. This reinforces the question above of whether sufficient public resources are being devoted to education.

4. Percentage Distribution of Recurrent Expenditures Among Schooling Levels

These distributions vary considerably among DMCs, from 26.9 percent (Hong Kong, China) to 63.9 percent (Philippines) for the primary level, from 10.1 percent (Philippines) to 43.5 percent (Lao People's Democratic Republic) for the secondary level, and from 3.2 percent (Vanuatu) to 30.0 percent (Hong Kong, China) for the tertiary level. The means (which are very close to the medians) for the three levels, respectively, are 45.2, 29.3, and 14.7 percent. There is a weak but significant tendency for the shares devoted to the primary and secondary levels to increase with GDP per capita. Bangladesh allocates about equal percentage shares to the primary and secondary levels (43 and 44 percent, respectively) and a relatively small share to the tertiary level. In comparison with the shares predicted by the experience of all DMCs, Bangladesh allocates much more to the secondary level and much less to the tertiary level (as well as a little less to the primary level). The Philippines allocates the largest share among all DMCs (63.9 percent) to the primary level, the second largest share (23.5 percent) to the tertiary level, and the smallest share (10.1 percent) to the secondary level. In comparison with the shares predicted by the experience of all DMCs, the Philippines allocates much more to the primary level and somewhat more to the tertiary level (and therefore much less to the secondary level).

⁹ The correlation between the government share in product and real GDP per capita in PPP dollars is -0.26. This reflects that, among the DMCs that have both of these variables, the six largest shares of government in product are for four relatively low per capita product DMCs (40 percent for Bhutan, 38 percent for Sri Lanka, and 29 percent for India and the Kyrgyz Republic) and two medium per capita product DMCs (34 percent for Malaysia and 29 percent for the Fiji Islands) and the six smallest shares are for three of the four DMCs with the highest per capita product for which such data are available (16 percent for Hong Kong, China and 21 percent for Korea and Thailand) as well as for three DMCs with relatively low product per capita (22 percent for Nepal, 19 percent for the PRC, and 10 percent for Cambodia).

These two project DMCs, thus, take very different strategies regarding the allocation of public resources among the three levels (data are not available for Indonesia). If, as is claimed by some such as Psacharopoulos (1994), the social rates of return are highest to primary schooling, the Philippine strategy with high concentration of public expenditures on primary schooling has efficiency advantages. But the empirical basis for such claims is weak because the underlying estimates do not include the possibility of social benefits beyond private ones, which some commentators claim may increase the true social rates of returns relatively for tertiary schooling, particularly in science and engineering. If the critical bottleneck in the future is likely to be increasingly at the secondary level as Sussangkarn (1990) has claimed (at least for Thailand), then from an efficiency perspective Bangladesh may be following the better strategy. From the point of view of distribution, the Philippines seems to be favoring substantially the poor with resources to the primary level and the better-off with resources to the tertiary level, presumably to the disadvantage of those in between whom Bangladesh is favoring. Of course there are other critical questions that need to be addressed regarding these strategies, including, importantly, the extent to which private resources are used differentially across school levels. But the differences in these patterns raise some important questions about resource allocations among school levels for the project.

5. Private Enrollments as Percentage of Total Enrollments at Different School Levels

There is considerable variation among DMCs in the shares of private enrollments in total enrollments for the three school levels for which data are available. The ranges are from 0 to 100 percent for the preprimary level, from 0 to 96 percent for the primary level, and from 0 to 87 percent for the secondary level. The respective means are 56.9, 10.7, and 23.4 percent, suggesting a V-shaped pattern across these three school levels. The medians for the primary and secondary levels at 4.0 and 6.0 percent are much lower than the means because for these two school levels the distributions are concentrated at relatively low percentages with a few outliers with small populations (e.g., Fiji Islands, joined by Kiribati and Tonga for the secondary level) with quite high percentages. Both Indonesia and the Philippines also have a V-shaped pattern across these three school levels (data are not available for Bangladesh). Compared with the private enrollment rates as percentages of total enrollment rates predicted by the experience of all DMCs, Indonesia has higher private shares at all three levels. The Philippines has about the predicted percentage at the preprimary level, a much lower than predicted percentage at the primary level, and a higher than predicted percentage at the secondary level (with the latter two consistent with the high share of public resources allocated to the primary level and the low share allocated to the secondary level that are noted above). Such differences provide some additional clues about quite different public-private strategies followed in these two countries.

C. Distribution of Education

There are a number of aspects of the distribution of education that are of interest. The distributions by gender, ethnic group, region, urbanization, sociocultural background, income, caste, tribe, race, and national origin are some common examples. The general patterns (though not without exceptions) in the DMCs indicate that males, majority ethnic groups, urban residents, residents of more prosperous areas, and those from higher-income families average more schooling. An ADB paper by Lee (1998) provides a study of such aspects of distribution in the DMCs.

For most of these aspects of distribution, very few, if any, statistics permit placing the experience of the three project DMCs within the broader context of all DMCs as above in this section. One exception pertains to gender.

Table 3 presents basic aggregate statistics on selected aspects of gender and schooling for the three DMCs of particular interest for this study and, for comparison, basic summary statistics

Table 3. Statistics Related to Gender for Three Project Developing Member Countries and Summary Statistics for All Developing Member Countries

Developing Member Country	Gender	Male to Female	Male to Female Gross	
	Development Index, 1994	Adult Literacy Rates, 1994	Primary 1993	Secondary 1992
Bangladesh ^a	0.34 0.47 (-39%)	2.1 1.6 (23%)	1.2 1.2 (0%)	1.9 1.5 (24%)
Indonesia ^a	0.64 0.64 (1%)	1.2 1.3 (-12%)	1.0 1.1 (-10%)	1.2 1.3 (-7%)
Philippines ^a	0.65 0.58 (10%)	1.0 1.4 (-43%)	1.0 1.1 (-13%)	0.9 ^b 1.4 (-50%)
All Developing Member Countries				
Mean	0.62	1.5	1.2	1.4
Median	0.64	1.2	1.0	1.2
Standard Deviation	0.16	0.62	0.26	0.52
Range	0.32–0.85	1.0–3.2	1.0–2.0	0.8–2.8
Number of Countries	23	25	22	21
R ^{2c}	0.731 ^d	0.179 ^d	0.117 ^d	0.155

Sources: Calculated from Appendix Table A3. Original sources for country data are UNDP (1997), UNESCO, and various national sources as presented in Lee (1998, Tables 1, 3, 5, and 6).

^a The first item in each cell for the three DMC project countries is the value reported in Appendix Table A3. Beneath the actual data is the value predicted by a regression on the real GDP per capita in PPP terms for all DMCs for which data are available for those variables (see last row for R² for this regression).

^b 1980.

^c This row gives the adjusted R² for the regression among all DMCs for which data are available for the regression used to predict the values for the three project countries conditional on their respective real GDP per capita in PPP terms and the number of observations used in the regressions. The underlying relation is linear or semilog (the latter indicated by ^d), depending on which is more consistent with the variance in the variable being predicted.

^d The right-side real GDP per capita PPP variable is in *ln* terms so that the relation is in semilog form.

for all DMCs for which these data are available (Appendix Table A3 gives the individual country data. The table has information that is presented in a manner similar to that in Table 2.) The summary statistics for all DMCs include the mean, median, standard deviation, and range, and the consistency (R^2 adjusted for degrees of freedom) of each variable with real GDP per capita in PPP dollars among the DMCs for which data are available. For the three DMCs on which this study focuses, for each variable the top entry is the actual value of the variable for that country and the bottom entry is the value predicted on the basis of a regression for all DMCs and the real GDP per capita in PPP dollars for that country (with the percentage discrepancy between the actual and the predicted values relative to the actual value in parentheses). The distribution of each of these variables across the DMCs is now summarized, with emphasis on where in this distribution the three project DMCs are situated.

The Gender-related Development Index (GDI) uses the same variables as the HDI—life expectancies, education attainment, and income—but adjusts the average outcomes for a country to reflect disparities between females and males in these outcomes (for details see UNDP 1993). Among the DMCs for which both are available the patterns are almost the same; the adjusted R^2 for a regression of GDI on HDI is 0.98. Among the DMCs the GDI ranges from 0.32 (Nepal) to 0.85 (Singapore), with a fairly strong relation to GDP per capita in PPP dollars (i.e., the adjusted R^2 is 0.73). Bangladesh has a GDI of 0.34, the second lowest among the DMCs for which data are available and substantially below the value of 0.47 predicted from Bangladesh's GDP per capita and the experience of all the DMCs. This is in contrast to the other two project countries, Indonesia and the Philippines, which have GDIs of 0.64/0.65 that are at about or slightly above the mean and median for all DMCs and at (Indonesia) and above (the Philippines) the values predicted by the experience of all DMCs conditional on their respective GDPs per capita.

The GDI, as noted, uses education attainment and gender disparities in education attainments as one of its three major components. Table 3 also includes three variables that are directly reflective of gender differences in education: the male/female ratios for adult literacy, for primary school gross enrollment rates, and for secondary school gross enrollment rates. All three of these indicators are highly correlated among DMCs with the GDI (with correlation coefficients of 0.81, 0.79, and 0.91). For all three of these indicators at the means for all DMCs, there historically was (for current adult literacy), or currently is (for current enrollments), more investment in the education of males than of females (so all the means exceed one). That the mean of 1.5 for past education (as reflected in literacy for current adults) is greater than the mean of 1.2 for current primary enrollments (which generally will result in literacy) suggests that, on average, the extent to which males are favored in basic education has been declining among DMCs. The larger ratio at the means for male/female secondary school enrollments than for primary school enrollments, however, suggests the persistence of substantially greater investments in male than in female education beyond the basic level. For each of these three indicators, finally, the medians are less than the means because the means are increased by a few countries (e.g., Afghanistan, Pakistan, Nepal, Bhutan) for which investment in male education is much greater than in female education even though in most DMCs the ratios are close to one. In fact the median (as well as

the lower end of the range) for the male/female ratio of primary school enrollments is 1.0 and for five DMCs for secondary enrollments it is less than one (i.e., Cambodia, Malaysia, Micronesia, Philippines, and Sri Lanka).

The three project DMCs have fairly different indicators of the extent to which investments in education have been greater in males than in females. For Bangladesh the male/female ratios of education investments have been the greatest, at 2.1 for adult literacy, 1.2 for gross primary enrollments, and 1.9 for gross secondary enrollments. The comparison of the first with the second of these suggests a substantial recent decline in the extent to which investments in basic education is greater for males than for females, but the third suggests an ongoing large gender differential beyond basic education. Both for adult literacy and for secondary enrollments—but not for primary enrollments—the actual male/female ratios of education investments are greater than predicted on the basis of the experience of all DMCs and Bangladesh's real GDP per capita. For Indonesia the male/female ratios of education investments are much smaller than for Bangladesh though somewhat larger than for the Philippines, with a ratio of 1.2 for adult literacy, 1.0 for gross primary enrollments, and 1.2 for gross secondary enrollments. The comparison of the first with the second of these suggests a recent decline in the extent to which investments in basic education is greater for males than for females, but the third suggests an ongoing gender differential beyond basic education. For all three of these indicators the actual ratios of male to female education investments are smaller by 7–12 percent than predicted on the basis of the experience of all DMCs and Indonesia's real GDP per capita. For the Philippines the male/female ratios of education investments have been the smallest, not only among the three project countries but among almost all DMCs, with ratios of 1.0 for adult literacy and for gross primary enrollments and 0.9 (in 1980) for gross secondary enrollments. The comparison of the first with the second of these suggests no substantial recent decline in the extent to which investments in basic education differ between males and females, and the third suggests a gender differential beyond basic education with higher enrollment rates for females than for males. For all three indicators the actual male/female ratios of education investments are smaller than predicted on the basis of the experience of all DMCs and the Philippines' real GDP per capita.

II. BANGLADESH¹⁰

Bangladesh has made substantial progress in improving access to education, especially at the primary level. Net enrollments for primary school ages, which stood at less than 50 percent in 1971, increased to 85 percent in 1999. The quality of education, however, remains extremely poor as indicated by high dropout rates at the primary level and failure rates of secondary students

¹⁰ This section draws on the country report on Bangladesh by Masum (2000).

in public examinations at the university level. All indicators point to gross inefficiency and poor management of the education system. At the same time, public spending on education since 1995 has been on the decline. With the current high rate of growth of enrollments at all levels, unless resource allocation, both public and private, to the education sector can be significantly increased, it will be difficult even to maintain the current level of coverage and quality standards. Hence the major issue for decentralization in Bangladesh is how it can relieve fiscal pressures and mobilize increased resources for maintaining and improving the coverage and quality of education.

A. Structure of Education

In Bangladesh, primary schooling begins at the age of six, is compulsory and free, and consists of 5 years (classes I–V). Secondary education consists of 3 years of junior secondary education (classes VI–VIII), 2 years of secondary (classes IX–X) and 2 years of higher secondary (classes XI–XII). Public examinations are given at the end of Class X, the Secondary School Certificate (SSC), and at the end of Class XII, the Higher School Certificate (HSC). Results of these examinations determine eligibility for transition to the next level. Students who succeed in passing the SSC examination have the option to join a college for higher secondary education or to enroll in a technical institute for a technical education. The results of the HSC determine admission to undergraduate education, of 2 to 4 years, is offered in a number of public and private universities, degree colleges, technical colleges, and specialized institutions. Postgraduate education, normally of 1 or 2 years, is provided at universities and selected degree colleges and institutions.

B. Access to Schooling

Substantial progress has been made in expanding primary school enrollments. This is thought to be largely the result of the passage in 1991 of the Compulsory Primary Education Act that provided for universal compulsory primary education. The Food for Education Program introduced in 1993/94 also contributed to higher enrollments and retention of children from poorer families.¹¹ Primary enrollments increased from 12.6 million in 1991 to 18.4 million in 1998. Most of the increase was accommodated by increases in enrollments in nongovernment schools, either in schools initiated by local communities or by nongovernment organizations. The latter play an important role in providing primary education to underserved populations. Net enrollments stood at 85 percent (in 1999) with females making up 48 percent of enrollments. Access to primary schools, however, remains unequally distributed among different socioeconomic groups. The net enrollment rate for slum children of Dhaka City in the 6–11-year age group is only around 60 percent—a

¹¹ The Program, which provides 15 kilograms of wheat per month to landless poor families for sending their children to school, covered 17,403 schools in 1998 benefiting 2.3 million students belonging to 2.2 million families.

level that is even lower than rural enrollment rates. Enrollment rates are also low for very poor households—only about 40 percent of children from such households are enrolled in schools because of the high opportunity cost of sending children to school.

The marked increase in enrollment and completion rates at the primary level during the 1990s increased the pool of potential enrollees at higher levels and thereby helped raise enrollment rates at the junior secondary and secondary levels. Enrollments increased from 5.1 million in 1995 to 6.3 million in 1999, an increase of 24 percent. In 1997, 44 percent of the age group 11–13 were enrolled in junior secondary while 27 percent were enrolled in secondary school (World Bank 1999). In 1995, the corresponding figures were 38 percent for junior secondary and 25 percent for secondary school (ADB 1998a), all of which clearly points to improvements in access to secondary education.

The improved access to secondary schools is due to the fact that tuition fees are heavily subsidized by the Government. Tuition fees are nominal in government secondary schools as the Government virtually bears the full costs. Nongovernment secondary schools are also subsidized with the Government paying 80 percent of basic salaries, house rent, and medical allowances to teachers appointed against sanctioned posts of all recognized nongovernment secondary schools. The Government also provides occasional grants for construction and maintenance and for teacher training at training institutes. The remaining resource needs are met largely from student fees, but there is also some income from other sources.

However, nonschool costs for uniforms, transport, and especially private tutoring¹² (in addition to tuition fees) add significantly to the cost of schooling, thereby limiting access of children from poorer families. Another reason for differential enrollments across socioeconomic groups is differential physical access. Schools, most of them belonging to the private sector, have not been set up on the basis of any school mapping exercise. Consequently some backward and poorer regions are not served by any secondary school whereas prosperous regions have experienced a proliferation of schools. Further, in a country where nearly half the population lives below the poverty line, the opportunity cost of education in terms of income forgone that could be derived from child labor is potentially significant. For the last reason, to improve access the Government has intervened with programs like Food for Education, Primary Education Stipend Project, and Stipend for Girl Students at secondary schools outside municipal areas.

C. Quality of Education

It is widely perceived that students complete 5 years of primary education with a mastery of only about 3 years of the content. A study of basic skills among the rural poor shows an even more distressing reality—that only one third of those who have completed primary school have

¹² Private tutoring is heavily relied upon in student preparations for public examinations. Hence, even in the absence of school fees, income can be a significant determinant of enrollments, especially at the secondary level and higher.

mastered basic skills in reading, writing, and oral and written arithmetic. Every year the top 20 percent of students of Class V of the primary schools sit for the primary scholarship examination. Of those who sat for the examination in 1995, only 24 percent passed (i.e., with 33 percent or more correct answers). This implies that only 5 percent of the primary school students in grade V achieved a minimum recognized level of competence.

Some of the recognized causes of the poor and deteriorating quality of primary education in Bangladesh are the limited number of contact hours (daily school time of 120 minutes for classes I and II and 240 minutes for classes III to V), and high and increasing student/teacher ratios because of the surge in enrollments and the poor motivation of teachers due to their overburdening by nonacademic and nonschool responsibilities.

There are also indications that the quality of secondary education is low. Failure rates on the SSC examinations are high.¹³ Some of the recognized causes of the poor quality of education at the secondary level are increasing student/teacher ratios due to growth in secondary enrollment, stringent government regulations relating to sanctioning of teaching posts (for 60 students in a class a post is sanctioned and a second post is not sanctioned unless the class size reaches 120), inadequate physical facilities, faulty recruitment (recruitment of teachers with expertise having little relevance to teaching at school level), too few inspections and above all, poor motivation of teachers.

D. Management of the Education Sector

There are three administrative tiers of government below the central Government. The country is divided into six divisions, each placed under a Divisional Commissioner; each division is divided into districts (totaling 64) each headed by a Deputy Commissioner; and each district is divided into *upazilas* (totaling 460) each headed by an Upazila Nirbahi Officer and *thanas* (totaling 36) in metropolitan cities.

The overall responsibility of management of primary education lies with the Primary and Mass Education Division (PMED). While the PMED is involved in the formulation of policies, the responsibility for implementation rests with the Directorate of Primary Education (DPE) and its subordinate offices reaching down to the *upazila* level. The DPE's responsibilities include recruitment, posting, and transfer of teachers, arranging for in-service training, distribution of free textbooks, and supervision of schools. At the school level (both government and nongovernment)

¹³ Unfortunately the SSC results may be flawed as an indicator of learning achievements of the students at the secondary level for a number of reasons that include: (i) subvention payments to nongovernment schools depending on the schools' performance in the SSC examination, as a result of which, quite often, a sizable number of students do not take the examination lest they perform poorly; (ii) for the same reason as (i), teachers serving as monitors in examination centers often facilitate and encourage copying by students; and (iii) heavy reliance on private coaching prior to SSC examinations.

are school management committees (SMCs) formed under government directives with well-defined functions. The SMC consists of 11 members representing guardians, teachers, donors, and local elites. There are also parent-teacher associations (PTAs) whose role is to build a favorable teaching and learning environment in schools.

The responsibility for school construction, repair, and supply of school furniture lies with the Facilities Department (FD) and Local Government Engineering Department (LGED). The National Curriculum and Textbook Board (NCTB) is responsible for development of the curriculum and production of textbooks.

For secondary schools the Ministry of Education (MOE) is responsible for formulation of policies, while the Directorate of Secondary and Higher Education (DSHE), under the Ministry of Education, is responsible for implementing the same at the secondary and higher education levels. The NCTB is responsible for developing curriculum, and publishing standard textbooks. Six region-based Boards of Intermediate and Secondary Education are responsible for conducting the two public examinations, SSC and HSC, in addition to granting recognition to nongovernment secondary schools.

In principle, a highly centralized bureaucracy manages government secondary schools, but in practice schools enjoy some autonomy. Principals have considerable operational freedom within the school campus. However, the teachers are centrally recruited and posted to individual schools, and their expertise often fails to match the needs of the schools. Principals have no authority to take corrective measures; neither can they fill any vacant post and have to wait for some time before a new recruit or an existing staff member joins on transfer from another school.

Nongovernment secondary schools have SMCs that are formed according to directives of the Government and are responsible for mobilizing resources, approving budgets, controlling expenditures, and appointing and disciplining staff. Government secondary schools do not have SMCs. The principal is responsible solely for running the school and is supervised by the Deputy Director of the respective district.

In short, the management of both primary and secondary education in Bangladesh is highly centralized. In the case of primary schools it is through a chain of bureaucratic apparatus reaching to the *upazila* level and beyond. At the secondary level, management control is conducted indirectly through directives in the case of nongovernment schools, and directly, in the case of government schools. Although SMCs have been formed in all primary and nongovernment secondary schools, SMCs in primary schools have little to do; SMCs in nongovernment secondary schools are vested with authority but appear not to be doing enough.

E. Financing

Bangladesh is heavily dependent on external sources of financing for the development budget. External aid finances more than 50 percent of the development expenditure on education.

Development expenditure on education increased from an average of 0.27 percent of GDP during 1973–1980 to 1.06 percent of GDP in 1995, taking total expenditure as a percentage of

GDP to a peak of 2.4 percent in 1995. However, from that date expenditure on education declined, to 2.2 percent in 1998, primarily as a result of the fall in development expenditure. Real public spending per student per annum for primary education declined from Tk570 in 1993/94 to Tk525 in 1995/96, with possible adverse effects on the quality of education.

Teacher salaries in government primary schools and grants for salary subvention for nongovernment primary schools together accounted for 96.7 percent of total current spending on primary education in 1998, with operation and maintenance accounting for only 3.3 percent. Very little if anything is left for spending on other pedagogical inputs. Development expenditures in primary education are spent largely on building, renovating, and improving physical facilities.

At the secondary level, 79 percent of expenditures go toward teacher subvention payments to nongovernment secondary schools while grants from the development budget are primarily for construction.

F. The Case for Decentralization of the Education Sector

Despite considerable investment of scarce resources in the education sector, the quality of education in Bangladesh has probably deteriorated. A decentralized, well-functioning education system with a proper balance of resources and authority at the school level that is accountable to the communities might result in a better allocation of resources and contribute to improvement in the quality of education. This is the most forceful argument in favor of decentralization of education in Bangladesh.

Moreover, the resource needs for the education sector are fast expanding due to higher enrollment rates at all levels of education. In the face of the decline in the share of public expenditure on education, and the high level of dependence on donor funding for development expenditures, there is virtually no other option but to seek greater community support. This can be expected only if the education system is properly decentralized and made accountable to the community it serves.

1. Decentralization Efforts

Before the arrival of the British, Bangladesh had a highly decentralized system of education. Under British rule, Wood's Education Dispatch of 1854 accepted the principle that mass education was a state responsibility. Departments of Education were set up in all the provinces. Strict school discipline was enforced through an intensive system of inspection that also ensured that the Government determined the curriculum that was adopted, and that relevant government rules and regulations were complied with. The process of centralization thus began. After independence in 1947, the Government of the new state of Pakistan, facing the challenge of national integration, decided to retain its firm centralized control in the education sector. State control on education was perpetuated after Bangladesh gained independence from Pakistani rule in 1971. The constitution of Bangladesh adopted four fundamental state principles—namely, nationalism,

democracy, socialism, and secularism—for achieving the objectives of the state. Control over the education sector was further tightened in pursuit of these principles, culminating in the nationalization of primary education in 1973.

In 1983, the Government adopted a policy of administrative decentralization. Services of various functionaries of the central Government including the *upazila* education officers were placed at the disposal of the *upazila parishad*, a local council, and oversight of primary education was transferred to local governments. The *upazila parishad* was also given the responsibility of recruiting teachers in addition to the supervision of school management and development activities. Subsequently, however, the authority to recruit teachers was taken away in response to agitation by teachers and alleged malpractices in the recruitment process. In 1991, with the change in central Government, the local government at the *upazila* level was abolished. The Government enacted a new law bringing back local government at the *upazila* level, but the *upazila* elections had not yet been held at the time of the preparation of this working paper.

The rapid expansion of primary schooling following the enactment of compulsory primary education in 1991 was facilitated by a decentralized approach to school expansion. The Government allowed communities to set up schools to cater to the increase in demand for primary schooling. Consequently, the number of nongovernment schools surged from 12,000 to 26,000 between 1991 to 1998, while the number of government schools remained unchanged at 38,000.

For secondary education, the Government controls nongovernment schools by linking government subvention to adoption of national curriculum and textbooks. Management of nongovernment schools, however, remains largely decentralized. The SMCs of these schools have absolute authority in hiring teachers, subject to government regulations, but their authority to fire staff is limited because such cases have to be referred to the Boards of Intermediate and Secondary Education.

2. Draft National Education Policy, 1998

Decentralization is among the measures that were proposed in the Draft National Education Policy, 1998 to improve the quality of education. The proposals include the complete decentralization of the management of primary education. The Draft Policy recommended granting additional authority to SMCs, formation of PTAs and involving them in school activities, lodging the internal supervision of each school primarily with the principal, and strengthening and decentralizing external supervision and monitoring by, for example, limiting the number of schools to be supervised and monitored by each official at a realistic level. The proposals also include the decentralization of secondary education up to *upazila* level. The Draft Policy recommended that SMCs should be strengthened by giving them more authority and stressed the need for supervision by society involving guardians, local people interested in promoting education, leaders, and the local government. For academic supervision and monitoring, it proposed the creation of adequate posts of inspectors so that each school is thoroughly inspected at least once a quarter.

G. Assessing the Impact of Decentralization in Bangladesh

To assess the impact of some aspects of decentralization, a mini-survey was carried out among 205 schools as part of this project. These schools included 92 government primary schools, 18 government secondary schools, and 95 nongovernment secondary schools. Schools were drawn from both urban and rural areas of two regions—Dhaka and Kushtia-Rajbari-Faridpur (KRF). The individual schools were selected at random from among those accessible with relative ease from the point of view of the investigators (the schools left out however were not necessarily located in remote areas). The survey was conducted over 2 months, from August to September 1999.

Principals of all schools (except one government school, due to his non-availability) were interviewed for information relating to various aspects of the schools using structured questionnaires. Their personal opinions on a number of issues were also recorded. Although there were plans to interview the chairperson, and five nonteacher members from the SMCs of each school, due to the non-availability of the persons concerned, it was not possible to conduct all the interviews. About five teachers and five guardians of students of each school were also interviewed. Finally, a standard 30-minute test to ascertain academic achievements was conducted for about 30 students studying in Class V of primary schools and Class VIII of secondary schools.

The aspect of education decentralization about which there is the most information and most experience in Bangladesh is school-based management (SBM). SBM has been in practice for a long time in nongovernment secondary schools, with SMCs running the schools. SMCs have also been instituted in all primary schools to increase community participation in managing and financing education.

The Bangladesh country study analyzed the survey it conducted and information gathered from several focus group discussion meetings with concerned people held both inside and outside Dhaka to assess the impact of SMCs in shaping education outcomes and their determinants. The analysis is based on cross-tabulations, which of course do not permit control for many factors that could affect the variables of concern.

1. Findings of the Survey: Mean Student Achievement Scores

Table 4 presents mean student achievement test scores by school types and geographic areas.

a. Primary Schools

The low quality of primary schooling is reflected in the test scores of students sampled. The overall score for the three subjects averaged 29 percent, which is less than the standard pass mark of 33 percent. English scores are the worst, at 11 percent. There is little difference in the overall score between the two regions but rural-urban differences are substantial notably in the Dhaka region, where the average score of urban schools is 7 percent compared with 50 percent in rural schools (Figure 2). In contrast, in the KRF region the difference was insignificant—29 percent in rural areas compared with 28 percent in urban areas.

Figure 2. Average Student Achievement Test Scores (%)
in Government Primary Schools, by Region and Subject,
Bangladesh

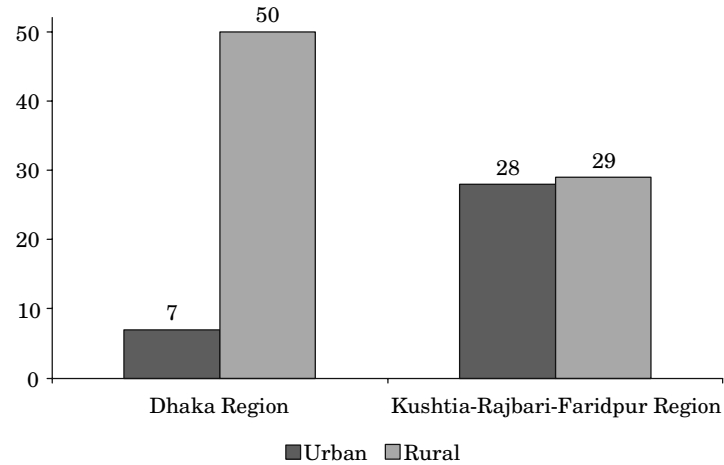


Table 4. Average Student Achievement Test Scores by School Type,
Rural-Urban Distribution, and Regional Distribution

	No. of Schools	Test Scores (Percent)			Total
		Bengali	English	Math	
Government Primary Schools					
All Regions	92	36	11	40	29
Rural	56	46	16	60	40
Urban	36	21	2	8	10
Dhaka Region	61	36	9	40	28
Rural	30	54	18	79	50
Urban	31	18	1	3	7
Kushtia-Rajbari-Faridpur Region	31	37	12	37	29
Rural	26	37	13	37	29
Urban	5	38	6	39	28
Government Secondary Schools					
All Regions	18	33	37	50	40
Dhaka Region	10	28	36	46	37
Kushtia-Rajbari-Faridpur Region	8	39	39	55	44
Nongovernment Secondary Schools					
All Regions	95	30	25	35	31
Rural	58	34	27	42	35
Urban	37	25	21	25	24
Dhaka Region	56	27	24	30	27
Rural	26	33	28	40	34
Urban	30	22	21	21	22
Kushtia-Rajbari-Faridpur Region	39	35	25	43	35
Rural	32	35	26	43	35
Urban	7	38	22	44	35

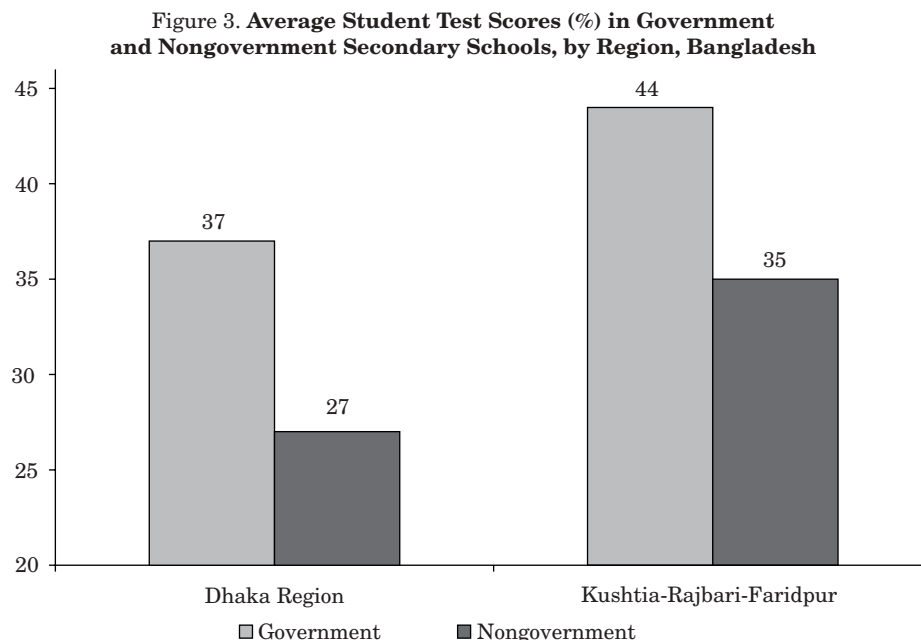
b. Secondary Schools

Students in government schools performed relatively better (40 percent) than students in nongovernment schools (31 percent). Both government and nongovernment schools performed better in the KRF region than in the Dhaka region (Figure 3). In the Dhaka region, rural nongovernment secondary schools, in general, performed better than their urban counterparts even though a few urban schools performed reasonably well. In the KRF region, on the other hand, there is no difference between urban and rural schools, with both averaging 35 percent.

2. Correlates of Mean School Achievement Scores

The survey solicited responses on a wide range of variables that are usually associated with schooling outcomes and are often interpreted to have causal effects on schooling outcomes. These can be grouped into four broad categories:

- (i) the quality of education services provided by the school, which is a function of physical inputs such as availability of adequately well-furnished and spacious classrooms; library and laboratory facilities; availability of well-qualified, well-trained, and highly motivated teachers discharging their duties in a planned and organized manner; a scientific and relevant curriculum; and adequate supply of necessary teaching and learning aids;



- (ii) students' involvement in education through regular attendance at schools, effective participation in various school activities, and study at home;
- (iii) home environment and role of parents or other guardians; and
- (iv) school management.

The results are summarized in the following paragraphs.

a. Primary Schools

- (i) Rural primary schools were better housed, i.e., were housed in buildings, compared with their urban counterparts. Only 14 percent of urban primary schools were housed in buildings compared with 87 percent of rural primary schools. In Dhaka City none of the schools surveyed were housed in buildings. The majority of rural schools, however, did not have adequate accommodation for all students enrolled and their classrooms were poorly furnished. Facilities such as electricity connections and libraries were better in urban schools than in rural schools.
- (ii) Both rural and urban schools reported shortages of teachers with the situation more severe in urban areas. However, primary schoolteachers in urban areas on average have higher qualifications than those in rural schools, even though the proportion of teachers with formal teacher training is higher in rural areas than in urban areas.
- (iii) Attendance of primary school students in their respective classes, on the day of the survey, ranged between 60 percent and 74 percent in most of the schools. The urban schools, particularly those belonging to Dhaka City, had the lowest attendance.
- (iv) Of principals of rural primary schools, 82 percent felt that their teachers lacked aptitude, motivation, and adequate knowledge in the subjects that they were teaching. On the other hand, principals of *all* urban primary schools reported the same.
- (v) In most rural primary schools, the principals had HSC as their highest academic attainment, and very few had training in education beyond primary training institute.
- (vi) All the rural primary schools had regular and duly constituted SMCs whereas only about four fifths of the urban primary schools surveyed had regular and duly constituted SMCs. Principals in rural schools had more positive responses to the role of their SMCs in the area of ensuring regular and timely attendance of teachers, implementation of co-curricular activities, and monitoring of repair of school infrastructure and furniture, etc. SMCs in urban schools did not seem to have made significant contributions at all.
- (vii) Most of the rural primary schools, 56 out of 60, had PTAs compared with only 16 out of 36 urban primary schools. But the majority of PTAs were inactive and few principals responded that the performance of PTAs was satisfactory.

b. Secondary Schools

- (i) All government secondary schools were properly housed while a wide variation in facilities was noticed among nongovernment secondary schools. Most secondary schools lacked adequate accommodation and furniture for all their enrolled students, but government schools were a little better off compared with nongovernment schools, and among nongovernment schools, urban schools enjoyed better facilities than rural counterparts. Most of the schools had adequate supplies of standard teaching aids.
- (ii) Government secondary schools had a comparatively better-educated teaching staff. Within the nongovernment sector, the urban schools had a better-educated teaching staff compared with their rural counterparts. While 86 percent of teachers of government secondary schools received some form of training in education, the percentage of teachers of nongovernment schools receiving training was 59 percent for rural schools and 72 percent for urban schools.
- (iii) Attendance of students was generally poor. Nearly half the nongovernment secondary schools for boys had less than 60 percent attendance on the day the survey was conducted. In government schools attendance was slightly better, ranging between 60 and 74 percent.
- (iv) Most of the principals expressed poor opinions about their colleagues' knowledge in the specific subjects that they taught, as well as their aptitude and motivation. Principals of only four government and 20 nongovernment secondary schools considered their school curriculum appropriate.
- (v) The principals of government schools were relatively better educated on average than principals of nongovernment schools. Principals of urban nongovernment schools, however, were best educated, with some even having research degrees. A similar picture emerges in terms of the level of training received by principals.
- (vi) Most principals of government secondary schools felt that they were adequately empowered by government regulations with respect to the enrollment of students, selection of teachers for training, disciplining teachers and students, fixing co-curricular activities, and preparation and implementation of academic programs. In the case of nongovernment schools, principals' perceptions in respect of what they could and could not do as per government regulations varied widely. However, most of the principals felt seriously constrained (even more so in rural schools) in exercising the authority that they considered they had.
- (vii) Most of the nongovernment secondary schools had SMCs. SMCs outside Dhaka appear to be properly constituted, each having a chairman and vice chairman but this is not so in the Dhaka region. SMCs operating outside Dhaka also seemed to be more active. All SMCs performed their tasks quite well, based on feedback from principals, in terms of recruitment and administration of teachers.

- (viii) Only one government school reported having a PTA; the vast majority of nongovernment schools did not have a PTA. Very few PTAs were active.

3. Relating Schooling Achievement Scores to Decentralization

In an exercise such as this, it is impossible to draw confident conclusions about relationships between the degree of decentralization and schooling outcomes. The survey found that government secondary schools had higher test scores than nongovernment secondary schools. This does not necessarily confirm any relationship with the degree of autonomy of schools. Because government secondary schools, which are located mostly in urban areas, have reasonably good physical infrastructure and other classroom facilities, and more qualified and trained teachers, it is not surprising that student scores are also better. More important, government schools may, for a variety of reasons, attract better students. It should also be noted that government secondary schools, while managed by a highly centralized education bureaucracy, in actual fact enjoy considerable autonomy because of the shortage of human resources in DSHE.

What the survey has done is to provide useful insights into the current system of management of schools and especially the role of SMCs that may provide some indication of the potential role that further decentralization of the education sector can play in improving the quality of schooling in Bangladesh.

Nongovernment secondary schools, though managed by the community through their participation in SMCs that exercise considerable power and authority, appear to have failed to fully exploit the advantages of decentralization for a variety of reasons (given below). The insights are provided by interviews of chairpersons and nonteacher members of SMCs of schools covered by the survey.

The quality of the membership and leadership of SMCs is generally poor, particularly among urban primary schools in the Dhaka region. There is a general lack of awareness about their duties and responsibilities, and their commitment. Quite often they meddle in internal affairs of the schools, making the principals ineffective in discharging their duties, which not only adversely affects the schooling outcomes, but also vitiates the overall academic environment of the schools. In schools where SMCs are properly constituted, remain active, and extend the necessary support to the principal, schooling outcomes are generally satisfactory. In nongovernment secondary schools outside Dhaka City, SMCs are properly constituted, function relatively better, and as the test scores indicate, produce better schooling outcomes than schools in Dhaka City.

In the case of primary schools, SMCs have little role to play because the education bureaucracy, through its elaborate administrative network, has firm control over all government primary schools. As a result, SMCs have failed to attract adequate community participation.

H. Implications

Despite the qualifications noted above, Masum (2000) concludes that there is a need to ensure greater autonomy of government schools. For government primary schools, the existing

control by the education bureaucracy should be relaxed. Schoolteachers should be allowed to function as teachers, rather than as petty government officials in a strict bureaucratic hierarchy as at present, similar to teachers in government secondary schools. In the case of government secondary schools, principals should be given some authority to fill vacant teaching positions with appropriately qualified teachers with the required expertise, perhaps from a panel of teachers already selected by DSHE, and some authority in fixing school fees on the basis of the income of guardians. In the case of nongovernment secondary schools, the SMCs need to be constituted and their roles defined so that they serve essentially as supporting institutions, with full executive authority for running the schools vested with the principal. The Government further should establish one government secondary school in every *upazila* to serve as a model for nongovernment secondary schools.

III. INDONESIA¹⁴

Until the eruption of the Asian financial crisis, Indonesia had been viewed by many as a model country that, along with rapid economic growth, had made impressive achievements in the education sector. Gross enrollments in primary schools increased from 62 percent in 1973 to 101 percent in 1983; junior secondary school enrollments increased from 18 percent in the early 1970s to 70 percent in 1997. In 1994 senior secondary and tertiary enrollments reached 35 and 17 percent respectively. The improvement in the gender (female/male) ratio at all levels of education is also another indicator often cited as evidence of Indonesia's achievements. By the mid-1990s, the gender ratio for primary enrollment had risen to 93 percent while the gender ratio at the senior secondary level had reached 88 percent, compared with 50 percent in the mid-1970s. Preserving these gains has hence been a priority of the Indonesian Government since the financial crisis broke out.

A. Structure of Education

Formal schooling begins at the age of seven, with 6 years of primary schooling, 3 years of junior secondary, and 3 years of senior secondary schooling. Tertiary education consists of a diploma course or an undergraduate degree that takes between 1 and 4 years. At the senior secondary level, pupils can pursue a vocational course or a general course. At all levels there are religious (Islamic) schools. Pupils in religious schools follow largely the same curriculum as secular schools but with more emphasis (up to 40 percent of the curriculum) on religious studies. At the end of the primary and junior secondary levels, pupils take a national final examination (called the Ebtanas) that determines whether they can progress to junior and senior secondary schools. University entrance examinations determine admission into the universities.

¹⁴ This section draws on the country report on Indonesia by Triaswati (2000).

In addition, Indonesia has a large informal school system consisting of an adult literacy program, an out-of-school primary education equivalency program, and more recently an out-of-school junior secondary program, a distance learning junior secondary program, and an open university.

B. Access to Schooling

The Indonesian Government's commitment to education dates back to 1950 when the first basic education law was passed committing the Government to provide 6 years of universal primary schooling. The same law committed it to fund not only public education but also to help finance private education; hence most private schools in Indonesia receive some public subsidy. However, the expansion of primary schooling did not accelerate until 1973 when windfall oil revenues channeled through a Presidential Instruction (Inpres) block grant were used to construct thousands of primary schools. In 1973 also, primary school fees were abolished. With the infrastructure in place and a crash program to train large numbers of teachers, universal primary schooling was achieved by 1983. The year 1989 marked another milestone with the passage of the fundamental education law that extended the Government's commitment to basic schooling from 6 to 9 years. Junior secondary school fees were abolished in 1994 as the Government mounted efforts to achieve 9 years of universal schooling by 2010.

By the mid-1990s, Indonesia had about 30 million students enrolled in primary schools, 8.4 million in junior secondary schools, 4.7 million in senior secondary schools, and 2.6 million in tertiary institutions. The sheer size of these enrollments underscores the magnitude of the achievements, as well as the task facing Indonesia: 82.4 percent of primary enrollments are in public schools, while the corresponding figures at junior secondary, senior secondary, and tertiary levels are 59.9, 45.4, and 42.7 percent, respectively. Indonesia therefore, unlike many DMCs, has a large system of private schools and expansion in school enrollments has occurred with fairly extensive private sector participation, particularly at higher levels of education. Indeed, as seen in Table 2, compared with the private enrollment rates as a percentage of total enrollment rates predicted by the experience of all DMCs, Indonesia has a higher private share at all three levels of schooling.

Religious schools make up a significant proportion of total enrollment—averaging about 12 percent, with the largest concentration at the junior secondary level (17 percent). The majority of religious schools are private.

In spite of the improvements in access at the primary level, secondary enrollment rates remain low. While Indonesia has primary enrollment rates that are substantially above the predictions based on the experience of all DMCs, secondary and tertiary enrollments are substantially below these predictions (Table 2). The Government's strategy to focus on the delivery of primary education appears to have traded off access to secondary schooling for large segments of the population, namely the poor and particularly those in the rural areas.

The junior secondary net enrollment rate in rural areas at 42.7 percent (1995 enrollment rates for males and females) is about two thirds the level of that in urban areas while the senior secondary enrollment rate at 20.9 percent is less than half that of urban areas. That secondary schooling is out of reach to the majority of the poor is also evident from figures on enrollment rates by income expenditure group: 1999 data show the net enrollment rate in junior secondary school for the lowest expenditure quintile at 43 percent compared with 77 percent for the richest quintile. The gap is even wider at senior secondary level with the poorest quintile showing an enrollment rate of 17 percent, compared with 63 percent for the richest quintile (Triaswati 2000, Table 4). Hence increasing junior secondary enrollment and achieving 9 years of universal schooling is a major challenge.

C. Quality of Schooling

It is widely held that the quality of schooling in Indonesia, on average, is low. Direct measures based on the Ebtanas scores are not readily available at the primary level, but at the secondary level, national examination scores show that the average quality of secondary schools, nation-wide, is poor. On a scale of 0 (minimum) to 10 (maximum), two thirds of junior secondary students score 5.5 or less; at the senior secondary level as much as 80 percent of the students score 5.5 or less (Triaswati 2000, Table 10).

Especially of concern is the low quality of basic education. The World Bank (1998) cites evidence that students leaving the basic education system generally lack competencies in numeracy, reading, and reasoning skills. Among the factors that have contributed to the low quality, the study identifies the low quality of education inputs; these include poor incentives for teachers to teach well because of the weak incentive pay structure, low learning time, poorly trained teachers, and low quality of textbooks and materials.

That inadequate financing has affected the quality of public schools is also supported by the findings of an ADB (1998b) study on education financing in Indonesia. According to this study, on a per student basis, primary schools operate on “bare-bones” budgets—while the Government provides buildings, teachers and books, there is little from recurrent budgets to support the teaching process.

The average quality of private schools, with the exception of a few very good private schools, is also believed to be poor. Private schools are more efficiently managed, and hence cost less, but private schools also employ lower-quality inputs (World Bank 1998); the average education level of private schoolteachers and principals is lower, and textbooks are less readily available, than in public schools. The Ebtanas scores appear to bear this out—at every secondary school level the average Ebtanas score of public schools is higher than that of private schools (Triaswati 2000, Table 11).

D. Management and Budgeting¹⁵

1. Management

The education system in Indonesia is large and complex. The sector falls under the jurisdiction of several ministries and has an organizational structure that has been identified as one of the factors affecting the effective delivery of education services in Indonesia:

There are several dimensions to the institutional constraints which include: organizational complexities at the primary level, overly centralized management at the junior secondary level, a fragmented and rigid budgetary process at both levels, and ineffective management at the school level” (World Bank 1998, 69).

The organizational complexity of primary education refers to the fact that primary education comes under the jurisdiction of two ministries, the Ministry of National Education (MONE) (previously the Ministry of Education and Culture) and the Ministry of Home Affairs (MOHA). While MONE is responsible for the content of education, MOHA is responsible for human resources, materials, and other resources including teaching recruitment and placement, school buildings, and all physical aspects of the school. This separation of functions between MONE and MOHA has resulted in ambiguity of managerial roles and responsibilities that has led to neglect of the quality of basic education. An example of how this has affected quality is the fact that the career development of primary schoolteachers is limited by this dual administration since promotion from primary to secondary schooling involves transferring control of staff from one ministry to another.

The administration of junior secondary education on the other hand rests with one ministry, MONE, but is overcentralized. Implementation is carried out at the provincial and district levels while budget programming and investment planning are carried out at the central level of MONE. Religious schools on the other hand come under the jurisdiction of the Ministry of Religious Affairs.

At the school level, public school principals are given little autonomy in running the school or in resource allocation (see below) and that probably has also affected the quality of schools.

2. Budgeting¹⁶

The budgetary process has drawn criticism for being fragmented and rigid. The development and routine (recurrent) budgets are prepared independently of each other by different sets of agencies. While the Ministry of Finance, MONE, and MOHA prepare the routine budget, Bappenas (National Development Planning Board), MONE, and MOHA prepare the development budget.

¹⁵ This discussion draws on World Bank (1998, chapter 5).

¹⁶ This discussion in this subsection and in the following section, *Financing*, draws on ADB (1998a).

Budget preparation for each fiscal year works on a “bottom-up” basis, beginning at the school level, working up through the local, provincial governments, and finally to the central Government. After the national budget is approved, this is followed by a “top-down” adjustment that usually consists of reductions in estimated budgets. Rigid rules govern the allocation and utilization of funds from the budget. All public schools receive funding from the center in the form of line-item budgets and they are not permitted to reallocate monies earmarked for one purpose to another line item without permission from the central Government.

E. Financing

Although Indonesia’s allocation to education as a percentage of GDP is considerably below the percentage predicted by the experience of DMCs (Table 2), the figure grossly understates the level of financing of the entire education sector. According to the ADB (1998b) study on education financing, the Government accounts for only 66 percent of total spending in the education system, with the remainder coming from families and additional nongovernment sources. The Government provides most of the funds at the primary level but its share decreases progressively at higher levels of education (Table 5 and Figure 4). Substantial government funds, however, also go to private schools, especially at the primary level—these are mainly in kind and in the form of government-paid seconded teachers.

Figure 4. Percentage of Government Financing, by Level of Schools, Indonesia

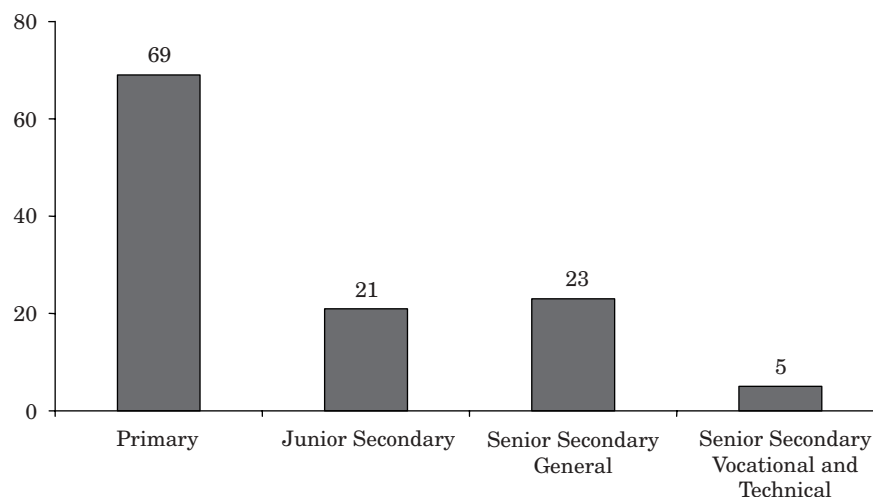


Table 5. Comparison of Private and Public Schools in Indonesia, 1995/96

Level of Schooling	Students per School ^a	Students per Teacher ^a	Receipts per Student ('000 rupiah)	Sources of Income (% distribution)		
				Government	Yayasan/ Family	Other ^b
Primary	182 (169)	24 (25)	176 (197)	69 (93)	30 (6)	2 (1)
Junior Secondary	222 (525)	16 (20)	273 (300)	21 (82)	65 (15)	13 (3)
Senior Secondary General	281 (606)	13 (15)	421 (432)	23 (79)	67 (19)	10 (1)
Senior Secondary Vocational and Technical	394 (697)	15 (13)	528 (270)	5 (78)	83 (2)	13 (2)

Note: Figures in parentheses are the figures for public schools.

^a 1997/98.

^b Other refers to savings, other government, and other community income. See ADB (1998b).

Source: Triaswati (2000, Table 2, Table 14).

Almost all schools, private or public, receive contributions from parents through their PTAs. Some of the charges are entrance fees, some are monthly levies, and some are for special funds for specific purposes. Family contributions make up a minor part of total financing for most schools, but contribute to a major part of the financing of nonsalary expenditures. All schools, public and private, under MONE, have *Badan Pembantu Penyelenggaraan Pendidikan* (abbreviated to BP3) as one form of PTA under a government ruling of 1993. The members consist of parents, school principal, teachers, and other members of the community. One of its roles is to raise funds, usually through donations from parents based on their income. While the role of PTAs in public schools is usually limited to fund raising, PTAs in private schools vary from having very limited roles to very powerful ones that include setting tuition fees, and hiring and firing teachers and principals. Family donations have become an especially important source of income for public junior secondary schools, particularly after school fees were abolished in 1994.

As noted, private schools play an important role in the delivery of education in Indonesia, especially at the secondary and tertiary levels. Traditionally, they fill an important gap in providing places for students who cannot get into public schools and for the very poor who cannot afford public schools.

In the wake of the financial crisis, government financing of education is under pressure to be cut even further. Even before the financial crisis, the Government had been under pressure to find ways of financing a rapidly expanding education system fed by a growing school-age population. In the light of inefficiencies that have been widely associated with centralization of the education administration in Indonesia, the case for decentralization of education is thought by many to be clear.

Table 6. **Strategy for Application of School-Based Management for Basic Education in Indonesia**

Aspects	Short-Term (1 st –3 rd year)	Mid-Term (4 th –6 th year)	Long-Term (7 th –10 th year)
Resource			
Principal	Training. Broader responsibility.	Training, Election of principal based on school council decision.	Broader responsibility.
Teacher	Primary: selection at province level, placement at local level. Secondary: selection at central level, placement at province level.	Primary: selection at province level, placement at local level. Secondary: selection at central level, placement at province level. Improvement in incentive system for the teacher, based on school needs.	Primary: selection and placement at local level. Secondary: selection and placement at province level. Improvement in incentive system for the teacher, based on school needs.
Controller/Head and Staff of <i>Dinas</i> <i>Dikbud</i>	Basic training.	Intermediate training.	Intermediate training.
Finance			
Routine Allocations	Maintain status quo, allocation for province level based on central decision.	Allocation at local level for teacher/administration. Staff salaries.	Given in the form of block grant based on number and rank of teachers.
Development Items	Maintain status quo; primary school (<i>sekolah dasar</i>) based on province decision, primary school (<i>sekolah lanjutan</i> <i>tingkat pertama</i>) based on central decision, such as operational, building, and laboratory. Others: block grant to school. Supplementary contribution for private school based on government budget.	All: block grant. School has flexibility in managing funding. Intensive monitoring: accountable and transparent. Block grant for private school based on government budget.	All: block grant. School has the flexibility to manage funding, controlled by school council. Intensive monitoring: accountable and transparent. Clustering the school management quality into 3 categories: “low” receive more money > medium > high. Increasing block grant for private schools.

continued on next page

Table 6. (continued)

Aspects	Short-Term (1 st –3 rd year)	Mid-Term (4 th –6 th year)	Long-Term (7 th –10 th year)
Funding from Parents	Maintain status quo (BP3).	Based on agreement with parents, accountable.	Based on agreement with parents, known by the school council.
Curriculum Material	Status quo: 20% local curriculum, 80% national curriculum, which is designed at central level.	Core (National). Curriculum: 80%, flexible hours. Local: 20%, designed at school or local level.	a. Core: based on central decision, minimum hour requirement should be fulfilled; b. Elective: guidance at central level, but material at local level, flexible hours.
Examination	Status quo, guidance at central level question prepared at province level for <i>sekolah dasar</i> , central level for <i>sekolah menengah pertama</i> (junior secondary school).	Both <i>sekolah dasar</i> and <i>sekolah menengah pertama</i> , guidance at central level, questions at province level.	Guidance and questions at central level for core courses, at province level for elective courses.
School Equipment and Infrastructure	Identification and restructuring of school equipment and infrastructure, managed at local level.	School equipment and infrastructure is managed at school level.	
Community Participation	Socialization of SBM idea, community participation through BP3.	Participation in the BP3, its role improved as follows: a. Collaboration with school in preparing the local curriculum; b. Monitoring the existing funding from community.	Committee/school council consists of: community representatives who are expert in some area, principal, teacher representatives, local representatives, parents. Representative from business community.

BP3 = *Badan Pembantu Penyelenggaraan Pendidikan*, a form of PTA.

Source: Bappenas, *School Based Management* (1998), cited in Triaswati (2000).

F. School-Based Management and the New Decentralization Laws

Decentralization is on the list of recommendations made by the World Bank (1998) to effect a more efficient allocation of resources that is necessary to bring about improvements in the quality of schools and to deal with financial pressures. Arising from these recommendations, the Government formed a task force to design a strategy for decentralization of basic education with a focus on SBM. The details of the plan drawn up by the task force are presented in Table 6. The plan spells out the strategy to phase out, over a period of 10 years, the devolution of authority

to the school and other levels of administration, on matters ranging from staff, finances, curriculum, school equipment, and infrastructure, to participation of parents and of the community in school management. The key features of the SBM plan include the use of block grants, selection and placement of primary schoolteachers at the local level, and the selection and placement of secondary schoolteachers at the provincial level. In view of the emphasis on the role that principals play in school management, the plan also spells out the training of principals as a goal to be attained in the short and medium term.

However, the SBM plan has been overtaken by events taking place at the national level with the passage of two decentralization laws (Law No. 22/1999 and Law No. 25/1999). The features of these decentralization laws that are expected to affect education are: (i) the implementation of education policies will be devolved to the district; (ii) financing for the education sector will be transferred from the central Government to the district government as regions receive more revenue under new revenue-sharing arrangements between the central and regional governments. The role of the central Government in education will be reduced to setting policies at the national level, such as providing guidelines for minimum standards of education.

At the time of preparation of this working paper (December 2000), these laws were expected to be implemented in January 2001, but the details of how decentralization would be implemented, and in particular how this would affect the education sector, were still not settled.

While uncertainty surrounds how decentralization will eventually take shape, the move to decentralize at least some aspects of education appears to be clearly under way. For instance, an initiative to decentralize the administration of junior secondary schools already occurred in 1996 when MONE shifted the preparation and implementation of several junior secondary education programs to province-level offices. In the wake of the financial crisis, the Indonesian Government has also been channeling funds to schools through block grants giving the schools and the communities concerned the flexibility to disburse funds to needy and deserving children.

G. Private Schools and Decentralization

At the time this project was initiated, interest in decentralization of education in Indonesia coincided with the task force recommendations on SBM. In view of the general lack of information about how schools perceive SBM it was timely to seek information on existing school autonomy and how schools (teachers and principals) view the factors that affect school quality. In view of the broader objective of this study to assess the effects of decentralization, information is also desired that can throw light on whether greater autonomy (under SBM) will alter school performance. This study therefore took as the logical point of departure a comparison between public and private schools because the management of private schools has many of the features of SBM.

Private schools differ fundamentally ways from public schools in the way that they are funded and managed. Private schools are usually owned and run by foundations (*yayasan*). Besides

the government subsidy, their other main sources of income are tuition fees and donations. It is widely believed that they operate more efficiently, partly because of the greater discretion given to principals in school management, and in some private schools because of the greater role of PTAs.

This project undertook a mini-survey of 60 junior secondary schools in Jakarta. Half the sampled schools are public and the other half private, and 40 percent of the private schools are religious schools. Information was collected from three separate questionnaires administered to principals, students, and teachers. Principals were asked questions relating to schools' authority in decision making. Teachers were asked questions about the education process; one teacher, selected at random, was interviewed in each school. In all, 60 principals, 60 teachers, and 600 students were interviewed.

The information gathered was analyzed by comparing differences in frequency responses between public and private schools. The main findings of the survey are summarized below.

1. Financial Management

On the financial management of schools, school principals were asked who (the principal, foundation/government) made the budgetary decisions with respect to school income, expenditure, voluntary donations, monthly fees, entrance fees, and monthly donations. Between 70 and 80 percent of private school principals responded that all these decisions (with the exception of monthly donations) were made either by the foundation or the foundation in consultation with the school principal. In contrast, among public school principals, only about half the schools responded that the schools and the Government jointly made income and expenditure decisions.

Interestingly, for most of these budgetary decisions, proportionately more public than private school principals responded that they were the sole decision makers. This need not necessarily suggest that private schools have less autonomy. Rather the fact that the principal makes budgetary decisions with the foundation can be viewed positively as an indication that a consultative framework may facilitate a more efficient utilization of resources and less likelihood of mismanagement.

2. Human Resources Management

Principals in both private and public schools had similar responses regarding the limited autonomy they had in the management of human resources—in the areas of hiring and firing staff, promotion, and pensions, the Government or the foundation is the dominant decision maker.

Principals of private schools had more authority than those of public schools in deciding staff career development. On the other hand, more public school principals responded that they had the sole authority in deciding staff remuneration. This is probably due to the fact that public school principals have the authority to spend donations from PTAs that usually go toward supplementing teacher salaries.

3. Quality of Teachers

The quality of teachers in private schools is higher than that of public schools based on qualifications. Private schools have a higher proportion of teachers (80 percent) who have completed at least the 3-year diploma certificate than public schools (56 percent). However, public schoolteachers appear to be more capable and have a better attitude toward teaching than private schoolteachers: 80 percent of private school principals said that their teachers are capable in teaching their courses, 77 percent agreed that they have a good attitude, and 73 percent agreed that the teachers are highly motivated; the responses for public schools are higher for every one of these questions. As for the low motivation of schoolteachers, the majority of both public and private schools agreed that low pay is the most important reason.

4. School Performance and Factors Affecting School Performance

In all subjects, the average Ebtanas scores are higher, and the standard deviation lower, for public schools than for private schools, which is consistent with the prevalent view that the quality of Indonesian public schools is, on average, better than private schools.

Principals and students were asked for their responses to a list of factors that influence school performance.

- (i) Both private and public school principals ranked the qualification and training of teachers as the most important factor, followed by better laboratory equipment and better physical infrastructure.
- (ii) Less than one third of both private and public school principals ranked school autonomy as the most important factor.
- (iii) The proportion of students who were dissatisfied with their teachers' performance is lower in private schools (less than three fourths) than in public schools (more than three fourths). The dissatisfaction is mainly due to teacher absenteeism or their inability to communicate.
- (iv) There is little difference between public and private schools in students' responses to the conditions of classrooms. Any major difference appears to be due to the availability of facilities—22 percent of private schools do not have libraries, compared with fewer than 1 percent of public schools; more than 50 percent of private schools interviewed did not have physics and biology laboratories compared with about 10 percent of public schools.
- (v) Public schools were more receptive (three quarters agreed) than private schools (half agreed) to the idea that empowerment of parents will enhance the quality of the school. Both public and private schools conduct meetings between teachers and parents—the frequency is higher in public schools (about five times per term) than in private schools (about twice per term). Furthermore, 80 percent of public schools believe that these meetings have an impact whereas only 63 percent of

private schools do. Public schools appear also to be more responsive to government monitoring of the schools' progress than private schools. More than three quarters of public schools replied that they follow up on the Government's evaluation of students' academic performance, teachers' performance and work development, but only 60 percent of private schools do.

- (vi) Schools were asked a list of factors affecting school quality that included: (a) too many students, (b) low teacher quality, (c) lack of proper textbooks, (d) inadequate physical infrastructure, (e) lack of laboratory or supporting equipment, (f) lack of parental support, (g) inability to pay fees, (h) teachers having no opportunity for further studies, and (i) teachers having problems in career development. Of these, lack of parental support and laboratory and supporting equipment came out as the most important factors affecting school quality for both private and public schools.
- (vii) Schools were asked about the degree of autonomy they have in setting their curriculum. Although all schools have to follow a standard curriculum set by MONE, at the secondary level, schools are given some flexibility that allows them to include in their curriculum subjects that draw on the strengths of the locality (for example, Balinese arts). Almost all public school principals responded that the curriculum is completely decided by MONE while only two thirds of private school principals responded similarly. The difference again could be due to a large sample of religious private schools, which, under the current regulations, are allowed to set up to 40 percent of their curriculum.

H. Implications

Decentralization in the form of SBM can potentially play an important role in increasing the efficiency with which existing resources are utilized in the education sector and can enhance the quality of education. Among the questions that this survey set out to answer is whether vesting more authority in principals, teachers, community, and parents would make a difference in terms of student performance in Indonesia.

The comparison of public and private schools does not yield a consistent pattern from which many inferences can be drawn. It is difficult to do so because of the method used—the analysis compares private and public schools for a given variable without holding constant systematic variations due to another variable that could be the source of the differences. An especially important variable in this regard is the differences in the quality of students enrolled in private and public schools.

Though limited, nonetheless some interesting observations surfaced from the survey. Both private and public school principals ranked the qualification and training of teachers as the most important factor, followed by better laboratory equipment and better physical infrastructure. Public schools are more receptive than private schools to the idea that empowerment of parents will increase the quality of the school. Public schools also appear to be more responsive to government

monitoring of their progress than private schools. These responses could augur well for the implementation of SBM.

IV. THE PHILIPPINES¹⁷

The Philippines' achievements in the education sector are among the most impressive in the region. Between school year (SY) 1981/82 and 1997/98, gross enrollments in basic education grew on average by 2.8 percent annually, a rate that exceeds the country's population growth. In 1997/98, total enrollments in the Philippine education system reached 19.9 million students compared with 12.8 million students in 1981/82. Over the same period, net enrollment rates in primary schools increased from 84.6 to 95.1 percent while secondary net enrollment rates increased from 54.7 to 64.0 percent. Tertiary enrollments recorded an even more impressive rate of growth. Such achievements have put education levels in the Philippines ahead of many of its Asian neighbors and enrollments substantially higher, at the secondary and tertiary levels, than that of DMCs at similar levels of per capita income (Table 2 above).

A. Structure of Education

The formal education system in the Philippines is divided into three levels: (i) basic education, (ii) technical/vocational education, and (iii) higher education. In addition, there is a preschool level and a nonformal component that provides basic literacy and livelihood skills to out-of-school youths and adults who have either not attended school at all or who dropped out of school early.

Basic education, which normally starts at age six, is divided into 6 years of primary schooling and 4 years of secondary schooling. The technical and vocational education and training (TVET) level provides pre-employment preparation in middle-level technician and craft skills. At the formal postsecondary level, TVET programs may have a duration of up to 3 years and may lead to certificate and diploma qualifications. Any formal postsecondary course of 4 or more years is considered part of the higher education program and leads to a bachelor's degree.

Broad-based access to education is mandated under the Philippine Constitution. Primary education is compulsory and is provided free by the state. The 1987 Constitution mandates that the Government should provide free secondary education; however, secondary education is voluntary.

¹⁷ This section draws on the country report on the Philippines by Manasan (2002).

B. Access to Schooling

The rapid growth in enrollment can be traced to three developments: (i) the establishment of at least one primary school in every *barangay*¹⁸ or village; (ii) the implementation of the Education Contracting Scheme that is designed to enable high school students to enroll in participating private schools in municipalities where there is no public high school or where there is excess enrollment in existing public high schools; and (iii) the rapid expansion of state universities and colleges (SUCs) coupled with the provision of scholarships to tertiary-level students in private schools.

Enrollments in tertiary education (combined higher education and technical/vocational schools) posted the fastest rate of growth averaging 4.3 percent over the period 1981/82 to 1997/98, facilitated by the rapid expansion of state tertiary institutions. This was followed by secondary enrollments, which recorded an annual growth of 3.4 percent yearly, due to the provision of free public secondary education. Primary school enrollments grew by 2.3 percent yearly.

That the improvement in access has been brought about by the rapid expansion of public schools is reflected in the public-private mix of school enrollments. In 1997/98, public primary schools accounted for 92.3 percent of enrollments, while public secondary schools accounted for 72.0 percent of total secondary enrollments, up from 54.2 percent in 1981/82. In fact in 1992–1997, private secondary school enrollments declined, suggesting that public schools have crowded out private schools. The share of tertiary enrollments in government institutions doubled, from 10.0 percent in 1981/82 to 24.1 percent in 1997/98, reflecting the rapid expansion in the number of SUCs.

The gains in access, however, are not distributed equally across all parts of the Philippines. The disparity is less at the primary school level than at the secondary school level. Net enrollment rates for primary education in 1997/98 varied from 82.4 percent (Southern Mindanao) to 100 percent (Central Mindanao and the Ilocos Region). In contrast, secondary net enrollment rates ranged from as low as 22.7 percent (Autonomous Region of Muslim Mindanao [ARMM]) to as high as 80.2 percent (National Capital Region [NCR]).

C. Quality of Education

Although access has improved dramatically, there are indications that the quality of education remains an issue in the Philippines.

One indicator of the quality of schooling is the cohort survival rate, which measures the proportion of students enrolled at the beginning grade or year who reach the final grade or year at the end of the required number of years of study. The cohort survival rate for both the primary and secondary levels deteriorated between 1990 and 1997, with survival rates falling more at the secondary than the primary level. The figures indicate that more than 30 percent of students who

¹⁸ The *barangay* is the basic unit of government in the Philippines.

start Grade 1 never reach Grade 6, and slightly less than 30 percent who start first year secondary school do not make it to the fourth year. In other words, more than half of those who start Grade 1 do not reach the final year of secondary school.

Regional variations in the quality of education are more pronounced at the primary than the secondary level. The survival rate at the primary level ranged from 29.3 percent (ARMM) to 87.0 percent (NCR). In comparison, the survival rate at the secondary level varied from 63.7 percent (Western Mindanao) to 80.9 percent (Ilocos Region and Cagayan Valley).

A more direct measure of school quality is the mean percentage score (MPS) for both the National Elementary Assessment Test (NEAT) and the National Secondary Assessment Test (NSAT).¹⁹ Though these have shown marked improvements, they are persistently low, on average significantly lower than the pass rate of 70 percent.

A comparison of public and private schools suggests that the rapid expansion of schooling may have traded off quality; that is, as enrollments increased, fewer resources were available on a per student basis, either because of insufficient funding or because of inefficiencies induced in the education system as its size grew. First, cohort survival rates at the secondary level fell more sharply for public schools than private schools. Second, for both NEAT and NSAT, public sector schools consistently perform worse than private schools although the rate of improvement has been greater in public than private schools. Finally, the rapid growth in enrollments was not in all instances accompanied by an equally rapid growth in the building program. At the primary and secondary levels, the overall growth in the number of institutions did not keep pace with enrollments due to the inadequacies of the school building program for public primary and secondary schools. As a result, the average size of government primary schools rose from 264 students per school in 1981/82 to 318 in 1997/98, and that of public secondary schools almost doubled, from 483 to 924, over the same period. If a larger average size implies overcrowding and poorer facilities available per student, then this would suggest that the quality of secondary schooling may have suffered because the rapid expansion in enrollment was not matched by an equally rapid growth of physical facilities, and probably other schooling inputs as well, such as teachers.

D. Management and Budgeting

1. Management

The education sector falls under the jurisdiction of three distinct bodies: the Department of Education, Culture and Sports (DECS) for basic education; the Technical Education and Skills Development Authority (TESDA) for technical and vocational education and training; and the Commission on Higher Education (CHED) for higher education.

¹⁹ The NEAT has been given to all Grade 6 students since 1993/94. The NSAT has been administered to all fourth-year high school students since 1994/95.

The DECS is the largest department in the Government, accounting for 45% of the civil service. The authority structure is hierarchical and highly centralized. The line of authority extends from the DECS central office through the 16 regional offices, to 134 division offices, 2,150 district offices, some 36,000 public primary schools, and almost 4,000 public secondary schools. Most of the functions are delegated to the regional offices and, more recently, to division offices. The regional offices, under the Regional Directors, supervise both division and district offices. Decisions on matters related to learning/teaching standards emanate from the DECS central office while the choice of textbooks is largely a decision of the regional offices. The regional offices are also responsible for preparing the budget. The division office, which is headed by a Division Superintendent, prepares and recommends the budget of the division office and of the individual schools in his or her division, and exercises general supervision over the schools within the jurisdiction. The Division Superintendent also has the authority to hire, promote, discipline, and redeploy public schoolteachers. The District Supervisor formulates plans and programs for the improvement of learning, supervises public and private primary schools and evaluates the education achievement in the district.

In other words, decision making emanates from the center and the top, resulting in a system that is oriented toward control rather than support and toward activities rather than results.

2. Budgeting

A similar top-down approach characterizes the budgeting process. The rules that govern the budget allocation have resulted in allocations that are often far removed from the needs of the schools.

Each year regional offices are responsible for preparing the annual budget for maintenance and other operating expenditures, i.e., recurrent nonpersonnel expenditures, with inputs from their division offices. The allocation to the various DECS regional offices follows a simple capitation rule, i.e., the budget is allocated in direct proportion to student enrollments. This allocation formula works against school divisions with small enrollments (because all divisions are mandated to have a uniform organizational and staffing structure, regardless of the size of enrollment). Furthermore, the General Appropriations Act specifies precisely how the DECS budget should be spent. Together with the system of single-year budgeting that prohibits the carryover of unutilized funds from one year to the next, this has severely constrained the ability of DECS central office and its regional offices from reallocating expenditures within the budget to the changing requirements of individual schools.

E. Financing of Education

1. Central Government Financing

A feature that stands out in the financing of education in the Philippines is the increasing reliance on public funds. Expenditure on education comes from three sources—central Government,

LGUs, and the private sector (primarily households). Between 1994 and 1997, the aggregate spending on education increased from P97.3 billion in 1994 to P174.6 billion (or P142.1 billion in 1994 prices) in 1997, with virtually all the growth financed from increases in central government expenditure, and most of the increase going to secondary schooling and to a lesser extent tertiary education. As the World Bank (1999) notes, between 1986 and 1997, public expenditure on education expanded in those areas where the private sector seemed to be thriving, thus effectively undermining the private sector's share in the education market.

The fact that public expenditure has crowded out private expenditure in secondary school has implications for whether public funds in the education sector are allocated efficiently and equitably. From an efficiency point of view, conventional wisdom is that public expenditure on primary education yields the highest social returns above the private returns. On equity considerations, the rising share of public expenditure going to secondary schooling is also less equitable as it benefits the rich more than the poor, given that net enrollment rates in secondary and tertiary education are lower for the poor than the rich.

Another area of financing suggesting that resources may not have been allocated efficiently concerns the budget allocation between expenditure on personnel services and expenditure on maintenance and other operating expenditures. Between 1990 and 1999, the share of personnel services in the DECS budget rose from 74.3 to 87.7 percent, mainly as a result a sharp increase in the salaries of public schoolteachers. The higher teacher salaries constrained the government's capacity to hire new teachers to cope with expanding enrollments as a result of which the student/teacher ratio in public primary and secondary schools increased. At the same time, because the increased bill for salaries was accommodated at the expense of maintenance and other operating expenditures, the latter's share in the DECS budget was halved from 16.5 percent in 1990 to 8.8 percent in 1999. This squeeze resulted in short supplies of key education inputs such as textbooks, teaching/instructional materials, science laboratory equipment and supplies, and school desks, as well as provisions for teacher training and the maintenance of school buildings.

It is likely that this turn of events contributed to the poor quality of education services in public schools. It could also partly explain why the achievement scores of students from public schools are lower than those from private schools even if teachers in public schools are better remunerated (and presumably better qualified) than private sector counterparts, particularly toward the latter part of the 1990s.

2. Local Government Financing

The second feature of the Philippines' financing of education is the role that LGUs play. Although LGUs have long played a role, it was not until the passage of the 1991 Local Government Code (LGC) that provided the LGU with enhanced financial resources at their disposal that local government financing became significant. As a result of the LGC, LGU spending on education rose from P0.8 billion in 1991 to P7.9 billion in 1998. In fact, aggregate LGU expenditures on the education sector in 1998 were larger than the DECS total maintenance and other operating expenditures budget.

LGU spending on education is largely financed through the Special Education Fund (SEF), which is financed by revenue from a 1 percent tax on real properties within the jurisdiction of the LGU. A revaluation in real property values mandated by the LGC resulted in a surge in SEF revenue. In addition, the LGC also provided LGUs with a higher share of tax revenues from the central Government.

The proceeds from the SEF may be allocated to the operation and maintenance of public schools, the construction and repair of school buildings and facilities, purchase of equipment, education research, purchase of books and periodicals, and sports development. In practice, LGU outlays have gone mainly to the construction of school buildings with sizable amounts also going to teachers' salaries and other nonpersonnel inputs. Some LGUs top off the basic salaries that public schoolteachers receive from the DECS. Some LGUs are also known to hire and pay for additional teachers. In other words, the LGC has not only provided LGUs with access to more financial resources, but also greater flexibility in allocating these resources.

Actual spending priorities are set by local school boards (LSBs). Each LSB is co-chaired by the local chief executive (mayor or governor) and the Division Superintendent (or District Supervisor). The other members of the LSB are the chairperson of the education committee of the local legislature, the local treasurer, the representative of the federation of local youth councils, the president of the local federation of PTAs, a representative of the local teachers' organization, and a representative of the non-academic personnel of public schools in the local jurisdiction. In many divisions, public primary and secondary schools are highly dependent on SEF resources for their operation and maintenance expenditures.

F. Decentralization Efforts

The LGC represents a major shift in local governance in the Philippines. It includes far-reaching provisions affecting the assignment of functions across different levels of government, revenue sharing between the central Government and the LGUs, the resource generation/utilization authorities of the LGUs, and the participation of civil society in various aspects of local governance.

As part of the devolution of the construction and maintenance of local infrastructure to LGUs under the LGC, responsibility for the construction and maintenance of public primary and secondary school buildings is now assigned principally to municipal and city governments.²⁰ However, the central Government continues to be in charge of the operation of public schools.

²⁰ On the other hand, while the provincial governments (PLGUs) have a 50 percent share in the SEF, the LGC is silent as to the PLGUs' specific responsibilities in the education sector. This situation has not been helpful in galvanizing PLGU financing in the sector. In this light, PLGUs are a potential source of funding for nonschool building expenditures, e.g., textbooks.

G. Fiscal Decentralization and School Outcomes

The delivery of basic education services is not devolved to LGUs. However, the more decentralized fiscal framework engendered by the LGC in effect has allowed LGUs to have greater access to more financial resources and greater flexibility to supplement central government allocations with locally purchased inputs (both personnel and nonpersonnel). Furthermore, the LGC has enhanced the participation of civil society in LGU affairs, specifically the management of SEF through the LSB. As such, fiscal decentralization may have provided the environment for the local community, through the LGU in general, and the LSB in particular, to provide the essential financial and management inputs at the school level that may spell the difference in student achievement and school efficiency. But more importantly, the presence of the LSB may have exerted a positive influence on the management of public schools as more active LSBs may have made school administrators more accountable to the local community through better monitoring of school activities and operations.

An attempt is made, applying regression analysis to aggregate (division-level) data for 1995 and 1996, to determine the impact of the greater degree of fiscal decentralization on school performance. A set of reduced-form demand relationships is estimated with different indicators of school performance (*SCHPERF*) as the dependent variable on the left side, and on the right side, independent variables that include the decentralization indicator, proportion of education expenditure that is locally financed, and a number of control variables.

Specifically, the following equation is estimated:

$$\begin{aligned}
 SCHPERF_i = & b_0 + b_1 LGUFR_i + b_2 HHY_i + b_3 YRSCH_i + b_4 WTV_i \\
 & + b_5 WRADIO_i + b_6 HOMEOWN_i + b_7 PCGGEDEXP_i + e_i
 \end{aligned} \tag{1}$$

where

LGUFR_i is the proportion of government education expenditure from LGU in the *i*th division;
HHY_i is mean household income in the *i*th division;
YRSCH_i is the proportion of household heads in the *i*th division who have completed at least 6 years of schooling;

WTV_i is the proportion of households with a television set in the *i*th division;

WRADIO_i is the proportion of households with a radio in the *i*th division;

HOMEOWN_i is the proportion of households owning their house and lot in the *i*th division;

and

PCGGEDEXP_i is per student expenditure on basic education of the general government in the *i*th division.²¹

²¹ General government refers to the central Government and LGUs combined.

Separate estimation was carried out for primary and secondary public schools. The three measures of schooling performance are (i) NEAT (or NSAT) average percentage scores for all public primary (or secondary) schools under each DECS division office; (ii) division-level cohort survival rates (for primary schools only); and (iii) division-level dropout rates.²² In addition, another reduced-form equation with enrollment, E_i , in primary (secondary) schools as the dependent variable is also estimated to determine whether fiscal decentralization has affected access to education, as proxied by school enrollment.

A common problem in estimating such relations is that critical variables may not be observed with the result that the estimates of the coefficients of the included variables do not represent only the effects of the included variables but also the effects of correlated unobserved variables. The possibility of omitted variable bias was addressed by differencing. Specifically, the reduced-form equations were also estimated using the differences in the values of the variables for between 1995 and 1996. Given the available data, this estimation strategy is possible only with the first indicator of schooling performance—the NEAT (or NSAT) average test score.

In equation (1), the coefficient for per student school expenditures is expected to be positive. Likewise, a positive relationship is expected between school performance, on the one hand, and household characteristics like household income (and its associated attributes like home, television, radio ownership) and the education of the household head, on the other. The central question for this study, of course, is whether the proportion of government education expenditure from the LGU has a significant impact on school performance.

The central results of the regression estimates in Tables 7–10 are:

- (i) At the primary school level, the coefficient estimates for the LGU share in school finance are generally highly significant and positive, indicating that a higher LGU share in education finance, other things being equal, has a positive effect on NEAT scores and on cohort survival rates in public primary schools. However, for dropout rates, the LGU coefficient has the correct sign in 1996 but it is not significant. The significant effects do not seem to be an artifact that results from the LGU share representing some omitted variable, such as community commitment to schooling or expectations regarding returns to schooling. Indeed, the estimate with control for unobserved community effects is not only significant, but is also three to four times bigger than the estimates that do not have such a control. Based on this a priori preferred estimate, a 1 percentage point increase in the LGU share in education financing in public primary schools results in an increase of 0.14 percentage points in the average overall NEAT score of the division.

²² Details of how all the variables are constructed and the sources of data are given in Manasan (2002).

Table 7. **Reduced-Form Equations for School Performance in Public Primary Schools^a**

Independent Variable	Dependent Variable				
	Overall NEAT Score			Cohort Survival Rate 1996	Dropout Rate 1996
	1995	1996	Time-Difference		
<i>PCGGELEDEX</i>	0.0004 (3.798)	0.0004 (1.853)	0.0001 (0.833)	0.000003 (0.960)	-0.0002 (-1.049)
<i>ELLGUSHR</i>	3.720 (2.082)	4.676 (2.185)	14.630 (2.122)	0.506 (2.555)	-2.981 (-1.023)
<i>HHY</i>	0.00001 (0.494)	0.00001 (0.417)	-0.00002 (-2.008)	-0.0000004 (-1.479)	0.00002 (1.011)
<i>YRSCH</i>	2.857 (0.435)	-2.734 (-0.395)	-3.430 (-0.539)	0.429 (3.635)	-9.429 (-1.558)
<i>WTV</i>	2.816 (0.859)	1.923 (0.564)	3.385 (0.763)	0.085 (1.215)	-6.582 (-1.912)
<i>WRADIO</i>	-4.228 (-0.805)	3.589 (0.617)	4.429 (1.108)	0.238 (1.850)	-4.572 (-1.014)
<i>HOMEOWN</i>	4.392 (2.340)	7.355 (3.086)	-0.473 (-0.180)	0.148 (3.124)	-6.952 (-2.781)
INTERCEPT	42.079 (8.680)	36.771 (6.720)	-1.554 (-3.860)	0.074 (0.970)	27.511 (6.692)
ADJUSTED R ²	0.151	0.068	0.024	0.486	0.254
SAMPLE SIZE	127	130	127	124	130
CORRECTED FOR HETEROSKEDASTICITY	Yes	Yes	Yes	Yes	No

PCGGELEDEX – Per student expenditure on primary education of the general government
ELLGUSHR – Share of local government units in total general government primary education expenditure
HHY – Mean household income
YRSCH – Proportion of household heads who have completed at least 6 years of schooling
WTV – Proportion of households with a television set
WRADIO – Proportion of households with a radio
HOMEOWN – Proportion of households owning their house and lot

NEAT = National Elementary Assessment Test.

^a Numbers in parentheses refer to t-statistics.

- (ii) At the secondary school level, performance scores do not appear to be affected by the share of LGUs in education finance; the variable is not statistically significant. One explanation for the difference may be the fact that the existing arrangements and the expenditure assignment with respect to public secondary education are not clear-cut. On the one hand, construction and maintenance of both public primary and secondary schools are assigned

to municipalities under the LGC even as provincial governments are not given an explicit role in the delivery of education services. On the other hand, district supervisors who co-chair the local school boards at the municipal level tend to share the view that public high schools do not need support from the municipal governments because these schools, being autonomous, are entitled to maintenance and other operating expenditures funds under the General Appropriations Act. Thus, public secondary schools, on the whole, do not receive as much support and attention from either the municipal or provincial school boards.

Table 8. **Reduced-Form Equations for School Performance in Public Secondary Schools^a**

Independent Variable	Dependent Variable			
	Overall NSAT Score			Dropout Rate 1996
	1995	1996	Time-Difference	
<i>PCGGSECEDEX</i>	0.0001 (5.501)	-0.0002 (-0.706)	0.00003 (3.654)	0.002 (1.736)
<i>SECLGUSHR</i>	0.026 (0.005)	4.652 (1.143)	-3.809 (-1.081)	26.403 (1.431)
<i>HHY</i>	0.00002 (0.946)	0.00003 (2.311)	0.00001 (1.810)	0.00004 (1.516)
<i>YRSCH</i>	-3.092 (-0.748)	-3.870 (-0.855)	-5.493 (-1.805)	12.857 (0.903)
<i>WTV</i>	5.952 (1.971)	1.566 (0.505)	-3.270 (-1.010)	-17.325 (-2.613)
<i>WRADIO</i>	3.181 (0.795)	3.487 (0.754)	-0.492 (-0.185)	-11.359 (-1.457)
<i>HOMEOWN</i>	6.849 (4.360)	6.777 (3.197)	-0.204 (-0.137)	-3.292 (-0.681)
INTERCEPT	35.642 (9.207)	37.902 (10.710)	0.947 (2.889)	8.988 (0.971)
ADJUSTED R ²	0.258	0.183	0.062	0.187
SAMPLE SIZE	119	126	117	123
CORRECTED FOR HETEROSKEDASTICITY	Yes	Yes	Yes	Yes

PCGGSECEDEX – Per student expenditure on secondary education of the general government
SECLGUSHR – Share of local government units in total general government al secondary education expenditure
HHY – Mean household income
YRSCH – Proportion of household head who have completed at least 6 years of schooling
WTV – Proportion of households with a television set
WRADIO – Proportion of households with a radio
HOMEOWN – Proportion of households owning their house and lot

NEAT = National Elementary Assessment Test.

^a Numbers in parentheses refer to t-statistics.

- (iii) Fiscal decentralization also has no impact on school enrollment. While the coefficient of the LGU share in education finance variable in the public primary school enrollment equation has a positive sign, the one in the public secondary school enrollment equation has a negative sign. In both cases, they are statistically insignificant.

Table 9. **Reduced-Form Equation for Enrollment in Public Primary Schools^a**

Independent Variable	1995	Enrollment 1996	Time-Difference
<i>PCGGELEDEX</i>	-7.268 (-3.370)	-7.786 (-1.914)	-0.693 (-1.290)
<i>ELLGUSHR</i>	-52052.57 (-1.800)	-53090.80 (-1.555)	13795.86 (0.868)
<i>HHY</i>	0.266 (1.064)	0.145 (0.590)	-0.004 (-0.171)
<i>YRSCH</i>	-108690.1 (-1.629)	-189999.7 (-2.074)	-1266.875 (-0.107)
<i>WTV</i>	67615.46 (1.433)	116945.9 (2.197)	4739.237 (0.704)
<i>WRADIO</i>	43533.99 (0.767)	72049.15 (1.324)	-6380.839 (-0.591)
<i>HOMEOWN</i>	16351.83 (0.472)	24516.02 (0.661)	10656.65 (1.199)
INTERCEPT	93132.99 (1.565)	115252.2 (1.996)	2456.394 (2.628)
ADJUSTED R ²	0.057	0.132	-0.004
SAMPLE SIZE	129	130	129
CORRECTED FOR HETEROSKEDASTICITY	Yes	Yes	Yes

PCGGELEDEX – Per student expenditure on elementary education of the general government
ELLGUSHR – Share of local government units in total general government elementary education expenditure
HHY – Mean household income
YRSCH – Proportion of household heads who have completed at least 6 years of schooling
WTV – Proportion of households with a television set
WRADIO – Proportion of households with a radio
HOMEOWN – Proportion of households owning their house and lot

^a Numbers in parentheses refer to t-statistics.

Table 10. **Reduced-Form Equation for Enrollment in Public Secondary Schools^a**

Independent Variable	1995	Enrollment 1996	Time-Difference
<i>PCGGSECEDEX</i>	-0.581 (-4.284)	0.900 (0.357)	-0.291 (-2.045)
<i>SECLGUSHR</i>	24157.20 (0.656)	-31989.36 (-1.106)	-5957.145 (-0.348)
<i>HHY</i>	0.240 (1.199)	0.037 (0.247)	-0.096 (-1.479)
<i>YRSCH</i>	-18649.38 (-0.903)	-53899.67 (-1.897)	-4110.205 (-0.351)
<i>WTV</i>	9110.638 (0.395)	46655.51 (2.073)	16436.880 (1.534)
<i>WRADIO</i>	33365.33 (1.700)	23328.77 (1.313)	8451.015 (1.083)
<i>HOMEOWN</i>	1782.634 (0.152)	12265.17 (0.996)	3134.561 (0.629)
INTERCEPT	-9056.269 (-0.424)	13297.26 (0.698)	102.543 (0.088)
ADJUSTED R ²	0.132	0.069	0.046
SAMPLE SIZE	120	126	118
CORRECTED FOR HETEROSKEDASTICITY	Yes	Yes	Yes

PCGGSECEDEX – Per student expenditure on secondary education of the general government
SECLGUSHR – Share of local government units in total general government secondary education expenditure
HHY – Mean household income
YRSCH – Proportion of household heads who have completed at least 6 years of schooling
WTV – Proportion of households with a television set
WRADIO – Proportion of households with a radio
HOMEOWN – Proportion of households owning their house and lot

^a Numbers in parentheses refer to t-statistics.

H. Conclusions

The findings of the Philippines study indicate some importance of fiscal decentralization in influencing school performance. The impact of fiscal decentralization on school access does not appear to be as significant. The findings highlight the opportunities and risks that increased fiscal decentralization may bring.

On the one hand, it appears that fiscal decentralization has promoted greater efficiency in the delivery of local services even with the limited extent of devolution in the sector. In this regard, it is important that ongoing discussions on how to operationalize SBM in a country build on the strengths of the existing system. First, it is important that the powers of LSBs are enhanced so that they are better able to represent community interests and that they may better influence the allocation of local education budgets across schools in the community and across different education inputs. In a sense, the LGU share in education finance not only represents additional inputs but perhaps more importantly represents the greater influence of stakeholders (through the LSBs) in the operations of the school. In particular, the greater participation of civil society (parents, people's organizations, and nongovernment organizations) in the LSBs is recommended. At the same time, LSBs should be given greater responsibilities in managing the schools as their capacities to do so are developed. Second, LGUs have been found to be an effective partner in the education sector, particularly with respect to resource mobilization. The various modalities that are being proposed with respect to SBM (e.g., the ADB technical assistance on the decentralization of basic education management) should not lose sight of this finding. Third, a clarification of the role of provincial governments with respect to education finance is in order. At present, provincial governments are mandated to earmark part of the proceeds of their real property tax on the education sector (via the SEF). However, provincial governments are not assigned specific expenditure responsibilities in the education sector. To better harness the resources of provincial governments that are available to the education sector, it is recommended that provincial governments be assigned the primary responsibility for the construction and maintenance of school buildings at the secondary level (even as municipal governments continue to construct and maintain public primary schools).

On the other hand, the findings of this study also indicate that fiscal decentralization may aggravate existing regional disparities in learning outcomes in the Philippines. In this regard, it is imperative that the Government reassess the allocation of central government resources in the basic education sector with the aim of equalizing the inherent inequalities in LGUs' SEF income.

V. CONCLUSIONS

Among DMCs, Indonesia and the Philippines rank fairly high in the distribution of real GDP per capita in PPP dollars while Bangladesh ranks much lower. In terms of aggregate schooling, the Philippines has secondary and tertiary enrollment rates that are substantially higher, while Indonesia has rates that are substantially lower, than that predicted based on all DMCs and their respective real products per capita. The Philippines also has expected grades for synthetic cohorts that are substantially above the overall mean for DMCs. In terms of public expenditures on education, all three countries have about the same percentage of GNP invested in education, a little over 2 percent, which is significantly below the level predicted by the experience of all DMCs given their respective real products per capita. Data available on distribution of recurrent

expenditures among schooling levels for Bangladesh and the Philippines show that Bangladesh allocates about equal percentage shares to the primary and secondary levels and a relatively small share to the tertiary level. In comparison with the shares predicted by the experience of all DMCs, Bangladesh allocates much more to the secondary level and much less to the tertiary level (as well as a little less to the primary level). The Philippines allocates the largest share among all DMCs to the primary level, the second largest share to the tertiary level and the smallest share to the secondary level. In comparison with the shares predicted by the experience of all DMCs, the Philippines allocates much more to the primary level and somewhat more to the tertiary level (and therefore much less to the secondary level). These two project DMCs, thus, take very different strategies regarding the allocation of public resources among the three levels. Taking private enrollment rates as percentages of total enrollment rates predicted by the experience of all DMCs, Indonesia has higher private shares at all three levels. The Philippines has about the predicted percentage at the preprimary level, a much lower than predicted percentage at the primary level and a higher than predicted percentage for the secondary level. The three project DMCs, finally, have fairly different indicators of the extent to which investments in education have been greater in males than in females. For Bangladesh, the ratios of education investments in males relative to females have been the greatest, with those for Indonesia next. For the Philippines, the ratios of education investments in males relative to females have been the smallest, not only among the three project countries but also among almost all DMCs.

There has been considerable public pressure for decentralization of education in DMCs in recent years. This pressure has been driven largely by fiscal constraints but has also been motivated by concerns over the effectiveness of a centralized system for delivering education services. The three country studies provide a rich characterization of the evolving—and in certain respects, rapidly changing—education systems in these DMCs. Common themes include:

- (i) Substantial—often constitutional—and growing political and legal commitments to education.
- (ii) Rapidly growing enrollments to universal or near universal primary schooling and increasing enrollments at the secondary and tertiary levels, though with variance among the three countries (e.g., probably the most rapid expansions are at higher levels in the Philippines).
- (iii) Increasing financial pressures, in part because of the rapidly growing enrollments and in part because of more general pressures on government finances.
- (iv) Limited, and perhaps deteriorating, school quality.
- (v) Historically, very centralized and often complicated management and financial systems that permitted little decision making that was responsive to local conditions.
- (vi) Differential access that favored actual and potential students with more affluent family backgrounds living in better-off areas.
- (vii) Significant private sector participation in education, though with probable increases in Bangladesh, and particularly Indonesia, in contrast to declines in the Philippines.

- (viii) Limited experience with aspects of decentralization—including private schools, SMCs, and local control over budgets—but often partial and not clearly defined.
- (ix) Increased movement toward greater decentralization, though again often partial, not well defined, and without all the necessary components in place.
- (x) Very little prior systematic exploration of the impact of decentralization.

Each of the country studies also contributes further by undertaking some original empirical analysis, for Bangladesh and Indonesia with school-based data collected by project surveys and for the Philippines with aggregate division-level data assembled for 2 years from multiple sources. These studies are limited due to the lack of previously existing data with the desired characteristics (i.e., before and after, treatment and control, random assignment) and the limited resources available for such data collection and analysis as part of the project. Nevertheless, they contribute to our understanding of cross-sectional patterns in the data and, at least for the Philippines, the possible impact of one form of decentralization. The Bangladesh and Indonesian studies present bivariate correlates of aspects of decentralization—SBM and privatization, respectively—and point to the difficulties of deducing the impact of decentralization from such associations if there are other school characteristics that are correlated with the forms of decentralization, as there appears to be in both cases so that—net of the form of decentralization experience—the schools with greater decentralization also tend to have poorer quality school inputs. The Philippines study, under much weaker assumptions than the other two, identifies the impact of local government financing on some measures of school success with control for some probably important other observed characteristics and, in the case of test scores, unobserved community characteristics. The estimates indicate a significantly positive impact of this form of decentralization on primary school cohort survival rates and achievement test scores. But there are no significant effects on secondary school success, which the author (Manasan 2002) speculates is due to the lack of clear arrangements regarding obligations and expenditures at the secondary level.

APPENDIX TABLES

Table A1. **Basic Population and Development Statistics and Gross Enrollment Rates for Developing Member Countries**

Developing Member Country	Population (million)	GNP per Capita (\$)	Real GDP per Capita (PPP \$)	Human Development Index	Gross Enrollment Rates, 1995 (%)			
					Pre-primary	Primary	Secondary	Tertiary
Afghanistan	17.4	—	—	—	—	49	22	—
Bangladesh	116.5	220	1,331	0.368	—	—	—	—
Bhutan	0.6	400	1,289	0.338	—	—	—	—
Cambodia	9.8	238	1,084	0.348	5	122	78	1.6
China, People's Rep. of	1,208.3	530	2,604	0.626	29	118	27	5.7
Cook Islands	0.02	—	—	—	—	—	—	—
Fiji Islands	0.8	2,250	5,763	0.863	15	128	64	—
Hong Kong, China	6.5	21,650	22,310	0.914	90	100	75	21.9
India	913.5	320	1,348	0.446	5	100	49	6.4
Indonesia	194.5	880	3,740	0.668	19	114	48	11.1
Kazakhstan	17.0	1,540	3,284	0.709	29	96	83	32.7
Kiribati	0.08	710	—	—	—	—	—	—
Republic of Korea	44.5	8,260	10,656	0.890	85	101	101	52.0
Kyrgyz Republic	4.6	850	1,930	0.635	8	107	81	12.2
Lao PDR	4.7	320	2,484	0.459	7	107	25	1.5
Malaysia	19.7	3,480	8,865	0.832	—	91	57	10.6
Maldives	0.2	950	2,200	0.611	59	134	49	—
Marshall Islands	0.05	1,894	—	—	—	94	81	—
Micronesia, Fed. States of	0.1	2036	—	—	—	—	—	—
Mongolia	2.4	300	3,766	0.661	23	88	59	15.2
Myanmar	44.3	—	1,051	0.475	—	103	30	5.4
Nauru	0.01	10,230	—	—	—	—	—	—
Nepal	20.9	200	1,137	0.347	—	110	37	5.2
Pakistan	132.7	430	2,154	0.445	—	80	—	—
Papua New Guinea	14.2	1,240	2,821	0.525	1	80	14	3.2
Philippines	66.4	950	2,681	0.672	13	116	79	27.4
Samoa	0.2	1120	750	—	—	116	47	—
Singapore	3.3	22,500	20,987	0.900	—	—	—	33.7
Solomon Islands	0.4	810	2,118	0.556	—	97	17	—
Sri Lanka	17.8	640	3,277	0.711	—	113	75	5.1
Taipei, China	20.0	10,215	—	—	—	—	—	—
Thailand	57.8	2,410	7,104	0.833	58	87	55	20.1
Tonga	0.1	1,610	—	—	—	—	—	—
Tuvalu	0.01	650	—	—	—	—	—	—
Uzbekistan	21.9	960	2,438	0.662	54	77	93	31.7
Vanuatu	0.2	1,230	2,276	0.547	—	106	20	—
Viet Nam	72.4	200	1,208	0.557	35	114	47	4.1

— = not available.

Sources: First four columns from UNDP (1997) and various national sources as presented in Bray (1998, Table 1); last four columns from UNESCO (1997) and various national sources as presented in Bray (1998, Table 2).

Table A2. **Public Expenditures on Education and Private Enrollments as Percentage of Total Enrollments in Developing Member Countries, 1995**

Developing Member Country	Public Expenditures on Education as Percent of GNP	Public Expenditures on Education as Percent of Total Govt. Budget	Percent Distribution of Recurrent Expenditure, 1992			Private Enrollments as Percent of Total Enrollments		
			Primary	Secondary	Tertiary	Pre-primary	Primary	Secondary
Afghanistan	—	—	—	—	—	—	—	—
Bangladesh	2.3	8.7	44.2	43.3	7.9	—	—	—
Bhutan	4.0	10.0	41.5	18.4	22.3	—	—	—
Cambodia	1.0	10.0	—	—	—	—	1	1
China, People's Rep. of	2.3	12.2	34.5	34.7	19.1	0	0	0
Cook Islands	—	—	—	—	—	—	—	—
Fiji Islands	5.4	18.6	50.5	37.0	9.0	100	96	87
Hong Kong, China	2.8	17.0	26.9	39.3	30.0	100	10	12
India	3.5	12.1	38.0	27.0	14.7	—	—	—
Indonesia	2.2	—	—	—	—	100	18	42
Kazakhstan	4.5	17.6	—	—	—	—	0	0
Kiribati	6.3	17.6	—	—	—	—	0	77
Republic of Korea	3.7	17.4	43.5	39.4	6.9	78	2	37
Kyrgyz Republic	6.8	23.1	—	—	—	—	—	—
Lao PDR	2.4	—	42.2	43.5	3.9	11	2	0
Malaysia	5.3	15.5	38.6	37.4	16.1	42	—	5
Maldives	—	—	—	—	—	93	—	38
Marshall Islands	—	—	—	—	—	—	—	—
Micronesia, Fed. States of	—	—	—	—	—	—	—	—
Mongolia	—	—	—	—	—	—	—	—
Myanmar	—	—	—	—	—	—	—	—
Nauru	—	—	—	—	—	—	—	—
Nepal	2.9	13.2	44.5	17.7	28.1	—	6	—
Pakistan	—	—	—	—	—	100	2	1
Papua New Guinea	—	—	—	—	—	41	2	3
Philippines	2.2	—	63.9	10.1	22.5	53	7	35
Samoa	4.2	—	52.6	25.2	—	—	13	43
Singapore	—	—	—	—	—	—	—	—
Solomon Islands	4.2	—	56.5	29.8	13.7	9	11	17
Sri Lanka	3.1	8.1	—	—	13.7	—	2	2
Taipei, China	6.2	17.9	—	—	—	—	—	—
Thailand	4.2	20.1	54.5	21.2	16.3	26	12	6
Tonga	4.7	17.3	38.8	24.2	7.3	—	7	80
Tuvalu	—	—	—	—	—	—	—	—
Uzbekistan	—	—	—	—	—	—	—	—
Vanuatu	4.9	18.8	58.0	29.1	3.2	100	22	6
Viet Nam	2.7	7.4	40.0	20.0	16.0	0	0	0

— = not available.

Sources: First five columns from UNESCO (1997) and various national sources as presented in Bray (1998, Table 3); last three columns from UNESCO (1997) as presented in Bray (1998, Table 5).

Table A3. **Gender Differences, Overall Literacy, and Enrollments in Developing Member Countries**

Developing Member Country	Gender-related Development Index 1994	Male/Female Adult Literacy Rates 1994	Gross Enrollment Ratios Male/Female	
			Primary 1993	Secondary 1992
Afghanistan	—	3.2	2.0	2.8
Bangladesh	0.339	2.1	1.2	1.9
Bhutan	—	2.1	—	—
Cambodia	—	1.5	1.0	0.8
China, People's Rep. of	0.617	1.3	1.0	1.2
Cook Islands	—	—	—	—
Fiji Islands	0.763	1.1	—	1.0
Hong Kong, China	0.852	1.2	1.0	—
India	0.419	1.6	1.2	1.6
Indonesia	0.642	1.2	1.0	1.2
Kazakhstan	0.698	—	1.0	1.0
Kiribati	—	—	—	—
Republic of Korea	0.826	1.0	1.0	1.0
Kyrgyz Republic	0.628	1.0	1.0	—
Lao PDR	0.444	1.6	1.3	1.7
Malaysia	0.782	1.2	1.0	0.9
Maldives	0.600	1.0	1.0	1.0
Marshall Islands	—	—	—	—
Micronesia, Fed. States of	—	1.0	1.0	0.9
Mongolia	0.650	1.2	—	—
Myanmar	0.469	1.2	—	1.0
Nauru	—	—	—	—
Nepal	0.321	3.1	1.5	2.0
Pakistan	0.392	2.1	1.6	2.2
Papua New Guinea	0.515	1.3	1.4	1.5
Philippines	0.650	1.0	1.0	—
Samoa	—	—	—	—
Singapore	0.853	1.1	—	—
Solomon Islands	—	—	1.2	1.6
Sri Lanka	0.694	1.1	1.0	0.9
Taipei, China	—	—	—	—
Thailand	0.812	1.1	1.0	1.0
Tonga	—	—	—	—
Tuvalu	—	—	—	—
Uzbekistan	0.655	—	1.0	—
Vanuatu	—	—	—	1.3
Viet Nam	0.552	1.1	—	—

— = not available.

Sources: Various ADB, UNESCO, UNDP and other sources as presented in Lee (1998, Tables 1, 3, 5, 6).

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