The Structure of Secondary Education in Developing Countries

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The views expressed in the papers are those of the authors and do not necessarily represent the official policy of the Bank. Rather, the papers reflect work in progress. They are intended to make lessons emerging from the current work program available to operational staff quickly and easily, as well as to stimulate discussion and comment. They also serve as the building blocks for subsequent policy and best practice papers.
ABSTRACT

Since the middle of this century, large scale expansion of primary education in developing countries has prepared large cohorts of students for secondary education opportunities. During the last thirty years many countries have undergone a significant increase in providing secondary schooling. Nevertheless there are still significant differences in the rates of secondary enrollment increases among countries and these differences vary by characteristics of countries. There is also variation in the way secondary education is organized and some important historical trends indicating how secondary education will be organized in these countries in the next century.

An analysis of secondary education in the 100 countries with at least a population of one million in 1990 borrowing from the World Bank countries finds the following.

- By 1990 developed countries have reached full secondary enrollments; in comparison, the 100 largest World Bank Countries on average enroll 30 percent of an age cohort (gross enrollment rate).

- The gap between primary and secondary enrollment rates is still large among World Bank countries.

- Variation in secondary enrollment rates among World Bank countries has steadily grown from 1960 to 1990.

- The largest thirty-year increase in secondary enrollments rates has occurred among lower-middle countries (e.g., Algeria, Chile, Iran, Thailand).

- Countries in the World Bank regions of eastern/central Europe, middle east/northern Africa, Latin/south American and east Asia/Asia have the most growth in enrollment rates. Countries in south Asia regions have had the least growth.

- Regardless of small enrollment rates in low income countries, their larger populations of youth mean that most secondary students from World Bank countries are from poor countries.

- To increase the secondary enrollment rate of low income countries up to average World Bank levels would involve enrolling a very large volume of youth in the secondary sector.

- World Bank countries have on average higher secondary education enrollment rate for males than females, but at the same time males have not increased their
advantage, as the average difference between the two groups has remained constant from 1960 to 1990.

- Among low income countries gender inequality in enrollments increased over this period, while it decreased in lower-middle income countries.

- Countries in south Asia and eastern/northern Africa have the highest gender inequality in enrollments, while countries in Latin/south America have the lowest.

- Countries with larger enrollments rates incorporate proportionally more females into secondary school than countries with lower overall rates.

- The modal organization of the secondary sector is a three year lower school starting in 7th grade and a three year upper school ending in the 12th grade.

- By far, the general academic curricular stream enrolls the largest share of secondary students and this stream has been growing over this time period, usually at the expense of the teacher training stream.

- The vocational stream has remained constant in size over the past thirty years. Lower- and upper-middle income countries tend to have larger enrollments in this stream as compared to low income countries.

- Countries with less differences between primary and secondary enrollments rates have higher secondary rates, larger growth over this period and larger enrollments in the vocational stream.
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INTRODUCTION

Since the middle of the 20th century, the world has experienced an expansion of all types of formal schooling. More children than ever before are in school longer than ever before. One of the main features of this expansion has been the organizational development of a standard sequence of schooling which runs from primary to secondary to post-secondary training. The idea that children will progress in school with age and that types of schools will generally not overlap ages of students has become a standard organizational feature of national systems of education.

Among the most developed countries the middle portion of that sequence—the secondary school—developed and reached its near full enrollment potential during the middle years of this century. In less developed countries there has been corresponding growth, but it is slower and still far from full enrollment.

This report describes the recent history of the size and structure of secondary education in developing World Bank countries. Enrollment and organizational data about secondary schooling in about 100 World Bank countries have been collected from several sources. The data reach back to 1960, a period before some of the largest recent growth in education among these countries, and extends until 1990. This thirty year period has witnessed growth in primary education in almost all countries of the world, including the least developed. For example, among the countries studied here, on average over 85 percent of eligible children were enrolled in primary school.

This educational expansion has prepared large cohorts of students for available secondary education opportunities. The period between 1960 and 1990 represents for many World Bank countries a shift from primary to secondary expansion. It is thus the crucial period to study educational subsector development among developing countries.

Assumed to potentially included all children everywhere, educational expansion is often described by sweeping, monolithic imagery. Although underlying that image is some general truth, it is obviously an overstatement to assume that expansion merely occurs everywhere. As shown below, there are considerable national differences in the rates of expansion based on regional and economical factors. Countries make different educational investments in different types of children. A prime example of this is evident in gender differences in enrollment. Another example is national variation in the strength of the connection between primary and secondary enrollments. Uncovering variation within the general pattern of expansion reveals some of the dynamics behind the growth.

Before the results section, there is a brief description of data sources and analysis techniques. Then the results are broken down into three main sections of size of secondary enrollments, structure of secondary schooling and selected relationships among them. In each section historical trends, gender and regional variations and other related topics are examined.
TECHNICAL DESCRIPTION OF THE METHODS AND DATA

All World Bank countries with 1990 populations over one million were included in the study. Appendix A lists all studied countries by World Bank region. Data on the size and structure of secondary schooling were compiled from several sources: (1) enrollments came primary from the World Bank's BESD system with the data originating from UNESCO; (2) economic development data came from the *World Development Report, 1992*; and (3) other secondary sources were also consulted.

As much relevant data as possible were compiled for the years from 1960 to 1990. Because there is less missing data early in the time series, some estimation of 1990 enrollments was necessary. This was done by substituting the most recent data from 1986 to 1990 for each country. About sixty percent of the countries have estimates of some of their 1990 variables.

The secondary school "gross enrollment ratio" (GER) is the primary indicator of enrollment used here. It is the total enrollment divided by the total school aged population for secondary school multiplied by 100. As the GER approaches 100, the secondary subsector reaches its full enrollment capacity of an age cohort. Variations on this rate and other indicators of enrollment are used as well.

Indicators of the structure of a country's secondary subsector are more complex and harder to obtain. Several indicators of structure are used here. One is the diversification of secondary enrollments in different curriculum areas (general, teaching education and vocational). Also the length and age span of the sector is examined.

In each case the report describes the distribution and general trends in the secondary education subsector of these World Bank countries. When possible a historical perspective from 1960 is provided. In addition to a general description, detailed descriptions of regional, gender and development level are included.

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1 Another indicator of enrollment capacity often used is the "net enrollment rate" which removes from the nominator of the GER any out of age range children, who are still in school due to some form of retention. In systems where large numbers of students are retained in school after the average finishing age the NER is a better estimate of enrollment of an age cohort. The NER is, however, not often calculated on a regular basis for the countries studied here. The GER is far more widely reported for World Bank countries and is a reasonable indicator, so it is used here.
RESULTS: SIZE OF SECONDARY SCHOOLING

A. Enrollment by Economic Development

In 1960, while countries like Japan, the U.K. and the U.S. were enrolling well over one half of eligible children in secondary school, the World Bank countries enrolled only about ten percent. By 1990, OECD countries have secondary enrollment rates approaching full capacity while World Bank countries have an average rate just over one third.²

The variation among World Bank countries is considerable. From 1960 to 1990 the range in enrollment rates increased by over 70 percent (1960 range, 49; 1990 range, 85). The 1960 rates ranged between under 1 percent enrolled to almost one half enrolled. By 1990 the range was between 4 percent to over 86 percent enrolled among all World Bank countries. One major correlate of this uneven spread in secondary enrollment rates is a country’s level of development. Figure 1 shows the growth in the spread of enrollment rates by World Bank country income levels over time. The difference between income levels and enrollment rates in 1960 was considerably less than it was by 1990. The poorest of World Bank countries did not grow at a pace to keep up with the wealthier countries.

Figure 1. Secondary Education Gross Enrollment Rates, 1960 to 1990 by World Bank Income Levels

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² China, Mongolia and eastern European countries are excluded for this section since their patterns of schooling are so different. They are covered in a short following section.
Figure 2 examines this further by showing the increase in the spread of secondary enrollments between the most developed and least developed World Bank countries from 1960 to 1990. In 1960 there was only a 13 percentage point difference between the average rate for these two types of countries, but by 1990 this difference had grown to over 40 percentage points. And there is some evidence that the secondary school enrollment rate among low income countries has stalled or even turned down over the past decade.\(^3\)

**Figure 2. Spread of Secondary Education Gross Enrollment Rates Between Upper and Lower Income Developing Countries**

One important feature of this growth pattern is the expansion of enrollments of the lower middle income World Bank country. Over the past thirty years, countries like Algeria, Bolivia, Chile, Peoples Republic of the Congo, Iran, Malaysia, Senegal and Thailand have produced substantial growth in secondary school enrollment rates. Figure 3 shows each income group's contribution to the (percentage) growth in secondary enrollments across all World Bank countries. At each time point, the lower middle income countries produce over one half of the total increase in enrollment. For example, these countries account for over fifty percent of the growth in enrollments from 1960 to 1990. On the other hand, the poorest countries' contribution has decreased over this time period. From 1960 to 1970 these poorer countries contributed almost thirty percent of the growth but dropped to under twenty percent for the 1980 to 1990 growth. Correspondingly, upper middle income countries have increased their share of growth.

\(^3\) The same pattern of slow growth and some leveling-off holds true when just those low income countries that report data for all seven time points are examined.
Countries like Brazil, Korea, Mexico, and Trinidad and Tobago accounted for thirty percent of the growth from 1980 to 1990.

**Figure 3. Percentage of Total Secondary Education Growth For All World Bank Countries by Income Level**

![Graph showing percentage of total secondary education growth for all World Bank countries by income level from 1960-1990.](image)

Eastern Europe excluded.

The figures above report GER's; thus they illustrate enrollments trends controlling for any changes in the size of the population of a country over time and population size across countries, thereby masking differences in actual size of enrollments across countries. In addition to the GER's, differences in enrollment size across World Bank countries shows an important feature of secondary education expansion over the past thirty years. Although the poorest World Bank countries account for only a modest portion of the growth in enrollment rates, they account for the majority of growth in correlation actual students attending secondary school, particularly in recent years.

For example, in 1980 the low income countries accounted for over seventy percent of the total secondary enrollment among World Bank countries. The lower-middle income and upper-middle countries accounted for only fifteen and twelve percent respectively. The majority of secondary students from World Bank countries are attending school in a low income country.

Of course the overwhelming majority of secondary students from low income countries are from China and India. These large countries have very high rates of secondary enrollments compared to other low income countries (e.g., in 1980 China and India, 46 percent and 34 percent respectively, compared to a mean of 19 percent among all low income countries).
But even if the size of the Chinese and Indian secondary education populations are removed from the total, the remaining low income countries account for over a third of all secondary students in World Bank countries. This is a sizable share, especially when compared to the lower growth rate among these poorer countries. The large share of all secondary students in World Bank countries attributable to low income countries is a function of the later countries' larger youth populations, not higher enrollment rates; the GER's in these countries are uniformly low, except for China and India. This means that to bring the enrollment rates of most low income countries up to the levels for other World Bank countries would entail enrolling a large volume of youth in the secondary school.

B. Enrollment by World Region

Another way to compare secondary enrollments is by region of the world. The World Bank divides countries into some twenty administrative sections. Combined these yields six world regions of Africa, South Asia, East Asia/Pacific, Middle East/North Africa, East Europe/Central Asia and Latin/Caribbean/South America.

As is the case with country income level, growth in secondary school enrollment rates vary considerably by geographical region and this variation has increased over the last thirty years. In 1960 the gross enrollment rates of World Bank countries were more similar by region than in recent years. The range across regions was 32 percentage points in 1960 and increased to 59 percentage points by 1990. Figure 4 shows how this has occurred.

Figure 4. Secondary Education Gross Enrollment Rates 1960 to 1990 by Region
Nations in four regions, Eastern/Central Europe, Middle East/Northern Africa, Latin/South America and East Asia/Asia show strong growth in secondary enrollment rates. Nations in South Asia show a very flat rate of growth while nations in the Africa region show a very modest growth rate.

C. Gender Differences in Secondary Enrollments

An important worldwide trend has been the inclusion of females at all levels of schooling and this is also true among World Bank countries. In these countries over the past thirty years the female gross enrollment rate (percent of females of school age in secondary school) is usually lower than the male rate, but female rates have kept pace with growth.

Figure 5 shows the parallel growth in enrollment for each gender group. The difference between the two groups has remained about constant even during the period of rapid growth (roughly 1970 to 1985). Females have been afforded educational opportunities as secondary education has expanded.

Figure 5. Female and Male Gross Enrollment Rates in Secondary School Among All World Bank Countries (N=76)*

Eastern Europe excluded; N=76 represents average number of countries reporting necessary data over time period.

As shown above, development level is associated with secondary enrollments. Similarly development level is associated with differences between male and female enrollments. Figure 6 shows the differences between average enrollment rates for males and females by the development level of the country. The smaller the mean difference, the less of a differences between male and female enrollment rates.
While all levels of development have similar differences between male and female rates in 1960, by 1970 gender differences diverge with low middle income countries showing a persistent drop in differences in gender enrollment. Countries like Chile, Malaysia and the Philippines were expanding enrollments and doing so in a gender egalitarian fashion. Conversely, low income countries increased the difference between female and male enrollment rates until 1980 at which point some modest reduction in inequality began. Upper-middle income countries show a very mixed pattern by ending the time series with less average gender inequality than they began with in 1960.

There are also large and interesting regional differences as well. Figure 7 displays differences between male and female gross enrollment rates for the six World Bank geographical regions. South Asia, or countries such as Bangladesh and Pakistan, and Middle Eastern/Northern Africa, or countries such as Algeria and Iraq, show the highest levels of gender inequality in enrollment rates. Latin/South American nations show equal rates with a small but steady trend towards larger female than male rates.
The size of the differences between female and male rates of enrollment may in part be a function of the overall level of enrollment. National secondary systems with large overall rates can have larger differences, and nations with lower rates can only produce so much absolute inequality. Note, for example, the pattern among African nations. Here the gender difference is relatively small, but grows consistently over the thirty year period. The overall rate of enrollment in many of these countries is so modest that the gender differences are perhaps less important than in other parts of the world where larger systems of secondary education produce, in actual numbers, larger differences between enrollments of boys and girls. There are, however, some trends running counter to this tendency.

The size of the correlation between gross enrollment rate and the gender difference between rates is modest and negative (-.31, p=.004, n=81). That is, countries with larger secondary school enrollment rates tend to have less gender differences. For example, countries below the mean gross enrollment rate (36 percent) in 1990 enrolled on average one third more males than females. While countries with larger enrollment rate (above 37 percent) enrolled on average only five percent more of their males than their females. Countries with larger enrollment rates have incorporated more females relative to males into secondary education. There is, however, as expected, a larger range in gender differences among the countries with larger overall enrollment rates.
One final way to consider gender and secondary enrollments is by the percent male and female of the in-school enrollment. These percentages indicate the gender mix of the secondary school population. Figure 8 shows these percentages and the range of percent female from 1960 to 1990. There has been a steady increase towards parity between male and female students among World Bank countries. In 1960 females made up less than one third of secondary student population on average, but by 1990 their share increased to 40 percent on average. But the range in the mix between male and female students is very still large among these countries, although this variation appears to be dropping slowly.

Figure 8. Mean Percent Female and Male of Total Secondary School Enrollment All World Bank Countries, 1960-1990 (N=81)

D. Effects of Primary Enrollments

The sequential movement of students through school is a well established organizational feature of all educational systems. Therefore the development of primary systems is a perquisite to the development of secondary systems. Secondary enrollments are constrained by primary enrollments.

Actual student flows from one educational sector to another are hard to come by for enough World Bank countries to undertake a summary analysis. Instead a comparison of gross enrollment rates across sectors is possible and provides a less sophisticated, but reasonably informative, assessment of the connection between sectors in these countries.

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4 It should be noted that these GER's do not take into account any differential retention by gender which could influence the overall ratio between female and male students.
Enrollment rates in primary school have steadily increased among World Bank countries over the past twenty years. In 1970 the average rate was 77 percent and it increased to 88 percent by 1990. This means that large percentages of young children are schooled and available for further education in the secondary subsector in many of these countries. Nevertheless the gap between enrollment rates in primary and secondary schooling is still large in World Bank countries. Figure 9 shows the differences between primary and secondary rates over the past twenty years. While the overall difference is declining, it is declining slowly rate. For example, in 1970 the average difference between enrollment rates was 52 percentage points and by 1990 this had dropped to 44 percentage points.

![Figure 9. Mean Differences Between Gross Enrollment Rates for Primary and Secondary Schooling by Country Income](image)

There is substantial variation between subsectors in these countries. The primary and secondary enrollment rates have steadily converged among upper-middle and low-middle income countries, but have sharply diverged among low income countries. The latter is accentuated by a steady rise in primary enrollments over the past two decades while secondary enrollments have grown more slowly (see graph 1). In more developed countries, which by 1970 already had very high primary rates, the past twenty years has been a period of growth in secondary enrollments, producing a greater articulation between educational sectors.

The size of a country's primary enrollment rate can be predictive of the size of the secondary enrollment rate later in time. About one half of the between-country variation in 1990 secondary gross enrollment rates are predicted by primary enrollment rates in 1970 (r=.71, p=.0001, n=92). Countries which developed primary education since the second world war also developed secondary education as well.
The size of the above also means, however, that one half of the between-country variation in secondary rates is *not* predicted from primary rates. To have growth in the secondary sector a country needs more than large primary enrollments.
STRUCTURE OF SECONDARY SCHOOLING

Two aspects of structure of this sector are examined for these World Bank countries. The first is the basic organizational structure of secondary schooling, including years of schooling and the division of lower and upper secondary. Second is the structure of curriculum by enrollment share across vocational, teacher training and academic streams.

A. Basic Organizational Structure

Table 1 presents the modal organization of secondary schooling in World Bank countries in 1990. The main pattern is one in which seventh graders (12 years old) start lower secondary school. This runs for three years through the ninth grade at which point upper secondary schooling starts and lasts for another three years through grade twelve. This is a reasonably strong pattern with 32 percent of the countries having this "3-3" structure. Most variation from this pattern is minor. The most common variation is four years of lower and three years of upper, a structure found in about a fifth of the countries. This followed by a 3 lower-2 upper structure, which only about a tenth of the countries have. There are two extreme patterns of 2 lower-5 upper or 5 lower-2 upper which together comprise only about seven percent of the countries.

<table>
<thead>
<tr>
<th>Table 1. Modal Organizational Structure of Secondary Schooling in World Bank</th>
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<tbody>
<tr>
<td><strong>Mode</strong></td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td><strong>I. Total Secondary Sector</strong> (Lower and Upper combined)</td>
</tr>
<tr>
<td>Official Starting Age</td>
</tr>
<tr>
<td>Number of Grades</td>
</tr>
<tr>
<td>Last Grade</td>
</tr>
<tr>
<td><strong>II. Lower Secondary</strong></td>
</tr>
<tr>
<td>Number of Grades</td>
</tr>
<tr>
<td>Last Grade</td>
</tr>
<tr>
<td><strong>III. Upper Secondary</strong></td>
</tr>
<tr>
<td>Number of Grades</td>
</tr>
<tr>
<td>Last Grade</td>
</tr>
</tbody>
</table>

There is some consistent variation among organizational structure, but it is modest. For example, low income countries have more variation in organizational structure than do either low-middle or upper-middle countries. Low income countries account for almost all of the 2-5 or 5-2 organization among World Bank countries. Also ten percent of these countries have a 3-2 structure and only one fifth have the overall modal structure of 3-3. But the overall variation in organization is not great. The low-middle and upper-middle countries show consistent patterns of organization. Additionally all of the countries examined had some form of secondary schooling; all had some lower and some upper secondary as well.
There are only a few notable regional differences in organization as well. The countries of south Asia, such as India, Nepal and Afghanistan, have a little more organizational variation among them than countries in other regions. But overall the consistencies outweigh any variation. This similarity in gross educational organization has been noted by other studies of the spread of organizational forms across educational systems in the world.

B. Curriculum Variation and Enrollment

Secondary school enrollment is reported by three large curricular streams of general academic (hereafter referred to as general), vocational training (vocational) and teacher training (teach tr.). These represent streams with varying enrollment shares across countries and time. The enrollment share of a particular stream is a reasonable indicator of the emphasis the system places on a particular curricular area.

The general stream has gained in its share of the overall secondary enrollment over the past thirty years from an average of 74 percent in 1960 to an average of 85 percent in 1990. As figure 10 shows, this increase has come chiefly at the expense of enrollments in teach tr. Vocational enrollments also dropped over this period, but to a lesser extent.

Figure 10. Mean Enrollment Distribution Across General, Vocational and Teacher Training Curricular Streams, 1960-1990 (N=96)*

There is notable variation from the main curricular pattern. In 1960, for example, one standard deviation above and below the mean finds that the general enrollment share ranged from 56 percent to 92 percent, by 1990 this range was from 66 percent to 100 percent.
There is also some pattern of curricular organization across the development level of countries. As figure 11 shows, low income countries tend to have smaller vocational streams and larger general streams than low-middle or upper-middle countries. The larger vocation streams among the latter two types of countries is in part due to large vocational systems in eastern European countries such as Albania (75 percent) and Romania (93 percent), but it is also due to large vocational streams in South American such as Brazil (49 percent) Columbia (21 percent) and Panama (27 percent).

Figure 11. Mean Enrollment Distribution Across Curricular Stream by Income Level, 1990*

* 1990 enrollment is estimated from 1986 to 1990 data.
SELECTED ANALYSES OF SIZE, STRUCTURE AND DEVELOPMENT

The above results present in some detail the size and structure of secondary schooling in World Bank countries. As a final section some basic relationships among size, structure and economic development are explored.

Two indicators of size and one indicator of structure are examined: the gross enrollment rate in 1985, the growth in the gross enrollment rate from 1960 to 1990 and the percentage enrollment in the vocational curriculum stream, respectively.

The first column in table 2 displays the correlation between these three indicators and the differences between a country's primary and secondary enrollment rates. The latter, as described above, is an indicator of the connection across sectors of the educational system. Countries with small differences have better articulated systems (i.e., many graduates of primary schooling are moving on to secondary schooling) than do countries with larger differences. The correlation show that countries with more articulation between sectors (lower differences) in 1985 have higher secondary enrollment rates, larger thirty year growth in secondary enrollment rates and a higher percentage of enrollment in the vocational curricular stream.

Table 2. Selected Associations Among Economic Development, Size and Structure of Secondary Schooling in World Bank Countries

<table>
<thead>
<tr>
<th>Differences between Primary and Secondary Rates 1985</th>
<th>Gross Enrollment Rate 1985</th>
<th>Growth in Rate 1960-90</th>
<th>Percent Vocational Enrollment 1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Vocational Enrollment 1985</td>
<td>-.71&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.48&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-.33&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Per Capita GNP 1990</td>
<td>.41&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.16</td>
<td>-</td>
</tr>
<tr>
<td>Growth GNP Per Capita 1965-90</td>
<td>.45&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.58&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.01</td>
</tr>
</tbody>
</table>

The second column of this table shows that high enrollment rates tend to happen in countries with larger vocational streams. This relation was not very strong in 1960, since most likely both size and structure factors are being driven by economic development. As economic development fanned out enrollment rates, it may have also fanned out vocational enrollments. The growth in enrollment rate, however, is not related to the size of vocational streams.

The final two columns of the table show the associations between economic development and size and structure of secondary schooling. As described above the level of development is associated with size and growth in size. Among these World Bank countries wealthier countries have expanded secondary school opportunities for larger percentages of their youth. They have done this through an expansion of primary enrollments and a closer connections between the
primary and secondary sectors (the differences in sectors and per capita GNP is correlated at \(-0.31^*\)). But there is no correlation between GNP and the relative size of the vocational stream. Nor are there correlation between a twenty-five year growth rate in the per capita GNP and any indicators of the size and structure of secondary systems.
CONCLUSION

The thirty years between 1960 and 1990 mark a continuing worldwide trend towards school expansion. What began among the primary subsector has carried over to the secondary subsector. The 100 hundred largest developing countries have expanded primary enrollments and are in the process of doing the same for secondary enrollments. The two processes are linked. A large primary school system produces the demand for larger secondary systems. The lesson from the past one hundred years of school expansion in developed countries is that demand for more schooling is pervasive and as a result upper subsectors will expand rapidly under favorable conditions.

The general trend towards larger secondary subsectors is clear, but it is by no means a uniform process across all developing countries. As the analysis of these World Bank countries shows, there is substantial variation in the expansion of both primary and secondary schooling. It is not the case that secondary expansion "waits" for full primary schooling. Nor have all countries increased the portion of secondary-aged youth in school at the same rate. There is even evidence that a minority of these countries have a stalled rate of secondary school growth.

The variation in secondary enrollment rates among World Bank countries has steadily grown from 1960 to 1990. Both region and the level of development are associated with variation in the rate of increase in secondary education. The largest increase in gross enrollment rates has occurred among lower middle-income countries. At the same time the low income countries have had very low growth and show some indication of a stalled trend over the past two decades. Poor countries in Africa and south Asia have had the least growth in this subsector.

The modal secondary education student in the 100 largest developing countries is from a low-income countries even though these countries have the lowest gross enrollment rates. Large youth populations present a particularly difficult challenge to the development of education in these countries.

The growth in secondary schooling has been accompanied by higher enrollments for female students. Although male students still maintain higher enrollment ratios, gender differences in rates has remained constant over the thirty year period. As the subsector grew, females did not lose in their share of enrollment. Countries with particularly large enrollment rates have incorporated proportionally more female students into secondary school. Although males still receive educational opportunities first, females have won a significant share of the increase in secondary schooling. In some cases, though, gender inequality has increased. This has happened in low-income countries and in south asian and eastern/northern african countries.

The analysis of the organization of secondary school indicates two important trends. First is that many national systems are organized around a general academic curriculum while vocational and teacher training have declined or remained stable over the last several decades.
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