Achieving Universal Primary Education by 2015

A Chance for Every Child

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1 2 3 4 06 05 04 03

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ISBN 0-8213-5345-4

Library of Congress Cataloging-in-Publication Data
has been applied for

Cover photo: Students writing in a war-torn classroom, Baukau, East Timor. Photo by Alex Baluyut/ World Bank Photo Library.

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ACKNOWLEDGMENTS

This study is the work of a team led by Alain Mingat and Barbara Bruns. Team members included Ramahatra Rakotomalala, who developed the simulation model used and carried out the simulations for the African countries; Ashutosh Dubey, who supervised the data collection and simulations for the countries outside Africa; Nicholas Wilson, Saida Mamedova, and Jose Carlos Orihuela, who developed the new database of primary completion rates; Jee-Peng Tan, who contributed to data collection and analysis for the African countries; and Andrew Clark and Hongyu Yang, who assisted in data collection and analysis. Dina Abu-Ghaida carried out a review of relevant literature. Julie Wagshal tirelessly supported the team and handled the report processing through all stages with superb efficiency. Many other colleagues, especially Emanuela di Groppello, Lianqin Wang, Michael Drabble, Douglas Lehman, and Nancy Vandycke, helped in collection of the country-level data. We are grateful to Catherine Sunshine for copyediting; to John Mosier and Al Barkat of Intermax, Inc. and the team at Dohatec New Media for outstanding work in developing the CD-ROM; and above all to Mark Ingebretsen for superb production assistance.

We are grateful to Eduard Bos of the World Bank for the population data used in this analysis, to Sanjeev Gupta and Erwin Tiongson of the International Monetary Fund for fiscal data, and to our colleague Don Bundy and his collaborators at the Imperial College, U.K., for data and assistance in analyzing the impact of HIV/AIDS on the costs of achieving universal primary education. Many other World Bank colleagues helped with the analysis of country-level results, including Philip Goldman, Alan Wright, Brigitte Duces, Michelle Riboud, Keith Hinchliffe, Gary Theisen, Hena Mukherjee, Amit Dar, Christine Allison, Paud Murphy, Bruce Jones, Alexandria Valerio, Safaa El Kogali, Benoit Millot, Regina Bendokat, Keiichi Ogawa, Ayesha Vawda, Ousmane Diagana, John Newman, Peter Moock, Chris Thomas, Chris Shaw, and Tanaporn Poshyananda. Colleagues at numerous bilateral agencies also generously shared existing data and aided with data collection in the field. Without all of their help, this work would not have been possible. Finally, we are indebted to the governments of the Netherlands and Norway, which generously supported this research. We are especially grateful to Evelyn Herfkens, then minister of development cooperation in the Netherlands, for hosting the April 2002 international conference on Education for All in Amsterdam, at which this work was first presented.

The research was carried out under the direct supervision of Ruth Kagia, Birger Fredriksen, and Josef Ritzen, and the team owes much to their vision in launching this exercise, their intellectual guidance throughout, and their unflagging support. The technical work was overseen by an advisory panel led by Shanta Devarajan and including Jamil Salmi, Maureen Lewis, Elizabeth King, Deon Filmer, Emmanuel Jimenez, and Margaret Miller, which contributed much to the conceptual framework and methodology. Discussions with a large number of other colleagues helped to sharpen our thinking—notably Hanke Koopman and

Jeannette Vogelaar of the Netherlands Cooperation Agency; Len Good, Tom Wallace, and Susan Moir at the Canadian International Development Agency (CIDA); Harry Hagan and Steve Packer at the U.K. Department for International Development (DFID); Clay Lowery, Brian Crowe, Stephen Krasner, Buff Mackenzie, and Greg Loos of the U.S. government; Michael Hofmann of the German Ministry for Cooperation and Development; Serge Tomasi, Paul Coustère, and Jean-Claude Balmès from the French Ministry of Foreign Affairs; Olaf Seim from the Norwegian Ministry of Foreign Affairs; Chris Colclough of Sussex University, U.K.; Sir John Daniel, Abimanyu Singh, and Khawla Shaheen at UNESCO; Cream Wright at UNICEF; Lant Pritchett at Harvard University; Nancy Birdsall and Steve Radelet at the Center for Global Development; Brian Ames at the International Monetary Fund; Gene Sperling of the Basic Education Coalition; Phil Twyford, Anne Jellema, Oliver Buston, and Patrick Watt of the Global Campaign for Education; and Luis Crouch, Carolyn Winter, Bob Prouty, Peter Buckland, Hans-Martin Boehmer, Sukai Prom-Jackson, Kin-Bing Wu, and Eric Swanson at the World Bank. Any data inconsistencies, conceptual flaws, or other errors, however, are the sole responsibility of the authors.

We dedicate this book to our spouses, Miguel, Hélène and Fara, and to our own school-aged children, Elena, Pedro, Bakoly and Mamisoa, who share our vision of a world in which every child has the chance to complete primary school.

ACRONYMS

AFR	Africa Region
AIDS	Acquired immune deficiency syndrome
DAC	Development Assistance Committee (of the OECD)
EAP	East Asia and the Pacific Region
ECA	Europe and Central Asia Region
EFA	Education for All
IBRD	International Bank for Reconstruction and Development (of the World Bank Group)
IDA	International Development Association (of the World Bank Group)
G-7	Group of Seven
G-8	Group of Eight
GDP	Gross domestic product
GER	Gross enrollment ratio
GNI	Gross national income
HIV	Human immunodeficiency virus
LCR	Latin America and the Caribbean Region
MDB	Multilateral development bank
MDG	Millennium Development Goal
MNA	Middle East and North Africa Region
MRY	Most recent year
MTEF	Medium-term Expenditure Framework
NER	Net enrollment ratio
NGO	Nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
PCGDP	Per capita GDP

PCR	Primary completion rate
PRSC	Poverty Reduction Support Credit
PRSP	Poverty Reduction Strategy Paper
PTR	Pupil-teacher ratio
SAR	South Asia Region
SWAP	Sector-wide approach
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNICEF	United Nations Children's Fund
UPC	Universal primary completion

Executive Summary

Few global goals have been as consistently and deeply supported as the notion that every child in every country should have the chance to complete at least a primary education. The 1990 World Conference on Education for All in Jomtien, Thailand set this goal to be achieved by 2000. The World Education Forum in Dakar in 2000 reaffirmed and extended the Jomtien commitment, bringing a welcome emphasis on schooling quality while acknowledging that universal primary completion had not yet been reached (box 1). Universal primary completion and gender equity in primary and secondary education were affirmed again in that same year as Millennium Development Goals (MDGs).

Education, and particularly primary education, is a goal in and of itself, but it is also a powerful driver of progress toward the other MDGs. More equitable distribution of education is correlated with lower poverty and inequality and faster economic growth (Birdsall and Londoño 1998). Greater education for girls has strong positive impacts on the health of infants and children, immunization rates, family nutrition, and the next generation's schooling attainment (World Bank 2001). New data from Africa show that education for girls and boys may be the single most effective preventive weapon against HIV/AIDS (World Bank 2002b). Primary education also contributes to better natural resource management, including conservation of the tropical rain forest (Godoy and Contreras 2001). Increasingly, however, research suggests that many of these positive externalities associated with primary education require that a minimum threshold of five or six years of schooling be attained—hence the importance of ensuring primary school completion, and not just primary school access.

Combined with sound macroeconomic policies, education is fundamental for the construction of globally competitive economies and democratic societies. Education is key to creating, applying, and spreading new ideas and technologies which in turn are critical for sustained growth; it augments cognitive and other skills, which in turn increase labor productivity. The expansion of educational opportunity is a "win-win" strategy that in most societies is far easier to implement than the redistribution of other assets such as land or capital. Ultimately, education builds what Amartya Sen (1999) calls "human capabilities"—the essential and individual power to reflect, make choices, seek a voice in society, and enjoy a better life. In short, education is one of the most powerful instruments known for reducing poverty and inequality and for laying the basis for sustained economic growth, sound governance, and effective institutions.

Yet the world remains far from the core Education for All (EFA) goal—universal primary school completion. This study assesses whether universal primary comple-

Box 1 Global "Education for All" Goals

DAKAR WORLD EDUCATION FORUM GOALS	MILLENNIUM DEVELOPMENT GOALS
Expand and improve comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children.	
Ensure that by 2015 all children, particularly girls, children in difficult circumstances, and those belonging to ethnic minorities, have access to and complete free and compulsory primary education of good quality.	Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.
Ensure that the learning needs of young people and adults are met through equitable access to appropriate learning and life skills programs.	
Achieve a 50 percent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults.	
Eliminate gender disparities in primary and secondary education by 2005, and achieve gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality.	Eliminate gender disparity in primary and secondary education, preferably by 2005, and at all levels of education no later than 2015.
Improve all aspects of the quality of education and ensure excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy, and essential life skills.	

tion can be achieved by 2015, the target date set by the Millennium Development Goals. Specifically, it asks:

- How close is the world to achieving the millennium goal of universal primary completion?
- Is it achievable by 2015?
- If so, what would be required to achieve it, in terms of both education policy reform and incremental domestic and international financing?

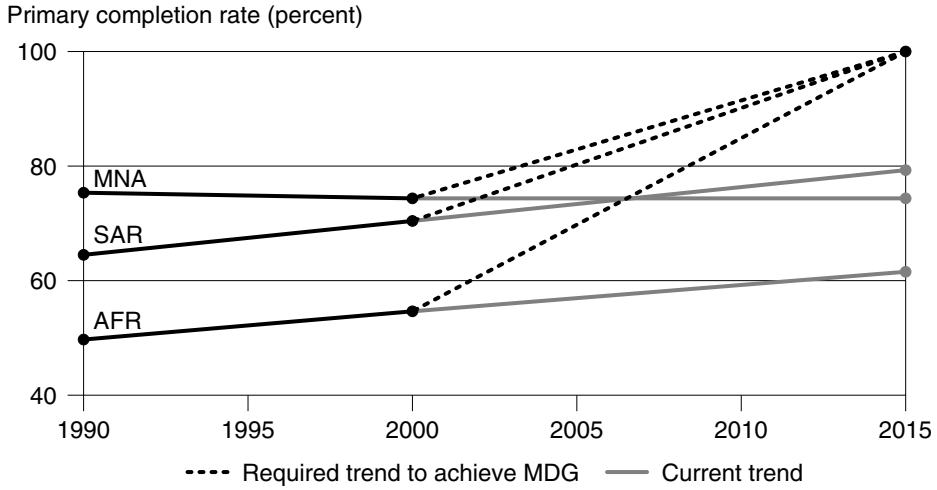
The Global Scorecard: Progress Since Jomtien

A new World Bank database developed for this study shows that over the 1990s the average rate of primary school completion in the developing world (on a country-weighted basis) improved only from 72 to 77 percent, far short of the progress needed to ensure achievement of the education MDG of universal primary completion. On a population-weighted basis, buoyed by China's high reported completion rate, the global picture looks slightly better, rising from 73 to 81 percent over the decade.

On either basis, however, the global average masks large regional differences in both the distance from the MDG and the progress made over the last decade, as can be seen from figures 1 and 2. Sub-Saharan Africa has the lowest completion rate by far, with barely half of all school-age children completing primary school; it is followed by South Asia, with an average completion rate of about 70 percent. The Middle East and North Africa showed a disturbing pattern of stagnation over the 1990s, with the average completion rate remaining around 74 percent. The Europe and Central Asia region (92 percent) is closest to the goal of universal primary completion, followed by Latin America and the Caribbean (85 percent) and East Asia and the Pacific (84 percent).

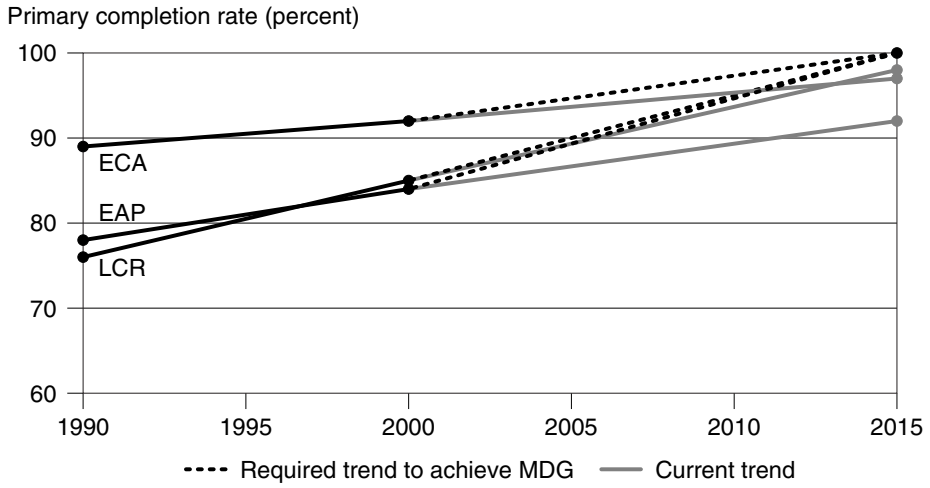
Moreover, within every region, trends at the country level diverge sharply, with rapid progress registered in some countries, stagnation in others, and declines elsewhere. For example, while the global average completion rate for girls improved

Figure 1 **Primary Completion Progress in Africa, Middle East and North Africa, and South Asia Regions, 1990–2015, Country-Weighted**



Source: Annex figure B.5.

FIGURE 2 **Primary Completion Progress in Europe and Central Asia, East Asia and the Pacific, and Latin America and the Caribbean Regions, 1990–2015, Country-Weighted**



Source: Annex figure B.5.

more than that for boys over the 1990s, it still lags that of boys, at 76 percent compared to 85 percent. Serious gender disparities are evident in at least 13 countries, where girls' completion rates trail those of boys by more than 10 percentage points. While countries such as Tunisia, Bangladesh, and Sri Lanka have made impressive progress in narrowing the gender gap, in other countries it has widened, or narrowed only because of declines in boys' completion rates rather than improvement in girls'.

Overall, though, the trends over the 1990s provide some encouraging evidence that where political will is strong, effective reforms are adopted, and international support is adequate, dramatic progress in increasing primary completion rates is possible. A significant number of countries, from Brazil and Nicaragua in Latin America to Cambodia in East Asia to South Africa and The Gambia in Africa, registered improvements in the primary completion rate of 20 percentage points or more in less than a decade. This holds out hope that any developing country whose completion rate is currently 70 percent or higher could meet the MDG by 2015, provided it can achieve and sustain the rate of improvement registered by these high-performing countries.

On the other hand, progress is clearly fragile. Thirteen middle-income and 15 low-income countries saw their completion rates stagnate or decline over the 1990s. The case of Afghanistan (which dropped from an already low 22 percent in 1990 to an estimated 8 percent in 1999) is obvious and dramatic. But other countries losing significant ground include Zambia, the Republic of Congo, Albania, Cameroon, Kenya, Madagascar, Qatar, Iraq, the United Arab Emirates, Bahrain, and Venezuela.

The Global Prospects for UPC by 2015

At the trend rate of progress achieved over the 1990s, by 2015 the global primary completion rate will not exceed 83 percent. On a population-weighted basis, the world would come closer to achieving the MDG, with about 9 out of every 10 children globally completing primary school. But, as figures 1 and 2 indicate, underlying this global average would be a wide gulf in performance across regions. Ultimately, the MDG will not be attained unless every child in every country has the chance to complete primary school, and change will have to happen at the level of national education systems in order to reach the goal. Therefore, the focus of this analysis is the country-by-country prospects for reaching universal primary completion (UPC) by 2015.

According to the best available estimates, 37 of 155 developing countries have achieved or have virtually achieved universal primary completion and another 32 are "on track" to reach the goal on trend rates of progress achieved over the 1990s (table 1). Some 86 countries, however, are at risk of not reaching the goal unless progress is accelerated. They include countries that are making good progress but will fall short of the goal because their completion rates started from a very low base, as well as countries with higher completion rates that have registered declining trends or stagnation during the 1990s; these 43 countries are labeled "off track." Another 27 countries must be considered "seriously off track": on current trends, their completion rates will not exceed even 50 percent by 2015. Of the 70 countries that are off track or seriously off track, 51 are low-income countries.

Table 1

Prospects for Universal Primary Completion by 2015

Progress Rating	Low-Income Countries[a]	Middle-Income Countries[b]	All Developing Countries
On track	22	47	69
Achieved UPC	11	26	37
On track to achieve UPC by 2015	11	21	32
Off track	51	19	70
Off track to achieve UPC by 2015	28	15	43
Seriously off track	23	4	27
No data available	9	7	16
At risk, subtotal	60	26	86
Total	82	73	155

a. Countries eligible for lending from the International Development Association (IDA) and "blend" countries eligible for IDA and IBRD lending, plus non-member low-income countries such as the Democratic People's Republic of Korea.

b. Countries eligible for lending from the International Bank for Reconstruction and Development (IBRD), plus non-member middle-income developing countries.

Finally, there are 16 countries for which no data are available, and at least some of these, such as Somalia, Liberia, and Myanmar, are very likely at risk as well.

This picture is not encouraging. But a significant share of the at-risk countries *could* reach the goal, if they could match the average rate of progress of 3 percentage points per year observed in the best-performing countries over the 1990s. At this rate of progress, *all* of the middle-income and more than two-thirds of the low-income at-risk countries would reach the MDG. This goal is achievable and should be the focus of country policy and international assistance.

However, the countries lagging furthest behind—many in Sub-Saharan Africa, and many countries scarred by conflict—would need to improve at even faster rates, for which there is little historical precedent. Some of these countries are making impressive progress in extremely difficult contexts. But it is clear that the worldwide attainment of universal primary completion by 2015 will require an even stronger combination of political will, sustained and deep reform, faster diffusion of best practices, and intensified financial effort than has been marshaled to date.

What Will It Take to Achieve Universal Primary Completion by 2015?

To answer this question, we focused on the 55 largest low-income[1] countries in the world, which are home to 75 percent of all children out of school globally. These are countries whose fragile domestic resource base and institutional weaknesses make them the priority arena for a global effort to support the achievement of universal primary completion.

Building on pioneering work by Colclough and Lewin (1993) and other researchers,[2] we analyzed primary completion rates and gross enrollments as a function of characteristics of the education system that have long been identified as key: the resources allocated to primary education; average teacher salaries and unit costs; spending on complementary non-teacher-salary items; average class size (pupil-teacher ratio); and average rate of grade repetition. Even in this relatively small sample, there was enormous variance across countries in the fiscal commitment to primary education and in these indicators of the structure and costs of their education service delivery, as can be seen from table 2.

The sample exhibited great variance in system outcomes as well, with primary completion rates ranging from 20 to 100 percent, and gross enrollment ratios ranging from 30 to 120 percent. Very notable in figure 3 is the variance in the relationship between schooling enrollments and completion rates, which provides a strong argument for the importance of tracking primary completion directly.

The diagonal line in the graph represents perfect one-to-one mapping between the gross enrollment ratio (GER) and the primary completion rate (PCR), but very

1. Countries with gross national income (GNI) per capita of US$885 or less in 2000.
2. See, for example, Mehrotra (1998), Colclough and Al-Samarrai (2000), and Delamonica, Mehrotra, and Vandemoortele (2001).

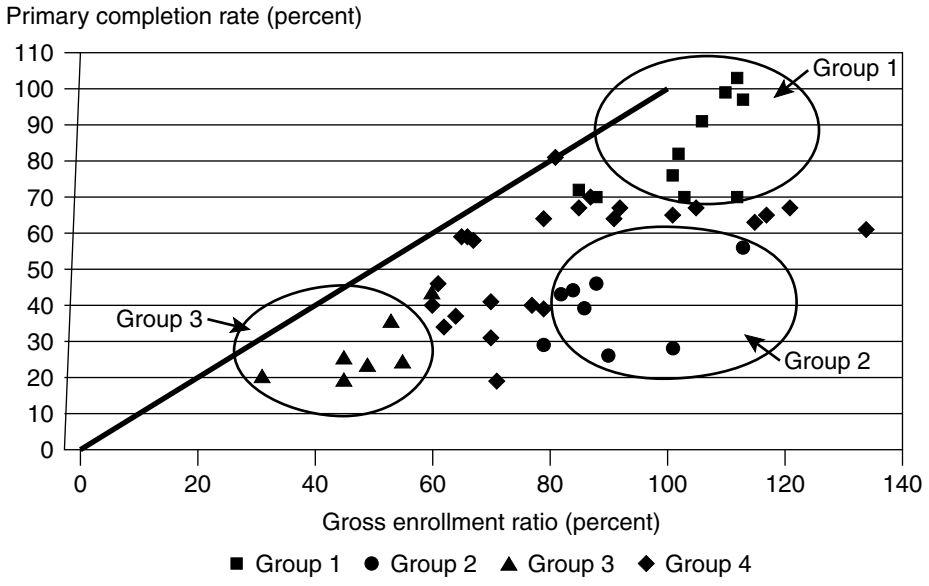
Table 2

Benchmarks for Primary Education Efficiency and Quality

Variable	Sample Range in 1999/2000	Sample Mean in 1999/2000: Adjusted Sample	Sample Mean in 1999/2000: Highest-Completion Countries	2015 Benchmarks
Service delivery				
Average annual teacher salary (as multiple of per capita GDP)	0.6–9.6	4.0	3.3	3.5
Pupil-teacher ratio	13:1–79:1	44:1	39:1	40:1
Spending on inputs other than teachers (as percentage of primary education recurrent spending)	0.1–45.0	24.4	26.0	33
Average repetition rate (percent)	0–36.1	15.8	9.5	10 or lower
System financing				
Government revenues (as percentage of GDP)[a]	8.0–55.7	19.7	20.7	14/16/18[b]
Education recurrent spending (as percentage of government revenues)	3.2–32.6	17.3	18.2	20
Primary education recurrent spending (as percentage of total education recurrent spending)	26.0–66.3	48.6	47.6	50[c]
Private enrollments (as percentage of total)	0–77.0	9.4	7.3	10

a. Government current revenues, excluding grants.
b. Staggered targets proportional to per capita GDP.
c. For six-year primary cycle; otherwise prorated for length of cycle.

FIGURE 3 **Primary School Completion Rates and Gross Enrollment Ratios in a Sample of Low-Income Countries, circa 1999/2000**



few of these low-income countries have achieved this. Instead, three stylized groupings may be observed, which we used to deepen the analysis:

Group 1 Relatively successful countries, with high GER (85 percent or above) and high PCR (70 percent or above).

Group 2 High inefficiency countries, with high GER (80 percent or above) but low PCR (60 percent or lower).

Group 3 Low coverage countries, with low GER and PCR (both 60 percent or lower).

Group 4 Countries falling in between the defined ranges, presenting milder versions of these patterns.

When education spending and service delivery characteristics were analyzed for the three stylized groups, several clear patterns emerged. The relatively successful countries in Group 1:

- Devote a higher share of their gross domestic product (GDP) to public primary education
- Have unit costs that fall in the middle of the range—not too high and not too low
- Pay teachers an average annual wage of about 3.3 times per capita GDP
- Have slightly higher spending on complementary, non-teacher-salary inputs
- Have an average pupil-teacher ratio of 39:1, and
- Have average repetition rates below 10 percent.

The Group 2 and Group 3 countries deviated widely from these average values, and in very distinct ways. Group 2 countries have significantly lower average spending and strikingly higher repetition—28 percent on average, compared to below 10 percent for Group 1. Group 3 countries have dramatically higher unit costs—about 70 percent higher than the other groups'—driven by very high average teacher salaries.

It appears from the experience of these Group 2 and 3 countries that deviating very far from the patterns observed in the more successful countries (for example, pupil-teacher ratios of 75:1 or 13:1, rather than 39:1 or 40:1) has forced their education systems into unhealthy adjustments and poor outcomes. The analysis suggests that the relatively balanced parameters observed in the Group 1 countries may offer a set of indicative benchmarks to guide service delivery and financing reforms. Bringing key service delivery and domestic financing parameters into line with benchmarks drawn from higher-performing countries offers a clear strategy for creating a higher-quality learning environment for children, associated with lower repetition, higher retention in school, and, consequently, a higher rate of primary completion.

Transparent parameters such as these also reveal each country's degree of domestic fiscal commitment to the goal of universal primary completion. Any global strategy for accelerating EFA progress must take this into account, encouraging more domestic effort where it is low, and taking care not to penalize countries currently showing stronger commitment.

These findings also imply that the road to universal primary completion for different countries will vary, depending on how their costs and structure of service delivery compare with the indicative benchmarks. For example, the high cost

structure of Group 3 countries makes achieving universal primary completion prohibitively expensive; the high repetition and dropout rates of Group 2 countries make it virtually impossible. The inescapable conclusion—reaffirming what Colclough and Lewin (1993) posited a decade ago—is that the attainment of universal primary completion depends even more crucially on education system reform than on incremental financing.

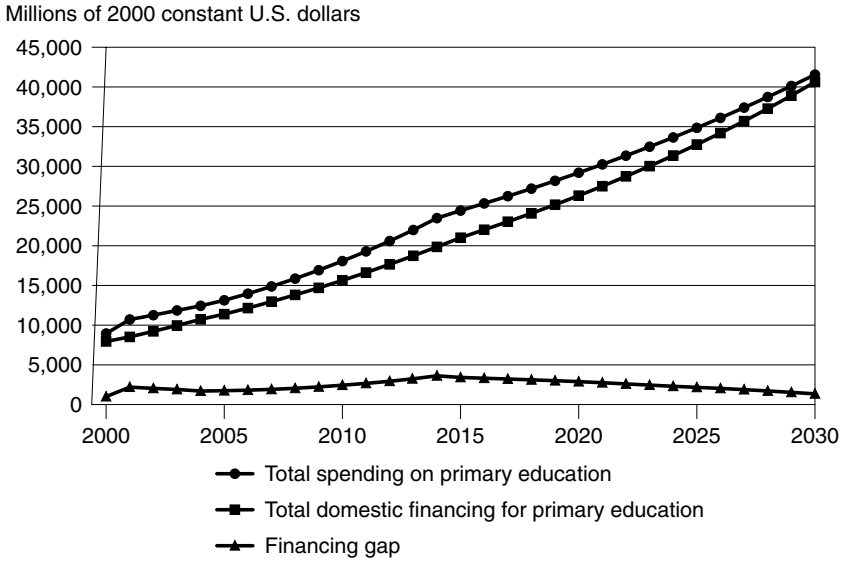
Costing the MDG of Universal Primary Completion

It follows that the soundest basis for estimating the global financing requirements for achieving the education MDG is to aggregate these from country-level analysis that takes into account the reforms needed for a viable strategy in each country context. We used a simulation model to do this, estimating the costs of achieving universal primary completion in the 47 countries in our sample that have not yet achieved the goal, under different scenarios of gradual policy reform toward the benchmarks. Depending on each country's initial situation, a gradual process of either increase or decline in average teacher salaries, the pupil-teacher ratio, average repetition, and each of the other variables is programmed to occur between 2002 and 2015, at the same time as the evolution of student flows is projected in light of the latest data on population trends.

This framework focuses on the quality and quantity of primary education supply, but also recognizes that demand-side issues (household budget constraints, direct and opportunity costs of schooling, the social value attached to educating girls or children with disabilities, and so forth) are important determinants of school attendance and completion. Accordingly, our cost estimates assume that primary education is completely free to users (no tuition, book charges, teacher supplements, or contributions to construction from the community, for example), and we make explicit budgetary provisions for additional subsidies and incentives to overcome demand-side constraints for the most disadvantaged children, including a special provision for stipends to HIV/AIDS orphans. We assume these programs would be tailored to the specific country context. We assume a public sector responsibility for *financing* the bulk of primary schooling, but not necessarily public *provision*. Indeed, increased service delivery through community schools, alternative schools, nonprofit private schools, and schools run by nongovernmental organizations (NGOs) is in many developing countries a key strategy for achieving more efficient use of public resources and more equitable geographic coverage.

The gradual reforms in all parameters to 2015 influence the efficiency of student flows, the domestic resources available for primary education, and the progress toward universal primary completion, in effect producing 47 country-specific strategies for achieving the MDG. Under these scenarios, the countries analyzed would expand their education system coverage 30 percent by 2015 (with a doubling of enrollments in Africa). Average spending per student would more than double in real terms, reflecting the impact of economic growth on average teacher salaries, the significant increase in schooling quality implied by the benchmark allotment for non-salary inputs, and our provision for additional targeted support to AIDS orphans. Increased efficiency of student flows resulting from

FIGURE 4 **Domestic and External Financing Required to Achieve the Education MDG in 47 Countries, 2001–2030**



these quality improvements would substantially accelerate the progress toward universal primary completion by 2015. But even with increased fiscal effort in many of the countries in line with the targets for domestic resource mobilization, the simulations show that these countries, as a group, would not be able to achieve the goal without sustained and significant external financial support.

Over the period to 2015, we simulated an increase in these 47 countries' own financing for primary education from a base of about $8.5 billion in 2000 to about $21 billion per year in 2015.[3] Even this significant a domestic effort would not cover the total incremental costs of reaching the education MDG. Our simulations showed a financing gap over the period, rising from about $1.0 billion in the initial year to a peak of $3.6 billion in 2015 when full primary coverage and quality are achieved. At the peak, this financing gap represents 15 percent of total expenditures. Thereafter, the financing gap would decline steadily, to an estimated 3–5 percent of total expenditures in 2030.

As Table 3 shows, the bulk of the external support—more than 75 percent of the total, or close to $1.9 billion per year—would be needed in Africa. The simulations show that all 33 Sub-Saharan African countries in this low-income sample would face a financing gap in achieving universal primary completion. The external funding required would also represent a much larger share of their total financing needs—as high as 36% in the peak year of 2015, before declining to about 6% of total requirements by 2030.

3. Unless otherwise noted, dollar amounts in this book are 2000 constant U.S. dollars.

Table 3

Estimated Annual Financing Gap by Region
(millions of 2000 constant U.S. dollars)

Type of Financing	Africa	South Asia	Latin America and the Caribbean	East Asia and the Pacific	Middle East and North Africa	Europe and Central Asia	Total	Percentage of Total Financing Gap
Recurrent	1,127	97	14	30	21	34	1,323	55
Operation	841	97	14	30	21	34	1,037	43
AIDS	286	0	0	0	0	0	286	12
Capital	725	300	34	6	49	0	1,114	45
Total	1,852	397	48	36	70	34	2,437	100

Note: Numbers may not sum to totals because of rounding.

The four South Asian countries we studied would require about $397 million per year in external funding; the three low-income countries analyzed in Latin America and the Caribbean would face a gap of $48 million per year; two countries in East Asia would require external support of about $36 million per year; the one Middle Eastern country in the sample would need $70 million per year; and the three countries analyzed in the Europe and Central Asia region would have a combined financing gap of about $34 million per year.

An important finding is that about 55 percent of the external financing needed would be for recurrent budget support, and only 45 percent for capital support (new school construction). Since construction investments are generally easiest for donors to mobilize, we assume that *all* of the new construction needed in these countries would be financed externally. But the simulations make clear that an even larger volume of external support would be needed for recurrent budget requirements. Under our target parameters, virtually all countries in the sample would increase their domestic financing for EFA, and would finance 90 percent of the incremental recurrent costs of achieving the goal themselves. But the bigger constraint to achieving the goal will be the availability of external financing for recurrent expenses, not capital.

The financing gap estimated in this study is a lower-bound estimate of the global costs of attaining the education MDG, for several reasons. First and most crucially, our simulations in essence captured the incremental costs of *expanding* primary education systems in these countries to reach the goal by 2015. They did not capture the important needs—particularly in these very low income countries—for rehabilitation and upgrading of the current system. Our data set did not permit a detailed appraisal of the adequacy of existing classroom and administrative infrastructure or the adequacy of system functioning in each country, an appraisal that would be required to estimate the costs of needed upgrading, rehabilitation, and capacity building to complement the expansion costs we estimated. Given the

precarious functioning of the education system in very many of the countries in our sample, it can be assumed that these needs are substantial. Because these investments are needed immediately, moreover, our simulation results for the first few years of the projection period particularly underestimate the true needs for external financing in these countries.

Second, although our sample included all of the most populous low-income countries—accounting for 94 percent of all children out of school in low-income developing countries—there are about 20 small low-income countries and several conflict-affected countries that were not analyzed. Moreover, we only estimated financing requirements through six grades of primary schooling; countries whose official primary cycle is longer than six years will face financing requirements that we did not capture. A full costing of the external needs would have to include all countries and reflect the full length of the primary cycle in each.

Third, this costing exercise simulated a reform path to the MDG for each country that assumed system reforms would be initiated immediately, and pursued steadily to 2015. In reality, there will be many cases where it is politically impossible to launch all needed reforms at the same time, where the pace of implementation will not always be linear, and where there is a need for the education system to deliver better service immediately, while key reforms—particularly on the resource mobilization side—may take longer to legislate and implement. To the extent that external assistance can facilitate such processes, transitional external financing requirements may be higher than the simulation estimates. However, the record on aid effectiveness also clearly points to the pitfalls of external assistance as a substitute for country commitment to needed reforms.

Finally, this costing exercise focused on the Millennium Development Goal of universal primary completion by 2015, and not on the full set of Education for All goals established at the Dakar conference. Developing countries are committed to pursuing all six Dakar goals, and the incremental costs to attain some of them—especially the elimination of gender disparities in secondary education, the achievement of a 50 percent improvement in adult literacy by 2015, and the expansion of early childhood care and education targeted to the most vulnerable children—will be significant. The financing framework introduced in the present study provides for balanced spending on *all* levels of education, and not only primary education, and would therefore provide some fiscal space for education systems to pursue the broader Dakar goals. But parallel efforts to the current study are needed for a full costing of the Education for All agenda, and especially to provide guidance on the "good practice" policies, service delivery parameters, and additional external financing that would be needed for developing countries to attain the Dakar goals in full.

Estimating the Global Costs of the Education MDG

Despite these limitations, the current study does represent one of the most careful efforts to date to analyze and cost a strategy for attaining the education MDG of universal primary completion. In a world where both developing and developed countries face competing priorities and budget constraints, we insist on the impor-

tance of a global strategy—such as the one outlined here—that seeks to achieve the goal at minimum adequate cost, rather than "at any cost." In this vein, we tried to generate a plausible estimate of the likely costs of achieving the education MDG (through five or six years of schooling) in *all* developing and transition countries, building on our detailed analysis of 47 low-income countries.

"Scaling up" our analysis to include estimated needs for *rehabilitation* and *expansion of system infrastructure* (based on more comprehensive data for a smaller sample of countries) increased the total incremental costs of achieving universal primary completion by about $1.1 billion per year. Since our analysis showed financing needs for primary education already in excess of these countries' capacity to finance them domestically, all of these additional costs were added to the estimated external financing gap. This increased the overall financing gap for these 47 countries by roughly 45 percent, to about $3.5 billion per year. As the rehabilitation needs are all concentrated in the early years of the period, they would increase the external financing needs in those years especially dramatically.

Extending the estimate from the 47 countries we analyzed to the full group of 79 low-income countries increased the estimated financing gap by an additional 8 percent—a relatively modest amount, since our sample countries account for such a large share of the total school-age population in low-income countries.

Thus, the total incremental costs of achieving the education MDG (through five or six years of schooling) in all low-income countries, including all needs, would total an estimated $9.7 billion per year over the period to 2015, of which about $3.7 billion per year would need to come from official development assistance. This is about 50 percent higher than the $2.4 billion annual gap we projected.

Estimating the likely costs and financing gaps for the 47 middle-income countries that have not yet reached the MDG is more difficult, however. Although these countries are already much closer to the goal of universal completion, have more scope for domestic financing of primary education, and have more favorable demographic trends, their unit costs are much higher, due to lower pupil-teacher ratios and the higher dollar costs of teacher salaries and other inputs.

Based on current unit costs and enrollment data, but applying population and economic growth projections, we estimate that the incremental costs of reaching the education MDG in the middle-income countries would be in the range of $23-28 billion per year, compared to baseline spending on primary education estimated at about $80 billion in 2000.

However, this estimate is not strictly parallel to our estimate for the lower income countries, because it assumes no changes in service delivery efficiency or domestic financial commitment to the goal. Without country-by-country analysis, it is impossible to say how these population, cost, and financing factors would balance out, what the most appropriate reform trajectories for these countries would be, or what residual external financing needs would remain.

The one study so far that has applied our methodology (with regionally appropriate benchmark parameters) to 10 middle-income countries in Latin America and the Caribbean found that these countries should be able to finance the limited amount of school-level expansion needed to reach the primary education MDG,

without an external gap, if they also adopt policies to improve the efficiency of student flows and devote reasonable domestic budget allocations to primary education (di Gropello, Dubey, and Winkler 2002). However, other studies—without assumptions on efficiency or financing reforms—have generated estimates of the financing gap for middle-income countries in the range of $4 billion per year.

We believe that, just as in the countries we analyzed, there is clear scope in middle-income countries to increase resource mobilization and improve efficiency in service delivery. Without careful country-by-country analysis of the type we have done, however, the most that can be said is that the incremental costs of reaching the education MDG in middle-income and transition countries could be as high as $23–28 billion per year, and, of this, the need for external financing might range between $1 billion (with appropriate policy reforms) to $4 billion, per year.

Summing these with our scaled-up estimates for the low-income countries results in a global estimate that roughly $33–38 billion per year in additional spending on primary education will be needed in developing countries between now and 2015 if the education MDG is to be met. This is the annual average of a spending increase that would take place gradually over the period, but it clearly connotes a significant challenge. The increase relative to current spending levels will be much higher for the low-income countries than for the middle-income and transition countries. We estimate that even with optimal policy reforms and strong domestic fiscal commitment to achieving the goal, countries themselves will not be able to generate the resources needed. We estimate that $5–7 billion of this total spending increase would need to come through external aid.

This estimate is anchored in careful country-by-country analysis. It is also shaped by an explicit focus on achieving the goal at minimum and sustainable global cost. But even this conservative estimate is many times higher than aid flows currently available for primary education, especially for the lowest income countries. It will take strong effort and commitment from development partners to mobilize this incremental funding, and equal effort from developing countries to use it well.

Implications for Countries and Donors

At the Monterrey conference on development finance in 2002, the donor community pledged increased development support channeled in a new and more selective framework to those countries with both sound policies and a willingness to be held accountable for clear results. At the Dakar conference in 2000, the donor community made a commitment that no developing country with a "credible plan" for achieving EFA would fall short of the 2015 goal for lack of external support. Our analysis suggests that a relatively small set of key parameters are important determinants of primary completion rate progress and therefore core elements of a "credible" or sound policy framework in education. Using these "indicative parameters" to guide education planning could bring increased technical rigor, transparency, and financial discipline to the process. Such a framework could help ensure that policy actions, new investments in school expansion, domestic resource

mobilization, and external assistance all lead to progressive improvements in system functioning, measured against clear benchmarks.

However, this indicative framework is clearly not *sufficient* for a credible EFA plan, and must not be applied rigidly. First, the system-wide average values on which these parameters rest do not guarantee that the underlying distribution is efficient or equitable—particularly in large federalized education systems such as those of India or Nigeria. In India, for example, while the national average is 52 pupils per teacher, the pupil-teacher ratio is as low as 30:1 in some states and as high as 60:1 in others, reflecting serious disparities in education access and quality across the country. Addressing these regional disparities—which could not be captured in our simple simulation model—will clearly be costly and will require concerted action at the federal, state, and district levels. A credible EFA plan for any country must go beyond the national average benchmarks and also focus on subnational variance in education financing and service delivery.

Second, while the indicative benchmarks can provide a useful point of reference for all countries, there will be many cases where they are culturally, institutionally, or financially inappropriate. The ultimate value of this framework is as a guide to the direction of reform, not as a dictate regarding where it should end.

Third and most importantly, the indicative framework can help ensure that education systems have adequate overall resources and a healthy mix of core inputs. But it cannot guarantee the effective management of those resources. In a great many developing countries, achieving better management of education resources—at the central level, at the school level, and in the classroom—is as large a challenge as mobilizing more resources. Indeed, as primary education systems in many of these countries will more than double in size over the coming decade, the management challenges will become even more acute.

At the central level, ministries of education must achieve greater equity and efficiency in allocating financing and deploying personnel across different regions and across schools, as well as between administrative support services and school-level delivery. The share of resources absorbed into central administration in many systems is very high, with little value added for system quality or student learning. Across different regions, schools with similar enrollments often differ widely in the number of teachers and other resources deployed to them, with no formal rationale but with clear implications for quality and equity. Similarly, expenditure tracking analyses frequently find that only a fraction of the overall education resources allocated to schools actually reaches them, and often too late in the school year to be used productively. Finally, national systems to assess student learning and monitor progress at the classroom and school level are crucial for holding education actors accountable and stimulating system-wide improvement. Yet they exist in very few of the countries in our sample.

Management capacity at the school level is also crucial. The quality of school leadership makes the difference between an orderly environment where teachers perform and children can learn, and a chaotic environment marked by rampant absenteeism, poor school maintenance, disappearance of books and materials, and poor relations with parents and the community, as seen in all too many education

systems. Simple and often costless actions such as assigning the best teachers to the early grades, adapting the school calendar to the needs of the community, and making sure that teachers show up on time and work a full week can greatly boost student attendance and learning. Effective management at the school level makes these happen.

And ultimately, it is management in the classroom that transforms education resources into student learning. Research shows that after controlling for student characteristics, learning outcomes can differ greatly even across equally resourced classrooms in the same school. What teachers do matters more for student learning than any other single factor. Teachers must use class time effectively; they must make creative use of learning materials; they must have the capacity to adapt their teaching practice to individual students' learning needs; and, above all, they must be motivated to devote time and hard work to proving that "every child can learn." In many developing countries, teachers' incentives, capacity, and practice are all greatly in need of strengthening.

Specific policies to address these management issues at all levels of the education system must equally be core elements of a credible EFA plan. But the first step toward a quality school system is to ensure adequate resources, allocated in an efficient balance against core system parameters. Without this, few other policy objectives or programs can be implemented or sustained.

Adopting this policy and financing framework would have several key implications for developing countries:

- The criteria for a "credible plan" would be less ambiguous and more technically rigorous.
- Countries' own commitments to EFA could be evaluated more transparently, as the allocation of a "fair share" of domestic fiscal resources to primary education.
- Steady improvement in service delivery parameters could be a quid pro quo for continued external support.
- The EFA process would be focused more sharply on key outcomes, especially the primary completion rate and student learning progress, and more accurate and timely measurement of these would be required.
- Countries and their partners would both be more clearly accountable for ensuring that external funding catalyzes tangible progress toward EFA and is not wasted in ineffective delivery systems.
- Countries' overall domestic resource mobilization and spending, not only education ministry spending, would become subject to EFA monitoring.

The implications for international development partners are equally strong. The simulation results show clearly that even with a maximum domestic effort, most low-income countries will not be able to achieve universal primary completion by 2015 without changes in both the level and nature of external support. Making good on the international community's commitment at Dakar would require development partners to take six basic steps.

First, they must significantly *increase donor funding for primary education.* The average external financing needed for just the 48 low-income countries we analyzed is about $2.5 billion per year between now and 2015—almost a tripling of current

aid for primary education to these countries and about a fourfold increase in the level of donor support to the 33 Sub-Saharan African countries in the sample.

Second, donors should *ensure better targeting of "EFA priority" countries.* Current patterns of aid to education are not prioritizing countries in greatest need. The countries analyzed have an average primary completion rate of only 57 percent, yet receive only about 10–15 percent of current official development assistance going to education.

Third, the *mix of donor assistance should be changed.* Donors need to shift a larger share of external assistance to recurrent budget support. In turn, recipient countries need to show greater budgetary transparency and monitoring of outcomes.

Fourth, donors can *improve the efficiency of aid transfers.* A significant share of donor assistance typically supports technical assistance contracts, consultancies, seminars, study tours, and other expenditures that—no matter how valuable—do not count directly against the "core" resource requirements for EFA estimated in our simulations, about 55 percent of which would be for recurrent costs and notably for teacher salaries and appropriate demand-side interventions. Similarly, the unit construction costs we assumed (averaging about $8,000 per classroom for the sample) are far lower than those many donors report. Shifting to community-based construction of new schools and classrooms to lower unit costs is essential for reaching the MDG but will require flexibility on the part of donors.

Fifth, donors should *transfer funds via new mechanisms.* The stability and predictability of external assistance is crucial if countries are to take on recurrent expenditures (such as hiring of additional teachers) that are not easily compressed if external support fluctuates. On the other hand, it is not easy for bilateral donors, subject to their own political processes and budget constraints, to make long-term funding commitments. Greater use of pooled donor assistance and direct budget transfers in the context of sector-wide approaches (SWAPs) and other programmatic support could help match donor assistance more effectively to countries' core financing needs and ensure a more stable and predictable flow of funding.

Finally, there is an urgent need for *more effective monitoring of progress, increased research, and faster diffusion of knowledge about what works.* The costs of EFA monitoring, data collection, international research, and global and local activities to diffuse new knowledge are not included in the estimated financing gap, but these investments in the global public good should be considered core responsibilities of the international community. The road to EFA will for many countries be an enormous challenge. Accumulated country experience and international research can play an important role in smoothing it.

The EFA Fast-Track Initiative

Building on the above analysis, a new compact for primary education designed to accelerate global progress toward the education MDG was endorsed by the Development Committee of the World Bank and International Monetary Fund in April 2002 and by the G-8 in its action plan for education at the June 2002 summit in Kananaskis, Alberta, Canada. The new compact, called the EFA Fast-Track Initiative, is the first proposal to emerge since the Monterrey conference that aims at

accelerating MDG progress using the Monterrey framework of increased development support in exchange for increased accountability for results. The new initiative is supported by all major bilateral donors for education and by UNESCO, UNICEF, the World Bank, and the regional development banks, all of which have jointly formed the EFA Fast-Track Partnership. At the heart of the Fast-Track Initiative are:

- A commitment by developing countries to accelerate efforts to achieve universal primary education cost-effectively, within an "EFA indicative framework" (box 2); and
- A commitment by donors to provide sustained incremental financing (as much as possible on a grant basis), where credible plans to accelerate progress in primary education exist.

Box 2

EFA Indicative Framework

- Average annual teacher salary (as multiple of per capita GDP)
- Pupil-teacher ratio
- Share of recurrent spending on inputs other than teachers
- Average repetition rate
- Education share of government recurrent budget
- Primary education share of education recurrent budget

In June 2002, a first set of 18 low-income countries was invited to join the initiative and to submit their EFA plans, including baseline indicative framework indicators and annual targets, for donor financing. The 18 countries (box 3) are diverse regionally and in terms of their proximity to universal primary completion; together, they account for an estimated 18 million children without access to education. This first set of countries was invited to consider committing to the Fast-Track Initiative on the basis of two simple and transparent criteria: (a) they have formally adopted national Poverty Reduction Strategy Papers (PRSPs) that integrate their education plans into overall national development priorities; and (b) they have education sector plans in place, agreed with the donors. The rationale for these two criteria is that having these elements in place should allow fast-track support to catalyze measurable progress more quickly. It should be noted that the Fast-Track Initiative is aimed at accelerating MDG progress in, and learning lessons from, countries that are currently on track to reach the goal as well as supporting countries that are off track.

A second set of five high-priority countries was also invited to join the initiative, but with a different status initially, as they did not yet meet the two criteria. These "Big Five" countries are deemed high priority because they account for the largest numbers of children without access to primary education globally—about 50 million of the 113 million children in total estimated to be out of school. The spirit of the Fast-Track Initiative is that country commitment to sound sector programs integrated into broader poverty reduction strategy as well as commitment to appropriate policy actions in line with the EFA indicative framework are important for effective use of development resources. "Analytical Fast-Track" support aims to help these countries reach that status. India is the first of the "Big Five" countries to meet the two criteria, and the government is considering participation in the FTI.

In countries with PRSPs and sector plans in place, the Fast-Track process involves a complementary in-country analysis to benchmark education system performance relative to the EFA indicative framework; to set appropriate annual targets for their country context; and to refine estimates of the external financing needs for accelerated progress in primary education, consistent with the implementation of appropriate reforms and the medium-term expenditure framework established in their PRSP. Although for the first set of countries these adjustments have been set out in "Fast-track proposals," it is expected that the process of identifying priority policy actions to align system functioning with the indicative framework benchmarks will increasingly be mainstreamed into the development of those plans in the first place and separate FTI proposals will not be needed. The first FTI proposals have represented a more comprehensive assessment of financing needs than we costed, as they include rehabilitation requirements. The estimated expansion needs, however, may be compared with the financing gap estimates presented here.

Box 3

First EFA Fast-Track Group, 2002

Albania
Bolivia
Burkina Faso
Ethiopia
The Gambia
Ghana
Guinea
Guyana
Honduras
Mauritania
Mozambique
Nicaragua
Niger
Tanzania
Uganda
Vietnam
Republic of Yemen
Zambia

Analytical Fast-Track Countries

Bangladesh
Democratic Republic of Congo
India
Nigeria
Pakistan

An important part of the process is also careful assessment of the physical and institutional capacity to execute increased primary education investment and expenditure. The Fast-Track Initiative implies a major expansion of the management challenge for systems that are generally perceived to be weakly managed today. But this cannot be an argument against such expansion; it simply means that attention to capacity building and institutional support must be an equal part of the partnership effort.

Finally, the estimated needs are compared with the pipeline of existing donor commitments for primary education in each country, including general budget support under Poverty Reduction Support Credits (PRSC) or other multisector programs. It should be recalled that the financing gaps estimated in the present study are gross financing gaps, with no adjustment for the current level of external assistance to the primary sector.

As of March 2003, ten of the first 18 countries invited to join the Fast-Track Initiative submitted proposals for consideration. The Fast-Track partners committed, upon verification of the estimated financing gaps against implementation plans, to ensure that these gaps are filled for the next three years, contingent on countries' continued progress in executing the accelerated program and improving sector functioning in line with their indicative framework targets. The partners also agreed to meet regularly to review implementation, harmonize their education assistance to Fast-Track countries, and decide on additional proposals. Intensified collaboration among donor representatives at the client country level is a key part of this process.

In addition to transparent annual monitoring of their progress against indicative framework targets, recipient countries also committed to monitoring key outcomes such as the net intake rate into first grade for girls and boys, the primary completion rate for girls and boys, and student learning achievement, although it is understood that these outcome indicators can be slow to reflect progress.

Conclusion

Universal primary completion is crucial for national economic and social advancement. It is a goal that all developing countries are committed to achieving by 2015, but one that will not be reached without a significant acceleration of current progress. Faster progress requires the bridging of substantial policy, capacity, and data gaps in many developing countries, in addition to financing gaps. The lack of external financing in some cases is not as binding as the constraints imposed by lack of capacity or the policy framework.

This study focuses on two of these gaps—the education policies that in many countries are needed for faster progress, and the incremental financing required to support this progress. The data we used did not permit us to analyze issues of institutional capacity in any depth, despite the obvious importance of capacity for the implementation of policies and investments and the attainment of desired outcomes. Nor does this study focus on the data gap per se, although the research was hampered by the limited, inconsistent, and outdated education statistics available in the countries analyzed, and the new primary completion database we developed is an effort to provide a better basis for monitoring MDG progress.

Our projections may be considered a minimum estimate of the incremental financing needed to achieve the MDG in the 48 low-income countries (including Afghanistan) currently furthest from the goal, within a framework of country commitment and gradual but effective policy reform. Although the $2.5 billion per year core external funding requirement we estimate is conservative, it is nonetheless many times higher than the current level of aid for primary education to these countries. Our conclusion is that both the policy and implementation challenge for low-income countries and the financing challenge for their development partners will be significant if the education MDG is to be met.

Finally, however important a goal it may be, primary completion is not the only challenge facing education systems in the developing world. Rather, it is just the first step toward a system of lifelong learning for all citizens, which is as relevant for the poorest countries as it is for the wealthiest. All countries, no matter how far they are today from universal primary completion, must simultaneously invest in and promote the balanced development of all levels of their education systems. In a globally integrated and highly competitive world economy, no country can any longer consider primary schooling a terminal level of education for its labor force. Indeed, it is important that expanded donor support for primary education under the EFA Fast-Track and other initiatives be matched by efforts to help countries expand lower secondary education, in anticipation of a growing wave of primary graduates.

But increasing the share of children who complete primary schooling is the essential first step. In a borderless world, where the gulf between the rich, educated, and empowered and the poor, stagnating, and powerless increasingly poses threats to all, the achievement of universal primary completion—like the other MDGs—is of global interest. The new EFA Fast-Track Initiative, if launched successfully and expanded steadily to reach all of the at-risk developing countries, offers the possibility of boosting rates of primary completion progress to the levels necessary to reach the goal. Few global goals have been as consistently and deeply supported as the notion that every child in every country should have the chance to complete primary school. With global effort, it could become a reality.