

# The Trouble with the MDGs: Confronting Expectations of Aid and Development Success

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**Summary.** — The United Nations Millennium Development Goals (MDGs) set targets that are implausible for a large number of countries. Many aid recipients will miss the goals, notwithstanding rapid progress by historical standards. Available estimates of the “cost” of the MDGs constitute *necessary* expenditures if the goals were to somehow be met, not expenditures that are *sufficient* for them to be met. Aid is on the rise; but when other necessary conditions fail to materialize, aid advocates who have claimed that more aid is sufficient may find aid blamed for false “failures,” undermining the constituency for sustained engagement with poor countries.  
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## 1. INTRODUCTION

In September 2000 at the United Nations, 147 presidents, prime ministers, and monarchs—the largest-ever gathering of heads of state—unanimously adopted the Millennium Declaration, committing themselves to a series of international development objectives to be reached by 2015. They include halving poverty headcounts, achieving universal primary school completion, and cutting child mortality rates by two-thirds. Known since 2001 as the Millennium Development Goals (MDGs), they are “commonly accepted as a framework for measuring development progress,” according to the World Bank. UN Secretary General Kofi Annan (2003) has described them as “ambitious [but] technically feasible.”<sup>1</sup>

Several major studies proceeded to estimate how much money would be required to reach the goals, arriving at figures in the range of \$40–70 billion in extra resources each year. Fifty billion dollars is the most commonly cited figure for new annual aid requirements. Crucially, none of the credible “costing” studies suggested that this expenditure was a sufficient condition for meeting the goals. All of them emphasized several other necessary conditions over which donors have little control, such as economic growth and improved policies and institutions. For the universal primary educa-

tion goal, for example, the costing studies calculated how much it would cost to educate all children *if somehow* all children were in school once these other necessary conditions were met.

Today it appears that the global goal of halving poverty will soon be reached because of rapid progress by India and China.<sup>2</sup> However, it is almost certain that the majority of developing countries will not meet many of the other goals. And some whole regions, especially sub-Saharan Africa, will miss them by a wide margin (Sahn & Stifel, 2003). Of 47 African countries, 42 are considered “off track” for at

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least half of the targets and 12 are “off track” for all targets. Meeting the goals for the majority of country indicators would require more than doubling the rate of progress (Carceles, Fredriksen, & Watt, 2001). Bruns, Mingat, and Rakotomalala (2003) estimate that 86 out of 155 countries are at risk of not achieving the goal of universal primary education. Twenty-seven of these countries are not even expected to break the 50% completion threshold by 2015. These forecasts exclude the 16 developing countries with no data—all of which are likely to have extremely low indicators. The UNDP (2003) estimates that, on current rates of progress, sub-Saharan Africa would not meet the hunger, primary education and child mortality targets for at least another century.

This apparently bleak state of affairs is already leading to complaints that the rich countries are not living up to their end of the MDG bargain.<sup>3</sup> The eighth Development Goal commits rich countries to allow greater trade access, reduce debts, and increase aid. Total official development assistance (ODA) from the main international donors rose from \$53 billion in 2000 to \$80 billion in 2004 (OECD, 2005, Table 4), and is likely to have doubled from 2000 levels by about 2007. There has been substantial progress in multilateral debt reduction. Other rich country policies have not become significantly more favorable to developing countries, notably their interventions in agricultural markets.

If and when most of the MDGs are formally missed in 2015, recipients are likely to stress donors’ failings and some donors will doubtless point to corruption, natural disasters, and other challenges faced by recipients. Both arguments would be largely incorrect; the goals will be missed primarily because of how they were set and the fundamental limitations of aid and other policies. Continued focus on the goals as they are may encourage such unproductive debate and undermine political support for long-term engagement and partnership between rich world and poor.

This is not the first study to suggest that the MDGs will not be met; Fay, Leipziger, Wodon, and Yepes (2005) document that most of the goals are out of reach on current trends. It is also not the first study to discuss drawbacks of the goals. White and Black (2004, p. 16) point out that the goals suffer from diminished effectiveness because accountability for failing to meet them is diffuse, and Maxwell (2003) argues that they may reward oversimplified inter-

ventions overemphasizing social indicators at the expense of economic growth. These papers suggest that complementary policy tools could remedy the flaws of the MDGs; we go further. First, we suggest that the goals as a set are impossible to meet *because of how they were designed*, not primarily because of lack of policy effort, commitment, or aid. Second, we claim that continued commitment to several impossible targets within the MDGs may bring not just decreased political benefits to aid advocates but also increased political costs. The trouble with the MDGs lies not in their stars, but in themselves.

## 2. MISINTERPRETING THE MDG “COSTING” STUDIES

The MDGs began as a review of development policy by the Development Assistance Committee of the OECD (1996). From the beginning, the MDGs were linked to the need for greater donor financing. In early documents the major aid agencies stated bluntly: “Development costs money . . . the high-income countries need to supply more aid” (OECD, UN, World Bank, & IMF, 2000, p. 23). The Monterrey Consensus of the United Nations (2002) proclaimed that “a substantial increase in ODA and other resources will be required if developing countries are to achieve the internationally agreed development goals” (United Nations, 2002).

How much money was needed? The first answer came from a commission led by former Mexican President Ernesto Zedillo *et al.* (2001) and known as the “High-level Panel on Financing for Development.” The panel synthesized existing research on the cost of each of the development goals, all of which was based on some version of the unit-cost approach. It estimated that roughly \$50 billion in additional ODA would be needed to reach the MDGs. During 2001–2004 total ODA from the DAC increased \$27 billion, or 54% of the assessed need.

A second widely cited study by Devarajan, Miller, and Swanson of the World Bank uses two estimates for costing the MDGs (Devarajan, Miller, & Swanson, 2002). First, it calculates the additional resources necessary to increase economic growth so as to reduce income poverty—suggesting an annual “financing gap” of \$54–62 billion. Second, it estimates the cost of meeting specific goals in health, educa-

tion and environment by using country-specific unit costs and then multiplying by the uncovered population. By this method it finds that \$35–75 billion more per year are needed. Based on these two methods, the paper concludes that ODA increases in the range of \$40–70 billion are required. These numbers have been directly influential on major policy proposals; they have been used, for example, as the basis for a British plan to finance additional aid through bond sales (HM Treasury, 2004) and are frequently cited by aid advocates (e.g., Greenhill, 2002; Oxfam, 2002; UNDP, 2006). Table 1 summarizes a drove of similar research.

The costing methods used in these studies are—by necessity, and usually by the authors' admission—simple and approximate. “It is clear that our present knowledge does not suffice to put a convincing price tag, even a rough one, on the cost of meeting the human development goals. Individual economies have not yet started to estimate the costs of meeting the goals, as they need to do if credible worldwide estimates are to be made available,” notes the Zedillo study (p. 69). “. . . [T]hese estimates are

extremely crude, and based on a host of heroic assumptions, many of which may not be borne out as history unfolds . . . [W]e cannot stress enough the fact that financial assistance is but one of the factors required to reach these goals,” point out Devarajan *et al.* (p. 30).

These other factors prominently include an improved policy environment within developing countries and alleviating a range of specific aid effectiveness bottlenecks. Regarding policies, the Zedillo study, for example, assumes that recipients are doing “what’s necessary” to improve policies. Mingat, Rakotomalala, and Tan (2002), in looking at the costs associated with reaching universal primary education for 33 African countries, state that “the implicit assumption is that countries would reform their education sector policies as needed to ensure that resources are used to offer quality services in a cost-efficient manner” (p. ix). Oxfam (2002) suggests that local political commitment would be required (p. 9).

It is further assumed that various constraints to absorptive capacity are relieved. Mingat *et al.*, for example, note that “[f]or the sake of

Table 1. *Costing the MDGs: selected recent estimates*

Study	Covering	Annual new money
Brossard and Gacougnolle (2001)	Africa, primary education	\$2.9–3.4 billion
Delamonica <i>et al.</i> (2001)	Global, primary education	\$9.1 billion
Zedillo <i>et al.</i> (2001)	Global, MDGs	\$50 billion
African Development Bank (2002)	30 African countries, MDGs	\$20–25 billion
Devarajan <i>et al.</i> (2002)	Global, poverty goal	\$54–62 billion
Devarajan <i>et al.</i> (2002)	Global, social and environmental goals	\$35–75 billion
Devarajan <i>et al.</i> (2002)	Global, primary education	\$10–15 billion
Filmer (2002)	Global, primary education	\$30 billion
Greenhill (2002)	Global, poverty goal	\$15–46 billion, plus 100% debt cancellation
Greenhill (2002)	Global, other goals	\$16.5 billion, plus 100% debt cancellation
Mingat <i>et al.</i> (2002)	33 African countries, primary education	\$2.1 billion
Naschold (2002)	Global, primary education	\$9 billion
Oxfam (2002)	Global, MDGs	\$100 billion
Vandemoortele (2002)	Global, MDGs	\$50–80 billion
World Bank (2002)	47 IDA countries, primary education	\$2.5–5 billion
World Bank (2002)	Africa, primary education	7X current aid
Bruns <i>et al.</i> (2003)	Low-income countries, primary education	\$5–7 billion
World Bank (2003a)	Asia and South Asia, MDGs	2–3X current aid
World Bank (2003a)	Africa and Central Asia, MDGs	60% increase
UN Millennium Project (2005)	Global, MDGs	\$73 billion in 2006, \$135 billion by 2015

The third column is illustrative rather than exhaustive. The figures use current dollars in a range of years from 1995 to 2005, rather than constant dollars. Some studies distinguish between “total additional resources” and “external financing requirements” (netting out an estimate of increased domestic resources), but we abstract from these fine points to provide a simple overview.

simplicity, we set aside at this stage the physical feasibility of the EFA-by-2015 objective. We focus instead on the size of the financing gap..." (p. 1). The Devarajan paper is also predicated on the idea that the question to be answered is "if we achieved the MDGs by 2015, how much would it have cost?"—explicitly leaving aside the question of developing countries' capacity to spend effectively such sums. They specifically note the capacity dilemma faced in particular by countries outside of Asia (see also Heller & Gupta, 2002).

The most recent and prominent "costing" work has reduced the prominence of the caveats and leaned more heavily toward suggesting the sufficiency of cash. The UN Millennium Project (2005, p. 240) estimates that "[o]fficial development assistance for direct MDG support will need to rise to ... \$135 billion in 2015 if all countries are to meet the goals." The report notes that several countries are unlikely to meet the "minimum governance thresholds" to achieve the MDGs and it implies that \$25 billion in development assistance should be withheld from such countries as a result. Nonetheless, the report suggests that governance is a comparatively minor constraint to progress in the countries slated to receive the remaining \$110 billion in MDG support. The analysis proceeds similarly to earlier studies, scaling up unit costs of service provision—not by estimating how much real investment or service provision would be caused by a given expenditure. It is worthy of note that the report endorses a target of 0.7% of rich countries' GDP in development aid (p. 9) even though its assessment of the "cost" of the MDGs is less than 0.48% of their GDP.<sup>4</sup>

Despite careful qualifications especially in the early costing studies, many in the policy, advocacy and media world have proceeded as if the costing research suggests that an expenditure of \$50 billion more is sufficient to achieve the MDGs. Speeches by leaders in the development community have frequently suggested that achieving the MDGs is primarily a question of donors' willingness to give specific quantities of money. Such statements were echoed by critics of the G8 summit at Gleneagles and the UN "World Summit" in 2005.

The caveats of the "costing" study authors are important, however. The qualifications in fact suggest that the MDGs are unlikely to be reached regardless of new aid flows. Any reading of the "costing" studies that suggests that the MDGs can be purchased by any quantity

of money *per se* is incorrect. Here we examine several specific MDGs in detail to highlight some of these issues. In each case, past experience and credible research suggest that rapid progress is being made in many countries, but there is a limit to how much these trends can be accelerated by increased aid and so many countries are very likely to miss the MDG targets regardless of increased aid flows.

Below we consider the performance of individual countries relative to the global goals, for four reasons. First, some of the *global* MDG targets apply by their nature to individual countries—universal primary school completion is only possible if every individual country attains it. Second, a global target like lower child mortality can only be reached if most countries, or at least the largest countries, perform somewhere near the target. Targets that are only met by a handful or fewer of countries can only be met globally under special circumstances that do not here obtain. Third, if the purpose of the MDGs is to bring donors' attention to the needs of the most troubled countries, it is those countries on which we should focus. Massive poverty reduction in China through forces entirely unrelated to aid intervention has little relevance to what donors must do for Africa. Fourth, the MDGs' champions consistently portray them as applying to individual countries. The UN Millennium Project for example, as noted above, calculates the amount of new aid needed "if all countries are to meet the goals"—a nonsensical statement if the goals apply only globally.

### 3. HALVING POVERTY: MDG ONE

The first MDG is to halve the 1990 poverty headcount by 2015. On a global scale, this goal is very likely to be reached, almost entirely because of poverty reduction in fast-growing India and China. It may already have been reached (Bhalla, 2002; World Bank, 2004b). At the same time, the majority of individual countries appear very unlikely to halve poverty by 2015 because the required economic growth would be extremely high by historical standards. At the same time, it is doubtful that increased aid would sufficiently accelerate growth rates, especially in the countries that are currently most off-track to miss the poverty reduction target. Most of the costing exercises use the "financing gap" to calculate the additional aid required for meeting growth targets, but this approach is

problematic and raises further doubts about the estimates.

Economic growth is central to the poverty reduction goal because it is the only source of increased income for the poor that can be (comparatively) rapidly achieved. Poor people in developing countries can become wealthier either through receiving a greater share of existing national income (redistribution of wealth from rich to poor) or a similar share of a greater national income (equitable economic growth). However, it is historically very rare to see rapid changes in income inequality (up or down) over time, and so those countries that have achieved rapid and substantial poverty reduction have done so mainly through economic growth. [Dollar and Kraay \(2002\)](#) suggest a one-for-one relationship between average income growth and income growth of the bottom 20%. [Besley and Burgess \(2003\)](#) suggest that the elasticity of poverty with respect to income per capita varies between  $-0.49$  in sub-Saharan Africa and  $-1.14$  in Eastern Europe, with a developing country average of  $-0.73$ . Regardless of the precise elasticity, it is clear that to achieve meaningful poverty reduction, economic growth rates will have to accelerate in the countries where the poor reside.

The [World Bank \(2004a\)](#) suggests that GDP in the typical African country will need to grow on average at least 7% for the next 15 years in order to halve poverty rates ([Gottschalk \(2000\)](#) estimates that it would need to exceed 8%). This compares to an average regional growth rate of just 2.4% for the past 15 years. Of the 47 sub-Saharan countries only two, Botswana and Equatorial Guinea (combined,

representing less than 0.3% of the continent's population), have beaten 7% over this period. Among African countries, nearly half (21) have seen negative per capita growth, and only nine (mostly small) countries have been above 2%. As a result, the poverty headcount ratio in Africa has actually increased, from 47% in 1990 to 49% in 2000. And it is not just that high rates of growth are unusual for Africa; in the world as a whole, during 1985–2000 only five countries managed to sustain a 7% growth average (calculated from [World Bank, 2004c](#)).

The UN has set growth targets for decades. [Figure 1](#) reveals the stark contrast between UN goals and performance in LDC growth measured by the Penn World Table. The UN General Assembly resolutions declaring the second and third “development decades”—the 1970s and 1980s—gave explicit goals for average real annual growth in GDP per capita in developing countries: 3.5% and 4.5%, respectively. In both cases, population growth was assumed to be 2.5% per year. The UN declarations for the first and fourth “development decades”—the 1960s and the 1990s—give only targets for GDP growth, but we can approximate the implied GDP per capita growth rate by assuming roughly the same rate of population growth of 2.5%. This means that the First Development Decade goal of 5% GDP growth implies roughly 2.5% in per capita growth, and likewise implies that the Fourth Development Decade goal of 7% in GDP growth implies 4.5% in per capita GDP growth. Comparing all of these targets to actual LDC performance in the latter three decades of the 20th century shows an arresting pattern. Every decade or

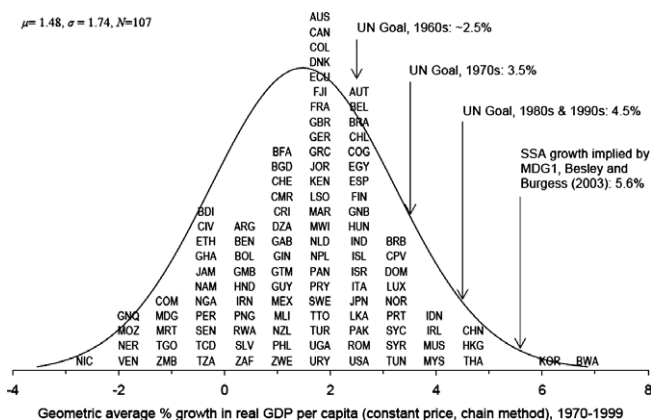


Figure 1. *Hope springs eternal: various growth goals compared to growth performance.*

two since the 1960s, the UN has increased its goal for developing country growth by 1%. Meanwhile, per capita growth in LDCs has typically hovered around 2%. This “goal inflation” has now arrived at the point where what is *expected* of LDCs lies at the very extreme of the distribution. Decades after the first round of goals, we still do not know how to turn Zambia into Botswana, nor how to turn Laos into Korea.

In the costing studies cited above, the expectation that unusually rapid growth rates might now be achieved more widely is based on two assumptions: (a) that policy changes will foster growth and (b) that increased aid in the presence of those good policies will catalyze even faster growth. There are problems with both of these assumptions, however. Easterly (2003a), reviewing evidence of the link between aid and outcomes, concludes that aid agencies “have misspent much effort looking for the Next Big Idea that would enable aid to buy growth.”

There is an ongoing debate between development economists who believe that policies are the major determinants of economic growth performance and those who believe that structural factors such as geography, history, and climatic conditions may play the dominant role. It may be fair to summarize that the evidence linking structural factors that do not change over time to growth is at least as strong as the evidence linking policies to changes in growth performance—in part because structural factors help drive policy choices, in part because of an independent direct impact.<sup>5</sup> It is also worth noting that cross-country evidence is not terribly clear on which policy levers might be the important ones for economic growth. As relevant, policy change has been historically slow and frequently reversed. Easterly *et al.* (1993) find policies far more stable than growth rates over time. The combination of a limited role for free policy choice in determining growth rates and limited evidence that dramatic improvements in policy stances are common suggests that the role for policy change to speed growth over the next fifteen years may be only modest.

There is further caution required regarding the link between increased donor assistance and higher economic growth. This assumption underlies all of the costing studies which use the “financing gap” model for estimating how much aid will be needed to reach certain growth targets. These estimates start from a measure-

ment of poverty-income elasticity and current growth rates, which suggests a “growth gap”—the rate at which the economy must grow to see the desired reduction in the poverty headcount—or in the case of reaching the poverty MDG, to halve the poverty ratio by 2015. This approach then uses the incremental capital output ratio (ICOR) to calculate what level of investment is required to reach the growth levels, then subtracts domestic savings to get the external financing gap—or the amount of required aid.

The problem is that, in practice, the financing gap model does not appear to work (Devarajan, Easterly, & Pack, 2003). Easterly (1999) demonstrates weak relationships in developing countries all along the aid-to-investment-to-growth chain. If the financing gap approach had worked as expected over the period 1960–94, he calculates that Zambia’s per capita income would have been \$20,000, or 33 times the actual figure of about \$600 (Easterly, 2001, p. 43).

One recent and more positive contribution to the aid and growth literature is Burnside and Dollar (2000). This highly influential study has been used to make the case that aid can lead to growth under the right circumstances—including the policy environment assumed by many of the costing studies. The results of Burnside-Dollar appear to be somewhat fragile—changing the period, adding new country data, or altering the definitions of “aid” or “good policies” tend to weaken the results (Dalgaard *et al.*, 2004; Easterly, Levine, & Roodman, 2003; Guillaumont & Chauvet, 2001; Hansen & Tarp, 2001; Lensink & White, 2001). Nonetheless, Clemens, Radellet, and Bhavnani (2004) find striking evidence of a positive average effect of development aid on growth, once the type of aid analyzed is matched to the time horizon of its expected growth effect. While this effect is clear on average, it varies greatly by country and its magnitude is limited to a certain range—two reasons to question whether even unlimited aid could cause a particular high level of growth in any given country.

It seems plausible to assume that the relationship between aid and growth in the presence of good policies does hold, at least in some circumstances. Does this suggest that significant increases in aid are likely to help meet the poverty MDG? The answer is still uncertain. This is because most low-income countries where the poor reside either have poor policies and weak institutions (and thus are assumed unable to

use additional aid effectively) or already receive considerable amounts of external assistance. This second factor may be a problem because even work that accepts a link between aid and growth finds that, above a certain level of aid, the relationship begins to break down (Collier & Dollar, 2001). Many poor countries already thought to have “good ODA policies” already receive substantial aid. Mozambique, for example, receives ODA more than twice the level of its domestic tax base. Other top-performing countries—such as Ghana, Ethiopia, Uganda, Nicaragua, Honduras, Burkina Faso, and Tanzania—receive aid flows well above 10% of GDP. Were total ODA levels to be doubled, as called for in the costing studies, the countries that are perhaps best able to absorb large aid increases are India and China, which currently receive minimal aid (0.36% and 0.13% of GDP, respectively). However, these two countries are both considered “on track.” The MDGs do not change the oft-noted irony of aid: those that need it most are frequently the ones least able to use it effectively.<sup>6</sup>

#### 4. REACHING THE SOCIAL SECTOR GOALS

We turn now to the MDGs for health and education. There is a large literature on the complex relationships between conditions, interventions, and outcomes, but this appears to have been neglected in much public discussion of the MDGs. Most health or education indicators are, across countries, closely related to income (Pritchett & Summers, 1996). Over time, progress on these indicators as well as many others tested by Easterly (1999) is not correlated with the rate of growth in that country, but instead with improvements common to all countries.<sup>7</sup> Given this, it may be difficult to considerably speed that progress through policy changes or alteration in resources.

Adding to the complexity of the causal chain between expenditures and outcomes is the fact that certain sector interventions can have impacts on other sector outcomes. Kremer and Miguel (2001) find that de-worming programs had a strongly positive impact on school attendance in Kenya. Ranis and Stewart (2001), who find that health expenditures appeared to have little or no impact, did suggest that increased female primary enrollment had an impact on life expectancy. Hicks (1982) also finds that variations of life expectancy were insignifi-

cantly correlated with measures such as population per doctor and overall income per capita changes, but significantly related to literacy and inequality.

All of this suggests that (a) additional aid may not be the most important factor in improving social outcomes; (b) the sectoral distribution of aid to maximize progress on any particular social MDG is not clear; (c) unit-cost approaches utilized in costing studies may be dramatically misleading; and (d) “best practices” may not be easily exportable because they are dependent on a range of determining factors that may be difficult to replicate. Of course, some of the costing study authors have suggested such problems themselves; Mingat *et al.* (2002, p. 30) admit that the unit cost approach is unreliable because it “ignores the dynamics of population and enrollment growth.” This has not stopped the widespread misinterpretation of their work.

##### (a) *Schooling goals: MDGs two and three*

Burkina Faso has raised school enrollments in the past decade at rates well above those of other developing countries. It nevertheless has no chance of meeting the second MDG, which requires not only universal enrollment but also universal completion by 2015. Figure 2 makes clear the irrelevance of the MDG to Burkina Faso’s reality. Its logistic trend (the solid S-curve) substantially beats that of the typical country after 1960 (the lower dashed S-curve). Compare its performance to the fastest sustained enrollment increase on the historical record—Korea from the 1920s to 1950s (the upper dotted S-curve).

Burkina Faso is able to approach such astonishing rates of increase, somehow, despite more challenging circumstances than most other countries have faced. This is success. The goal of universal completion or enrollment in MDG number two (the straight dashed line) negates the accomplishment and focuses on the distance between the status quo and perfection. Similar pictures can be drawn for Mali, Senegal, Guinea, Madagascar, and Nicaragua, among others (Clemens, 2004).

We use an S-curve in Figure 2 because enrollment tends to follow an S-shaped pattern over time in most countries.<sup>8</sup> A compact way to describe the speed of the transition towards universal schooling is to measure the slope of the S-curve at the inflection (center) point. For Burkina Faso this slope is about 0.06, meaning

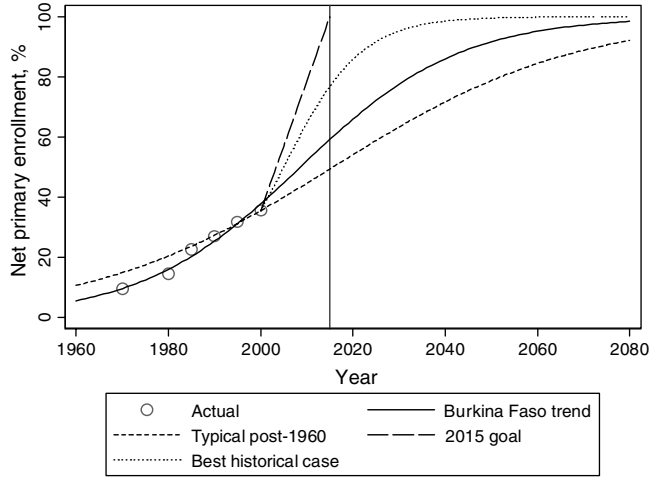


Figure 2. Burkina Faso is raising enrollments much faster than typical rates but has no hope of meeting the 2nd MDG. Open circles show actual net primary enrollment in Burkina Faso. The solid S-curve shows a least-squares logistic curve fit to those points. The lower, dashed S-curve shows typical developing country performance, 1960–2000. The upper, dotted S-curve shows the fastest increase on record (Korea, in the 1920–40s). The straight dashed line shows progress required for universal enrollment by 2015. Source: Clemens (2004).

in rough terms that it annually closes the gap between its enrollment and full enrollment by 6% of the gap. For the typical country after 1960, the slope is 0.04. For Korea leading up to 1950—the best case on record—this slope is about 0.12.

The horizontal axis of Figure 3 shows this slope for the 90 countries for which we have data after 1960. These countries represent a very broad range of education policies, wealth,

and institutional, political, and geographic conditions. No country has slope above 0.13, the rate required to increase enrollment from 80% to 95% over a 15 year period. There are 38 countries in this data set with 2000 enrollment rates below 80%. For these countries (and others for which we do not have data), reaching even 95% enrollment by 2015 would require not simply atypical progress but progress with no precedent.

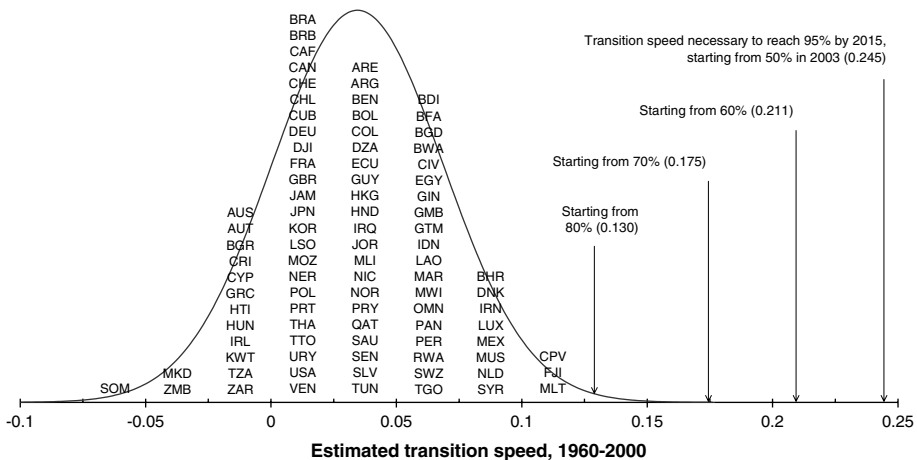


Figure 3. What it would take to meet Goal Two. The horizontal axis shows the slope at the inflection point of a logistic curve fit to each individual country's quinquennial progress on net primary enrollment. Source: Clemens (2004).



One reason for the limited range of primary enrollment growth rates is the strong relationship between parental primary completion and child enrollment. This correlates with more than 10 times the amount of cross-country variation in transition speeds than does education spending. A second factor that explains cross-country variance in the transition speed with many times the strength of differences in education expenditures is income. All this suggests a significant “demand side” element to primary education, with wealthier, educated, parents far more willing to send their children to school. Filmer (2004) estimates that even if all rural people in a sample of 22 countries lived right next door to a school, enrollment rates would only increase from an average of 49.8% to 53.1%—suggesting the dominance of “demand-side constraints.” Across countries, there is no significant relationship between public spending per child on education and the primary school completion rate once income is controlled for (World Bank, 2004b).

Similar analysis reveals that transitions from low to high ratios of girls to boys in school enrollments also fall within a historical range of speeds (Clemens, 2004). A country whose ratio of girls’ gross primary enrollment to boys is 0.8 typically takes 28 years to reach a ratio of 0.95. In the year 2000, 17 countries had a ratio of *less* than 0.8. Nevertheless, the great majority of developing countries are already fairly

close to meeting the MDG target of gender equality in education. A substantial majority of countries will likely reach this particular goal by 2015.

(b) Health goals: MDGs four and five

In the fourth MDG, governments commit to reducing child mortality (below age five) by two-thirds during 1990–2015. Here we consider infant mortality (below age one) because data are much more widely available and because it closely correlates with child mortality. Suppose the fourth MDG had been set in 1975—to reduce child mortality by two-thirds in the quarter century leading up to 2000—and compare this goal to what actually happened.

Figure 4 shows that of the 109 countries for which we have data, 33 would have met this hypothetical goal. None was amongst the poorest. Only one country with an income below \$1,600 in 1975 reduced child mortality by two-thirds over the next 25 years: Indonesia. This is not to say that the period 1990–2015 must exactly replicate the experience of the period 1975–2000. It does point out that we have the experience of only one relatively poor country—politically stable and oil-rich for almost all of this period—to offer as a model to other poor countries trying to replicate such an achievement in much more difficult circumstances. Widespread achievement of the fourth

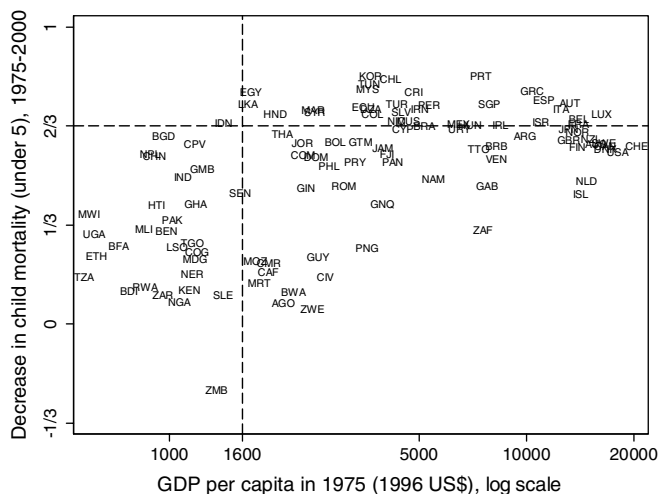


Figure 4. If MDG four had been set in 1975, only one of the poorest countries would have made it. The decrease in child mortality is equal to one minus the ratio of child mortality in 2000 to child mortality in 1975, where child mortality is the number of children dying before age 5 per 1,000 live births. Child mortality data are from the World Bank, World Development Indicators 2003. Real GDP per capita data are from the Penn World Tables 6.1.

MDG has *no* recent precedent in other poor countries, despite a vast range of different approaches to health policy, different degrees of health system capacity, different geographic conditions, and access to medical technology.

This suggests that the forces that *primarily* determine the speed of this transition go far beyond public health policy and inputs. Across countries, there is little significant relationship between public health spending per capita and under-five mortality once income and its distribution are controlled for (surveyed in Thorbecke & Charumilind, 2002; World Bank, 2004b). Filmer and Pritchett (1999) find that 95% of the variation in child mortality across countries can be explained by national income and its distribution, female literacy, ethnolinguistic fractionalization and the predominant religion of the country. These authors instrument for health expenditures, suggesting that error in their measurement is not to blame for their statistical insignificance as determinants of mortality.

Even a few recent studies that find correlations between lower child mortality and aid-financed interventions like vaccinations show small effects that leave the MDGs out of reach. White (2004, Table 10.3, cols. 6 and 7) finds an elasticity of  $-0.06$  between immunization rates and infant mortality—within regions and within years (thus with constant technology). This means that a considerable improvement in vaccine coverage would have very small effects; moving from 50% to universal vaccine coverage would decrease infant mortality just 3%.<sup>9</sup> This does not appear to be grounds to conclude that “historical experience shows that it is possible to achieve the rate of infant mortality reduction required to meet the Millennium Development Goals” (White, 2004 p. 226). It demonstrates the opposite.

More generously, Hanmer, Lensink, and White (2003) regress child mortality on thousands of permutations of independent variables and find that some vaccination rates are often positively correlated with lower infant or child mortality rates. Specifically, they find that the measles immunization rate (but not tuberculosis or DPT) is statistically significantly correlated with lower child mortality when assorted indicators of income, literacy, schooling, and gender equity are controlled for, and the tuberculosis vaccination rate (but not measles or DPT) is correlated with lower infant mortality under the same conditions. It is clear that vaccines can save some children some of the time,

and surely these regressions capture that fact. But these results again suggest little hope for the child mortality MDG. Consider the regressions with child mortality as the dependent variable where TB vaccinations enter significantly. Even assuming that the entire coefficient on tuberculosis vaccination rates reflects pure causation from vaccines to decreased mortality (while some of it is likely to reflect instead simultaneous causation by omitted variables like the strength of health system institutions) and that all variance in the vaccination rate is controllable with public interventions by aid agencies and national governments (implausible given repeated setbacks to vaccination efforts from religious, political, and armed conflict), there is little hope for reaching the goal through increased aid to vaccination programs. In the child mortality regressions, the coefficient on the tuberculosis vaccination rate is  $-0.49$ , meaning that a decrease of two-thirds in child mortality via these vaccinations alone would be impossible. Vaccination rates already run around 60–70% in the typical African country, so the measured coefficient suggests that improved vaccination *per se* could only lower mortality around 20% at best. The rest of the variables in the Hanmer *et al.* (2003) regressions are either not correlated with child or infant mortality to a degree that is statistically significant at conventional levels (including vaccination rates for other diseases) or reflect very complex domestic institutional structures and cannot be easily and rapidly changed by any amount of outside intervention (income per capita and indicators of gender equity).

Likewise, Fay *et al.* (2005) use survey data from 39 poor countries to show that even if we could somehow move all children in the bottom quintile of health care received (measured by vaccination rates, antenatal care, and medically attended births) to the top quintile the child mortality rate would fall by less than one third, far short of the MDG. Income and basic infrastructure also play an important role. It appears that one of the reasons that interventions often do not have the desired outcome is—as Pritchett (1994) showed with the relative ineffectiveness of family planning aid—that supply-side responses do not address the demand components that are affected by slower, broad social and economic changes. None of this is to say that specific public health interventions and large injections of inputs purchased by aid cannot affect infant mortality; obviously

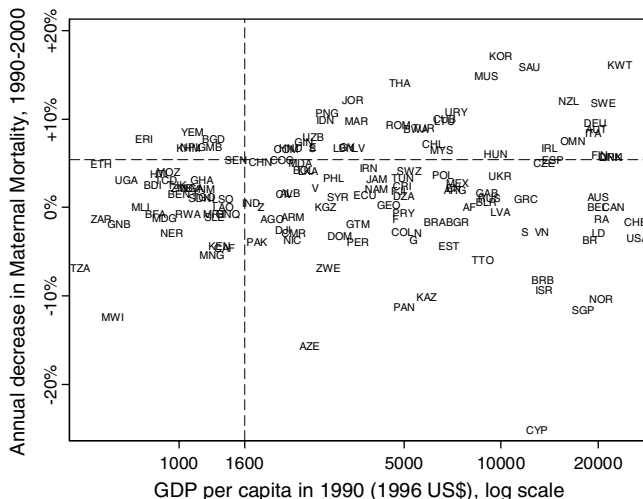


Figure 5. Only seven out of poorest 42 countries were able to reduce maternal mortality during the 1990s at the annual rate required by Goal Five. A cumulative decrease of 75% over 25 years implies an average annual decrease of 5.4%, the rate marked with a horizontal line in the figure above. This is about five times the median rate of decrease among the poorest countries. Sources: Year 1990 mortality from World Health Organization. Year 2000 mortality from WHO, UNICEF and UNFPA, *Maternal Mortality in 2000*. Real GDP per capita data are from the Penn World Tables 6.1.

they can. Rather, it is to question whether the rapid increase in the mortality transition rate needed to meet the fourth MDG is accessible to even the wisest and best-funded policy interventions.

The fifth MDG is a commitment to reduce the maternal mortality rate (MMR) per 100,000 live births by three quarters during 1990–2015, which requires a 5.4% annual decline. Figure 5 shows the decline in MMR during the 1990s, with a horizontal line showing the rate called for by the goal. The median decline among countries below \$1,600 GDP per capita was 1.15%, or about one fifth the target rate. Among the richest countries at the right side of the graph, median decline in MMR was roughly in accordance with the goal. The fifth MDG asks the typical poor country to quintuple its performance—devaluing the large decreases they achieved—and asks them to perform roughly as do the countries with the greatest wealth and finest institutions (see Clemens, Moss, & Kenny, 2004).

(c) *Leaps forward?*

It is not that we cannot imagine a scenario where historically unprecedented progress is made in Millennium indicators. If effective preventative and treatment interventions available for childhood mortality (including antenatal

checkups, delivery by trained personnel and DPT3 vaccinations) became ubiquitous, the number of under-five deaths worldwide might fall by as much as 63%. And one recent cross-country analysis suggests that, in countries with good governance, additional health spending and aid financing can have an impact on health outcomes (World Bank, 2003b).

Yet this same study suggests how hard it would be to meet the health MDGs in Africa, and why the MDGs at their current levels are over-reaching. First, the average quality of African government institutions as measured by the World Bank’s Country Policy and Institutional Assessment would have to leapfrog to one standard deviation above the mean global score (from significantly below the average today). Then government health expenditures as a percentage of GDP would have to reach as much as 16.5%—a level greater than that spent by any country in the world.

It should be noted that progress in meeting some of the other MDGs—perhaps in particular halting the spread of HIV/AIDS, decreasing the incidence of malaria and halving the proportion of people without sustainable access to drinking water and sanitation—could in fact be rapid enough to meet the MDG timetable. This appears possible because a small number of technological advances, or a significant increase in investment in a particular infrastructure, could

have a major effect on these areas in ways not obvious in the other goals. The creation of a malaria vaccine, for example, would have a monumental impact on prospects for the sixth MDG.<sup>10</sup>

## 5. MAKING THE PERFECT THE ENEMY OF THE GOOD

Some would have it that evidence based on past experience is useless and irrelevant to policy—arguing that was then, this is now. We invite reflection on the diversity of policies and circumstances represented by the outcomes in these historical data. The changes in development indicators shown there represent the efforts of countries with vast natural resources alongside those with almost none; countries in conflict and at peace; donor darlings and global pariahs; those with heightened access to the latest technologies and those without; communist and capitalist; autocratic and democratic; high savings and low savings; those with ready access to foreign investment and those without; those infested with disease and those in more salubrious climes. Some governments in some of these countries have tried something resembling nearly every development intervention now practiced or even envisioned by aid agencies.

A limited number of new technologies do now exist that can somewhat accelerate progress. But this is not true for all the goals; the frontiers of microchip technology have little relevance to parents' decisions to school their children in Niger. And even for other goals, the existence of technologies is just one of the many necessary conditions for their rapid implementation, as the decades-long campaigns to eradicate smallpox and polio have amply demonstrated.

Notably, the countries in the figures represent all possible degrees of "good governance;" the handiwork of Seretse Khama stands alongside that of Joseph Mobutu. Domestic constraints to aid effectiveness go far beyond "governance"—the only constraint given prominent attention by the UN Millennium Project (2005, Chapter 7). The many other political and economic complexities of the developing world limit the efficacy of massive, centralized expenditures. Even in the best-governed countries, sustained development progress falls within a range, and many of the MDG targets are beyond that range.

Growing concern that the MDGs will not be achieved is thus largely due to the design of the goals themselves, and should not obscure the bigger picture: Development progress in terms of social indicators has been occurring at unprecedented levels throughout the great majority of the world's population over the past 30 or more years. Life expectancy in poor countries began to diverge from that of rich countries perhaps as early as the fifteenth century, but this dramatically reversed in the second half of the twentieth century (Kenny, 2005). Data on infant survival suggest a similar performance.<sup>11</sup> From 1950 to 1999, average global literacy increased from 52% to 81%, while the weighted standard deviation dropped from 38% to 17%. Turning to female literacy as a percentage of male literacy, over the 1970–2000 period, the global average ratio has improved from 59% to 80%. These advances have occurred even in the poorest countries (Kenny, 2005; Preston, 1975).

It is hard to view such progress as anything other than dramatic success. Even if divergence continues "big time" with regard to income (Pritchett, 1997), other quality of life indicators show historically unprecedented improvement. These development triumphs have been encouraged to some degree by highly effective publicly funded interventions such as the campaigns against guinea worm, onchocerciasis, smallpox and polio, and conditional cash transfer programs for schooling such as Mexico's celebrated PROGRESA. The MDGs remove the focus from these triumphs and speak solely of what remains undone. This is where the real trouble with the MDGs may lie: in their political cost.

## 6. RE-INTERPRETING THE GOALS

The MDAs can be understood in two ways. One approach is to take them literally, as real targets of the development community, and to take the costing study estimates as the amount of aid needed to reach those goals. In this view the MDGs are an important mechanism for raising aid flows and ensuring accountability for donor promises. A big push on aid can, the view holds, accelerate progress beyond historical norms and meet the MDGs. Perhaps such outcomes will be achieved, particularly regarding the goals in areas such as water and sanitation, but as we have seen, the historical evidence suggests it is unlikely that the majority

of goals will be reached by the majority of countries.

A second understanding of the MDGs is a more nuanced view—that the goals are a symbol of the kinds of outcomes toward which the development community should strive. Similarly, new aid flows are considered just one of several necessary conditions for progress on development indicators. By themselves, new aid flows are insufficient. Unit costs might give us some very rough idea of the cost of providing services once delivered, but not how to ensure that such delivery occurs. Such a number is potentially irrelevant to the “cost” of causing outcomes with aid.

This alternative interpretation takes the MDGs as a tool, not a practical target. Goals generate discussion, focus attention, and help assign accountability for leaders’ pledges. The MDGs may have served these purposes to some degree. There can be little doubt that the MDGs helped galvanize the aid community and reverse the aid declines after the end of the Cold War. The United States, the European Union, Canada, Norway, and others made promises of substantial aid increases at Monterrey in 2002, a result doubtlessly influenced by the MDG negotiations 2 years earlier.

In spite of these notable benefits of the MDGs—even when taken as symbolic rather than literal—there has been almost no discussion so far of potential *costs* of the specific form taken by these goals. These potential costs take two distinct forms: unreasonable expectations about what is likely to be achieved within a short time period, and unreasonable expectations about the role of aid in the development process.

First, the specific targets of the MDGs have set up many countries for unavoidable “failure.” Some governments pursuing wise policies and making historically encouraging progress on development indicators could be weakened or delegitimized by the label of “failure” in 2015. Positing that such goals are attainable merely with increased resources contributes to the illusion that the goals are attainable for all countries. Even if most development practitioners know this is not true, they must recognize that the expectations of many have been raised.

Another potential downside is the possibility of increasing donor fatigue and distracting recipient countries from much-needed domestic reforms. Donors are in the process of doubling aid from 2000 levels by about 2007. When subsequently many of the goals are still not met, this will provide ammunition to interest groups

in rich countries seeking to give up on development assistance and other valuable forms of engagement with the poorest. Developing countries will undoubtedly need many decades of sustained assistance and engagement—like Korea, Botswana, and other eventual successes received—and the constituency for this must not be jeopardized by declarations of failure in 2015. The same countries will need sustained commitment to reform at home, made only more difficult by international condemnation.

What to do now? Moving forward, the donor community should accept that it is not feasible for the majority of countries to reach the majority of the MDGs. Similarly, the costing studies should not be invoked as evidence that we can purchase outcomes with more assistance. The studies themselves make no such claims, and history shows that this is highly unlikely to be true. Instead, the MDGs should be presented as useful benchmarks that publicly bring out the stark contrast between the world we want and the world we have, and cause us to redouble our search for points of intervention to close the gap.

Second, the donor community might consider ways of institutionalizing the recognition of development success. The government of Burkina Faso, for example, should be supported and lauded by the international community for raising school enrollments much faster than most countries did in the past, not criticized and delegitimized because primary enrollment remains low. Country-specific benchmarks can help signal when interventions of some kind are necessary, and they can also provide markers for progress along the way, given a country’s circumstances.

Lastly, future international development goals might avoid some of these pitfalls. The next round of goals should (a) be country-specific and flexible, more like today’s IDA targets; (b) take historical performance into account; (c) focus more on intermediate targets than outcomes; (d) be considered *benchmarks* to spur action in cases where assistance is not working, rather than goals technically feasible with sufficient funds alone. The global goals might then be based on aggregation of national Poverty Reduction Strategy Paper targets (assuming that they are set based on local conditions and reasonable expectations of progress) and approaches to meeting the goals might be similarly aggregated bottom-up, rather than on top-down globally calculated unit costs.

Indeed, given the widespread misuse in the past, the donor community might consider

avoiding global-level costing studies for the next round of goals, especially for outcomes known to be only tenuously linked to financial inputs. Rough back-of-the-envelope estimates can potentially be useful for identifying the hypothetical scale of resources and also for some limited supply-side interventions. Yet the widespread misinterpretation of the studies suggests that, however narrowly conceived by the authors, misuse is difficult to avoid. A more direct approach might be to cost specific interventions and link them to intermediate indicators rather than outcomes—for example, costing an immunization program rather than child mortality. Calculating financing gaps

and unit costs for final outcomes appear to create more illusion than illumination.

It is worth stressing the caveats attached to our analysis. None of this is to argue against aid or that goal setting is *per se* counterproductive. Aid has clearly been an important part of developmental progress for many countries. Perhaps aid levels should increase by tens of billions, but not with the expectation that this will cause the MDGs to be met. Excessive expectations threaten the political sustainability of the increases. Similarly, goals should indeed be set to enhance accountability and allocative efficiency, but goals must take history and context into account or risk malign irrelevance.

## NOTES

1. The *Millennium Declaration* is UN General Assembly document A/RES/55/2, September 8, 2000. Its content was organized into the eight goals by General Assembly document A/56/326, September 6, 2001. The goals are described as “commonly accepted as a framework for measuring development progress” by the World Bank (2006). Annan describes the goals as “technically feasible” in UN Press Release SG/SM/8989, November 6, 2003.

2. The Millennium Declaration commits only to halving *global* poverty, regardless of what happens in any given country or region. The UNDP (2003, pp. 198–202) and the World Bank (2004b, pp. 254–255), nevertheless both track progress towards halving *national* poverty by 2015 as indicators of progress towards the first MDG.

3. See, for example, “Donors fail on education funding,” by Andrew Balls, *Financial Times*, March 29, 2004.

4. The UN Millennium Project (2005, p. 240) estimates that the MDGs can be met in all countries if aid increases to \$135 billion per year by 2015, in 2003 dollars. In 2003, the GDP of the high-income OECD countries, as defined by the World Bank, was \$28.4 trillion. Even if there were no real economic growth during 2003–15, then, the assessed need for aid would be 0.48%. Since the economies of the high-income OECD will surely grow in real terms, this percentage will certainly be much smaller. Two percent annual real GDP growth in the donors during 2003–15, for example, means that the aid Millennium Project’s “need” is 0.38% of donor GDP.

5. See Mosley, Hudson, and Verschoor (2004), Dalggaard, Hansen, and Tarp (2004), Easterly, Kremer, Pritchett, and Summers (1993), Sachs (1996), Sachs

(1997), Easterly (2003b), Kenny (1999). See also Kenny and Williams (2001) for a review of the weak link between long-term growth and indicators covering trade, monetary, fiscal, industrial and social policies.

6. It is also worth briefly mentioning here the second half of MDG Goal One, which aims to halve the number of people suffering from hunger. While data weaknesses do not allow a detailed analysis of the likelihood of this target being reached, FAO data do suggest that progress can be rapid in reducing hunger. Fifty-eight developing countries saw declining malnutrition rates over the 1990s, with an average decline of 25%. However, at the same time, the unweighted average showed a decline of just 2%—a result of significant malnutrition increases in some countries, such as Iraq. Furthermore, progress was slow in some large countries, such as China’s decline in malnutrition rates from 16% to 9%, India’s reduction from 25% to only 24%, and Brazil’s drop from 13% to 10%.

7. Even if one accepts a close link between improvements in social sector performance and income growth, the rates of income growth required to meet MDG social targets are historically unprecedented. Using cross-country variations in child mortality and income in 2000 to calculate elasticities suggests that low-income countries would have to grow at 6.7% a year to reduce mortality by two-thirds in 2015 (World Bank, 2004b).

8. Certainly some countries experience sudden jumps that deviate from the logistic curve, but in rough terms, for every such country (e.g., Oman or Botswana) there is another where enrollment rises have fallen short of the S-curve or declined (e.g., Kenya or Venezuela). The typical country follows roughly a logistic curve. But whether this or another, related functional form for the

transition is chosen does not substantively alter the appearance of Figure 3 nor the qualitative analysis of the text.

9. Income per capita is statistically insignificant in these regressions *only* when the regression includes both immunization rates and an interaction term between the immunization rate and income per capita (White, 2004, cols. 8 and 9). Both of these variables are highly correlated with income per capita and the second at least is strongly *caused* by income per capita, leaving wide open the possibility that the high standard error on income per capita in such regressions is due primarily to collinearity and overcontrolling. It is also of note that in these same regressions the sign on immunization rates is positive, so if we interpret the negative coefficient on the interaction term to reflect the causal effect of immunization on infant mortality, then we must believe that—holding income per capita constant—higher immunization rates cause *higher* infant mortality.

10. Looking at determinants of malaria infection rates, McCarthy, Wolf, and Wu (2000) calculate that weather, latitude, income, poverty and inequality account between them for 4.9 times the variation in infection rates than does access to rural health care (even though this does suggest some role for government expenditure and aid; see also Mills & Shillcutt, 2004).

11. There are, of course, significant clouds on the horizon—the AIDS pandemic is having a particularly dramatic impact in sub-Saharan Africa, where life expectancy in the region as a whole has declined in recent years, and is likely to level off only in 2010 (Easterlin, 2000). Nonetheless, it is not clear why we should expect progress to halt more broadly.

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