4

The costs and benefits of achieving the Millennium Development Goals

Chapter 17

Resources required to finance the Millennium Development Goals

To implement the interventions recommended by the UN Millennium Project Task Forces, as outlined in chapter 5, countries will need to increase public investments in social services, basic infrastructure, and environmental management. Here, we estimate the cost of meeting the Millennium Development Goals (MDGs) at the country level and present a financing strategy based on increased domestic resource mobilization. We also describe the implications for global flows of official development assistance (box 17.1 summarizes key terms and concepts). We conclude by discussing mechanisms for financing the additional aid required to reach the Goals.

To be stressed at the outset is the provisional nature of our estimates of global needs. The estimates are meant to give guidance on the overall volume of aid that will be needed to achieve the Goals, but they should not be confused with the detailed costing that will have to be done country by country—and that will have to be regularly updated with experience and new information. The actual total costs will emerge over time as the sum of individual country costs and overall expenses of global operations. The individual country costs will be known definitively only as country programs are under way and more lessons are learned about scaling up. Here we provide what we believe are the right orders of magnitude.

To summarize our estimates, a typical low-income country in 2006 will need to invest around $70–$80 per capita in capital and operating expenditures toward meeting the Goals. Since investments can be scaled up only gradually, the financing will be lower at the beginning of the period and rise to $120–$160 per capita toward the end of the period. A rising share of these investments will be financed through domestic resource mobilization, which we project to increase sharply by up to four percentage points of GDP. Still, most low-income countries will experience an MDG financing gap of

Box 17.1
Key terms and concepts

Graduating countries. Countries whose domestic resource mobilization will rise enough to finance all MDG expenditures before 2015. As a result, they will "graduate" from the need for official development assistance (ODA) for direct MDG support.

MDG capacity building. Investments in human resources, including training and management systems for national and local governments as well as NGOs.

MDG investment needs. The capital investments and operating expenditures for basic infrastructure, social services, and improved environmental management required to meet the MDGs, excluding expenditures for capacity building (see below).

MDG financing gap. The portion of a country's MDG investment needs that cannot be financed through domestic resource mobilization by governments and households.

Official development assistance. Grants and concessional loans to developing countries to promote economic development and welfare.

ODA for direct MDG support. The amount of official development assistance that finances MDG investment needs (excluding capacity building) and can be provided to either governments or NGOs.

Other ODA. Flows that do not finance MDG investment needs or MDG capacity building.

10–20 percent of GDP that will need to be financed through official development assistance.

As this chapter describes, only a small share of today's global official development assistance—an estimated $16 billion of $65 billion in 2002 (in 2003 dollars)—supports direct MDG investment needs at the country level. Official development assistance (ODA) for direct MDG support will need to rise to $73 billion in 2006 and $135 billion in 2015 if all countries are to meet the Goals. After adjusting for the fact that several countries will not meet the minimum governance thresholds required to scale up public investments for the Goals, these figures are likely to be lower—$52 billion in 2006 and $110 billion in 2015.[1] In addition to these direct investments on the ground, meeting the Goals also requires capacity building, debt relief, additional early support for the Quick Wins (chapter 5), enhanced support for regional collaboration and infrastructure, global research, and emergency assistance. We estimate that total ODA volumes need to rise to 0.54 percent of rich country GNI in 2015, up from 0.23 percent in 2002 and 0.25 percent in 2003.[2]

By 2006 global official development assistance needs to reach $135 billion, up from $65 billion in 2002 and $69 billion in 2003. Some of the increase will be achieved on the basis of existing commitments made by OECD/DAC member countries. Based on those commitments, ODA in 2006 is to reach approximately $88 billion. Of course, it will be vital that, as ODA increases, it be properly directed at MDG needs.

Several financing mechanisms exist to make this steep rise in development assistance possible, despite short-term donor fiscal constraints. Among

them, the International Finance Facility (IFF) stands out as being practical, technically feasible, and fairly straightforward to implement. We encourage all developed countries to support the IFF in 2005, in time to start disbursing funds in 2006. After 2006 the ODA needs continue to rise, and donors should prepare for a continuing scale-up of funding between 2006 and 2015, as country-level investment programs grow in scope. During 2006–15 we project that some countries (such as India) will graduate from the need for ODA. But this will be more than offset by the increased scale of investment programs required in the remaining low-income countries.

Readers are advised to keep in mind that all ODA numbers presented here are in constant 2003 dollars. Inflation and dollar exchange rate depreciation will raise the current dollar amounts of these estimates in the years ahead.

MDG investment needs at the country level

The aggregate ODA figures presented in this chapter are anchored in the preliminary MDG needs assessements that the UN Millennium Project has carried out in Bangladesh, Cambodia, Ghana, Tanzania, and Uganda (box 17.2).[3] The results show that these countries' total MDG investment needs are $70–$80 per capita in 2006, rising to $120–$160 in 2015. Underlying these estimates is the assumption that the scaling up of investment goes hand in hand with optimizing current public expenditures using best practices. We have added $8 per capita in 2006 and $13 in 2015 to account for interventions not originally included in the needs assessments. Additional expenditures will be required for capacity building and for emergency assistance that are not reported in the country results but included in our estimate of global ODA needs.

Per capita MDG investment needs are remarkably similar across the five countries, even though they derive from country-specific coverage data and unit costs. Two reasons account for this low variation.

First, some unit costs are independent of per capita GDP. For example, antiretroviral drugs to treat HIV/AIDS cost several hundred dollars per year regardless of whether per capita income is $100, $300, or $1,000 a year. Likewise, the international market for doctors, a recent product of globalization, leads to more uniform salaries no matter how poor a country is. For this reason we stress the importance of considering MDG investment needs in absolute per capita terms rather than as shares of GDP or national budgets. Since our results suggest that countries will require similar expenditures to meet the Goals, MDG investment needs expressed as a percentage of GDP will be higher in poor countries.

Second, countries will reach similar service coverage or infrastructure stocks to achieve the Goals. In countries with high current coverage, a reduced need for additional capital investments to meet the Goals is partially offset by higher current operating costs. This partial tradeoff between capital investments and operating costs further reduces differences across countries. The remaining variation is driven by differences in unit costs or underlying needs.

Box 17.2

MDG needs assessment methodology

Our approach to estimating resource needs to meet the Millennium Development Goals is guided by four principles.

- First, there is no one-size-fits-all answer to the question, "What will it take to meet the Millennium Development Goals?" The question can be answered only through country-level needs assessments using country-specific coverage data, targets, and unit costs. We recommend this approach for all countries preparing MDG-based poverty reduction strategies.
- Second, instead of using aggregate input-output relationships and unit costs, needs assessments must build on a bottom-up assessment of both capital and operating expenditures. The analyses should also quantify human resource needs and infrastructure requirements for all interventions necessary to meet the Goals.
- Third, operationalizing the Monterrey Consensus requires that domestic resource mobilization by governments and households fund as much of the cost of meeting the Goals as possible. Where MDG investment needs exceed domestic resource mobilization, this MDG financing gap must be covered through official development assistance.
- Fourth, while the Goals cannot be "bought" through more money alone, increased assistance is necessary to meet them. Donors must commit credibly to make sufficient funds available, with actual disbursements contingent on the quality of MDG-based poverty reduction strategies and the credible commitments of countries to undertaking the necessary reforms.

In collaboration with local research institutes in five countries—Bangladesh, Cambodia, Ghana, Tanzania, and Uganda[a]—the UN Millennium Project conducted needs assessments to answer the basic question "What will it take to meet the Goals?" (UN Millennium Project 2004b). To answer this question, we quantified the required investments and operating expenditures as well as the human resources and infrastructure necessary to meet the Goals. A common objection to asking this question is that resources are finite while needs are infinite, as stressed in every introductory economics class. This statement is of course correct, but we define "needs" specifically as the resources required to meet the quantitative, time-bound targets for poverty reduction that the world set for itself in the form of the Millennium Development Goals.

Our needs assessment methodology follows five basic steps summarized here and described in more detail in UN Millennium Project (forthcoming).

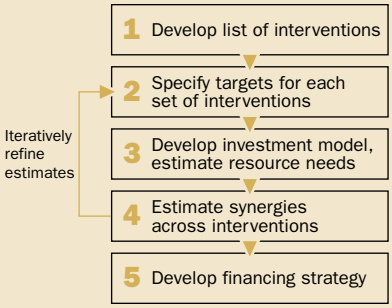
- In a first step, we identify all policies and interventions—defined broadly as the provision of services, goods, and infrastructure—necessary to meet the Goals, as described in chapter 5. They include sets of interventions for which no specific Goal exists, but that are nevertheless required to meet the Goals, such as improving access to transport, energy services, and sexual and reproductive health services (appendix 1).
- Second, we identify quantitative targets for each intervention for 2015, such as coverage rates for emergency obstetric care to reduce maternal mortality and the number of teachers, classrooms, and learning materials required to ensure universal primary education and the expansion of secondary education.
- Third, we use transparent investment models to estimate the capital and operating costs of the MDG interventions, including human resources and infrastructure.[b] We project an exponential scaling up of interventions to allow for a gradual expansion of service delivery capacity, as discussed in chapter 6.

a. Bangladesh Institute of Development Studies; Economic Policy Research Center, Uganda; Economic and Social Research Foundation, Tanzania; Institute of Social Statistics and Economic Research, Ghana; and the University of Cambodia.

b. These "open source" investment models can be downloaded at [www.unmillenniumproject.org].

Box 17.2
MDG needs assessment methodology
(continued)

- Fourth, we iteratively revise needs estimates to integrate synergies across intervention areas that would affect overall MDG investment needs. For example, greater access to safe water supply will reduce the incidence of diarrheal diseases and thereby lower health costs.
- In a final step, we develop a financing strategy by matching MDG investment needs with substantially increased domestic resource mobilization to estimate the MDG financing gap.



For example, health costs in countries with high HIV prevalence are higher than in low-prevalence countries.

Results of the needs assessment are arranged by MDG outcomes (table 17.1). Under hunger we quantify the MDG investments required to raise the productivity of subsistence farmers as well as nutrition interventions not provided through the primary health system, such as community-based nutrition programs. Other nutrition interventions are included under health. Our education estimates build upon the Education for All estimates by also including secondary school education. Investments in all sectors are targeted to benefit women and young girls. The gender needs assessment addresses additional interventions to combat violence against women, strengthen institutional capacity for promoting gender equality, and raise awareness of sexual and reproductive legal and economic rights.

One of the largest line item costs is for health. It includes the cost of running a health system offering essential medical interventions, such as emergency obstetric care, treatment for the major infectious diseases, and interventions to reduce child mortality. We also include some interventions primarily provided outside the health system, such as preventing major diseases. Consistent with the findings of the WHO (2001), differences in per capita costs are largely driven by HIV prevalence rates. "Improving the lives of slum dwellers" focuses on slum upgrading and providing alternatives to the formation of new slums. Infrastructure services—including domestic water supply, sanitation, electricity, improved cooking fuels, and transport—together account for roughly 35–50 percent of total MDG investment needs. The transport needs assessment includes only

Table 17.1

Per capita MDG investment needs and MDG financing gaps in Bangladesh, Cambodia, Ghana, Tanzania, and Uganda, 2006–15

2003 US$ per capita

	Bangladesh			Cambodia			Ghana			Tanzania			Uganda		
	2006	2010	2015	2006	2010	2015	2006	2010	2015	2006	2010	2015	2006	2010	2015
MDG investment needs															
Hunger	2	4	8	4	7	13	3	5	12	4	7	14	3	5	10
Education	11	17	25	15	19	22	17	19	22	11	13	17	14	15	17
Gender equality	2	3	3	2	3	3	2	3	3	2	3	3	2	3	3
Health	13	19	30	14	21	32	18	24	34	24	33	48	25	32	44
Water supply and sanitation	4	5	6	3	5	8	6	7	10	4	5	12	2	3	9
Improving the lives of slum dwellers	2	3	4	3	3	4	2	2	3	3	3	4	2	2	3
Energy	20	19	20	9	13	23	13	15	18	14	15	18	6	10	19
Roads	12	21	31	12	21	31	11	10	10	13	21	31	13	20	27
Other[a]	8	9	13	8	9	13	8	9	13	8	9	13	8	9	13
Total	**74**	**100**	**140**	**71**	**101**	**148**	**80**	**94**	**124**	**82**	**111**	**161**	**75**	**100**	**143**
Sources of financing															
Household contributions	8	10	14	9	13	18	9	11	15	9	11	17	8	9	14
Government expenditures	23	33	49	22	30	43	19	27	39	24	32	46	27	35	48
MDG financing gap	43	56	77	40	58	87	52	57	70	50	67	98	41	56	80
Shortfall of ODA for direct MDG support over 2002 level	**42**	**55**	**75**	**22**	**40**	**69**	**36**	**41**	**54**	**35**	**52**	**83**	**29**	**44**	**68**
For comparison: ODA for direct MDG support, 2002[b]		1			18			16			15			12	

Note: Numbers in table may not sum to totals due to rounding. Results describe MDG investment needs excluding expenditures for capacity building. Refer to appendix 3 and UN Millennium Project (forthcoming) for more details.

a. For MDG interventions not yet included in MDG needs assessments due to a lack of data (such as large infrastructure projects, higher education, national research systems, and environmental sustainability). Period average is $10 per capita for each country.

b. Consistent with table 13.2, calculated as net ODA minus technical cooperation, debt relief, aid to NGOs, emergency assistance, and food aid, using data from OECD/DAC (2004d).

Source: Authors' calculations prepared in collaboration with Bangladesh Institute of Development Studies; Economic Policy Research Center, Uganda; Economic and Social Research Foundation, Tanzania; Institute of Social Statistics and Economic Research, Ghana; and the University of Cambodia.

the cost of maintaining and expanding road networks. A more comprehensive assessment must factor in the cost of improving access to transport services as well as expanding ports and other transport infrastructure.

The UN Millennium Project's needs assessment methodology has recently been applied to other countries. The Indian Institute of Management in Ahmedabad collaborated with the Project to carry out detailed MDG needs assessments for three states: Madhya Pradesh, Rajasthan, and Uttar Pradesh, which together contain 28 percent of the Indian population below the poverty line. The researchers estimate that between 2005 and 2015, total annual MDG investment needs for the three states will average $115 per capita (Madhya Pradesh), $110 (Rajasthan), and $113 (Uttar Pradesh) (Dholakia, Kumar, and Datta 2004). These estimates, which exclude the significant costs of HIV/AIDS and transport, are in line with the results in table 17.1.

In Tajikistan, the UN Country Team is leading a detailed needs assessment for the country and has so far produced results for health, education, and water and sanitation. Preliminary estimates there suggest that the 2015 per capita costs of achieving 100 percent primary school enrollment would be $26,

achieving universal primary healthcare $39, and reaching 80 percent access to water and sanitation $10. So the total estimated cost of achieving the education, health, and water and sanitation MDGs in Tajikistan would be $75 per capita in 2015. These figures are somewhat higher than the results presented here. (Perhaps unit costs are higher due to the country's rugged terrain and extreme geographical isolation.)

The cross-country consistency of results provides some convenient shorthand for assessing whether poverty reduction strategies and national budgets are consistent with the Millennium Development Goals. For example, the health costs are around $13–$25 per capita in 2006, rising to around $30–$48 in 2015 ($25 in 2006 for countries with high HIV prevalence, rising to up to $48 by 2015). So if an MDG-based poverty reduction strategy includes a health budget of only $5 per capita, as is often the case, it is likely to fall far short of the Goals. Similarly, the scale-up results indicate that any serious MDG investment strategy will have education costs of at least $11–$17 per capita (rising to $17–$25 in 2015), hunger costs of $2–$4 (rising to $8–$14 per year), water and sanitation costs of $2–$6 (rising to $6–$12), energy costs of $6–$20 (rising to $18–$23), and slum upgrading costs of $2–$4. UN Millennium Project (forthcoming) contains a detailed discussion of the sectoral results.

Financing the MDG investments at the country level

To operationalize the Monterrey Consensus, countries need to maximize domestic resource mobilization for the Millennium Development Goals before official development assistance should be called on to fund public investments.

Increasing domestic resource mobilization

We estimate that each of the five countries can increase government spending on the Goals by an ambitious four percentage points of GDP over the next 10 years. In a typical low-income country this corresponds to a rise from 5 percent of GDP to 9 percent, a more than doubling in absolute terms.[4] This expansion is not only necessary—it is achievable through using broad-based revenue sources, such as a value added tax, strengthening tax collection, and redirecting current spending.

Meanwhile, middle-income countries will be able to finance essentially all investments in the Goals without raising government budgets by four percentage points of GDP or resorting to external finance. In some cases, primary surplus requirements for government budgets may need to be adjusted to allow countries to increase public investments for the Goals. Still, modest levels of ODA may be needed to help middle-income countries redress especially difficult "pockets of poverty." Some heavily indebted middle-income countries may also require assistance in refinancing their debt burden.

Households are expected to contribute financially within their means to sectors where the incentive effects of well designed user fees are compatible

with the overall policy objectives of ensuring effective and equitable access to basic infrastructure and social services. We project household contributions to investments in agricultural productivity, secondary school education, energy services, domestic water supply, and sanitation (UN Millennium Project forthcoming). In line with the international consensus and the recommendations of the UN Millennium Project, all direct and indirect fees for primary education and basic healthcare are discontinued (UNESCO 2000; WHO 2001).

The need for more official development assistance

Even substantial increases in domestic resource mobilization by governments and households will be insufficient to finance investments of approximately $120–$160 per capita by 2015. As a result, each of the five countries will require $40–$50 per capita in external finance in 2006, rising to $70–$100 in 2015. We stress that no distinction should be made between funding capital and operating costs through official development assistance, since poor countries cannot afford to fund operating expenditures, which account for a large share of total costs in health, education, and other sectors. To maintain macroeconomic stability, external finance to low-income countries will need to be provided in the form of grants (Landau 2004).

In the case of Ghana, direct investments in the Millennium Development Goals need to rise from $80 per capita in 2006 to $124 by 2015 (see table 17.1). Even after accounting for a near doubling of domestic resource mobilization between 2006 and 2015, the country's MDG financing gap is projected to rise from $52 to $70 per capita.

A step increase in MDG investments

The results for all five countries project a step increase in investment levels during 2006, to be funded largely through official development assistance. A common objection to such a step increase is that countries would not be able to spend the money productively due to constraints in their capacity to scale up public investments. As this report emphasizes, this is a valid concern that will frequently need to be addressed. For several reasons, however, countries like Ghana will be able to absorb the projected step increase in financing. Chief among them are policy changes that should be implemented rapidly with the existing administrative capacity. A significant amount of incremental financial support is often needed simply to abolish fees for primary schools and healthcare for the poor. Public sector salaries across the board will also need to be raised in many countries to improve the performance of public administration and public service delivery. Finally, unemployed teachers and medical staff should be rehired.

As described in chapter 5, several other interventions for achieving the Goals—we call them Quick Wins—can be implemented rapidly by developing countries without the need to invest in prior capacity building. Examples

include providing malaria bed-nets, training community health workers, increasing access to water and electricity for schools and healthcare facilities, and maintaining core infrastructure. Since the unmet financing needs in these areas are high, we project that the step increase can be invested during 2006 (figure 17.1). Thereafter, the scaling up of public investments will follow a smoother path to allow for time to remove capacity constraints.

The macroeconomic implications of increasing aid

ODA inflows of up to 20 percent of GDP may raise macroeconomic issues that need to be managed carefully. Since much of the externally financed government spending will be devoted to the nontradable sector, an appreciation of the real exchange rate is likely. But the implications for the "Dutch disease" should not be too quantitatively significant, since much of the official development assistance will be directed to raising supply-side productivity through investments in human capital, agriculture, and infrastructure—not to a consumption boom typically linked to a squeeze in the tradable sector. Further, this strategy is completely different from an oil boom, in which additional revenues are easily dissipated by an irresponsible government. In the current case, the increased resources would be made available in rigorous, monitored investment programs. Appropriate monetary sterilization and other policy tools can further contain real exchange rate appreciation.

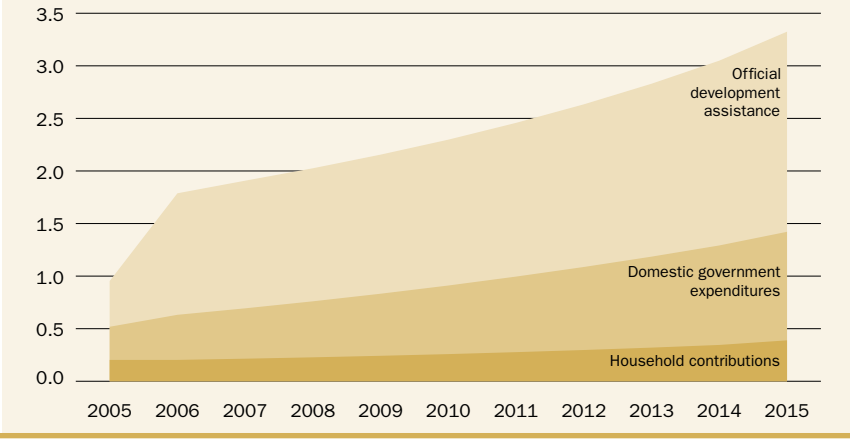
Most macroeconomists therefore share the view that the negative macroeconomic implications of increased assistance flows are manageable and are far outweighed by the benefits of scaled-up investments in the Millennium Development Goals—so long as the aid flows are predictable and come in the form of grants (IMF Fiscal Department, personal communication, 2004; Foster and Keith 2003; Prati, Sahay, and Tressel 2003). Likewise, the competitiveness of the private sector is unlikely to be put in jeopardy, as is sometimes feared, since most MDG-related interventions will lower the cost of doing business by improving human capital and infrastructure.

Figure 17.1

Scaling up public investments in the Goals in Ghana

2003 US$ billions

Source: Authors' calculations prepared in collaboration with the Institute of Social Statistics and Economic Research, Ghana.



The recent experience of Mozambique underlines this point. Between 1993 and 2002 ODA inflows averaged more than 40 percent of GNI while real growth averaged an impressive 5.5 percent per capita. The ODA inflows were instrumental in achieving dramatic poverty reduction without creating any major appreciation of the real exchange rate or other macroeconomic imbalances. Other economies that have experienced very high inflows of aid over long periods and managed to sustain high growth rates are Botswana after independence, Taiwan (China) in the 1950s, and Uganda in the 1990s (Foster and Keith 2003).

We have nonetheless estimated the likely effect of a real exchange rate appreciation on the external financing required for the Millennium Development Goals. A real exchange rate appreciation of 20 percent over the 10 years from 2006 to 2015, as suggested by Prati, Sahay, and Tressel (2003), would raise the need for external finance by 7–8 percent over the period.[5] Such a modest increase will not significantly alter the results of the needs assessment. Since estimates of real exchange rate appreciation are subject to considerable uncertainty, we have not adjusted our MDG needs assessment for exchange rate effects.

Global ODA needs to meet the Goals

What are the implications of national MDG needs assessments for global ODA volumes? To answer this question we estimate the global MDG financing gap using the country-level results. We then add estimated assistance needs for debt relief, technical cooperation, and other MDG-related expenditures to the MDG financing gap. Finally, we provide an indicative estimate of the total ODA envelope required to finance the Goals through 2015. We include adjustments for countries not qualifying due to inadequate governance and for efficiency gains from improved aid allocation and effectiveness. (Appendix 3 contains a detailed description of the key assumptions.)

The aggregate MDG financing gap

We estimate the global MDG financing gap as the difference between total MDG investment needs and domestic resource mobilization, assuming a rise in government expenditures of up to four percentage points of GDP over the decade. The MDG financing gap for all low-income countries will amount to $73 billion in 2006 and rise to $135 billion by 2015 (table 17.2). Thanks to rising domestic resource mobilization, the share of official development assistance in financing incremental investments (that is, the MDG financing gap) will fall from 59 percent in 2006 to 32 percent by 2015.

Many countries—particularly in Sub-Saharan Africa—will require sustained budget support of more than 10 percent of GDP through 2015 (map 17.1). The map underscores that because of rising incomes several countries, Bolivia, India, and Indonesia among them, will graduate from the need for official development assistance before 2015.

Table 17.2

Cofinancing the MDGs in low-income countries

2003 US$ billions

Note: Refer to appendix 3 for more details.

a. For 2002 we report actual expenditures and ODA for direct MDG support.

Source: Authors' calculations.

	2002[a]	2006	2010	2015
MDG financing gap, 2006–15				
MDG investment needs	149	253	348	529
Domestic resource mobilization	137	180	259	394
MDG financing gap	12	73	89	135
Increment over 2002				
MDG investment needs		104	200	380
Domestic resource mobilization		43	122	257
MDG financing gap		61	78	123
Share of increment over 2002 (percent)				
MDG investment needs		100	100	100
Domestic resource mobilization		41	61	68
MDG financing gap		59	39	32

Map 17.1

MDG financing gap, 2015

Share of GDP (%)

Source: Authors' calculations.

The cost of meeting the Millennium Development Goals in every country

We project that the cost of meeting the Goals in all countries will amount to $121 billion in 2006 and $189 billion in 2015 (table 17.3). This compares with 2002 official development assistance of roughly $28 billion in support of the Goals (out of $65 billion in total ODA).[6] The projections cover the MDG financing gap in all countries as well as the cost of financing capacity building

for the Goals, debt relief, and grants in support of heavy debt burdens. We assume that the poorest countries will require outright cancellation of their debt to be able to achieve the Goals (chapter 13). The granting of debt relief should of course be contingent on countries committing themselves to credible strategies for investing the proceeds in the Goals. Countries likely to graduate before 2015 will need grants to finance loan repayments only if the sum of their debt service payments and the MDG investments exceeds domestic resource mobilization.

While middle-income countries will be able to finance most MDG investments through domestic resource mobilization alone, we expect that overcoming entrenched "pockets of poverty" will require international assistance of $10 billion a year in addition to the current level of capacity building supported by bilateral and multilateral agencies. Since our MDG needs assessments have not focused on the MDG investment needs of middle-income countries, this estimate would need to be refined further through detailed country estimates.

We estimate that the $2 billion in current assistance flows for regional infrastructure and cooperation (Birdsall 2004) will need to rise to $11 billion by 2015. As described in chapter 15, additional annual funding of $7 billion is also required by 2015 to expand global research for the Millennium Development Goals. We have included four main areas in our estimates: public health, agriculture and natural resource management, energy technologies, and adaptation to climate change. Investments in many cases should target existing research centers or networks, such as the CGIAR system, which leads agricultural research for the needs of developing countries and whose budget we propose should increase to $1 billion annually.

Implementing the three Rio conventions also requires more funding. We project that the cost of implementing the Convention to Combat Desertification alone will reach $5 billion annually by 2015.[7] Finally, we include the cost of operating the international agencies of the UN system, which must provide enhanced technical support and training programs to assist countries in their pursuit of MDG-based poverty reduction strategies.

In aggregate, the bulk of additional official development assistance will be needed for direct MDG support to low-income countries (see table 17.3). Middle-income countries will also require an increase in net assistance flows—albeit a very modest one.

Implications for total official development assistance

With the cost of meeting the Millennium Development Goals at the country level known, it is possible to ask how the global ODA envelope will need to change to meet them. We estimate that global assistance will need to roughly double from $69 billion in 2003 (and $65 billion in 2002) to $135 billion in 2006, rising thereafter to $195 billion by 2015 (table 17.4). Projected official development assistance is high in absolute terms, but since rich countries'

Table 17.3

Estimated cost of meeting the Millennium Development Goals in all countries

2003 US$ billions

— Not available.

Note: Numbers in table may not sum to totals because of rounding. Refer to appendix 3 for more details.

Source: 2002 data based on OECD/DAC 2004d. Projections for 2006–15 are authors' calculations.

Category	Estimated ODA in 2002	Projected for 2006	Projected for 2010	Projected for 2015
MDG support needs in low-income countries				
MDG financing gap	12	73	89	135
Capacity building to achieve the MDGs	5	7	7	7
Grants in support of heavy debt burden	—	7	6	1
Debt relief	4	6	6	6
Repayments of concessional loans	–5	0	0	0
Subtotal	**15**	**94**	**108**	**149**
MDG support needs in middle-income countries				
Direct support to government	4	10	10	10
Capacity building to achieve the MDGs	5	5	5	5
Repayments of concessional loans	–6	–3	–4	–6
Subtotal	**3**	**12**	**11**	**9**
MDG support needs at the international level				
Regional cooperation and infrastructure	2	3	7	11
Funding for global research	1	5	7	7
Implementing the Rio Conventions	1	2	3	5
Technical cooperation by international organizations	5	5	7	8
Subtotal	**10**	**15**	**23**	**31**
Estimated cost of meeting the MDGs in all countries	**28**	**121**	**143**	**189**

Table 17.4

Plausible ODA needs to meet the Millennium Development Goals

2003 US$ billions

na Not applicable.

Note: Numbers in table may not sum to totals because of rounding. Refer to appendix 3 for more details.

a. Includes assistance that does not contribute directly to the Goals and operating expenditures of donor agencies.

b. Does not include several important ODA needs, such as responding to crises of geopolitical importance (such as in Afghanistan or Iraq), mitigating the impact of climate change, protecting biodiversity and conserving global fisheries, and so on.

Source: 2002 data based on OECD/DAC 2004d. Projections for 2006–15 are authors' calculations.

	Estimated ODA in 2002	Projected for 2006	Projected for 2010	Projected for 2015
Baseline ODA for the Goals in 2002	28	28	28	28
Incremental MDG investment needs	na	94	115	161
Adjustment for countries not qualifying due to inadequate governance	na	–21	–23	–25
Reprogramming of existing ODA	na	–6	–7	–9
Emergency and distress relief	4	4	5	6
Other ODA[a]	34	36	34	35
Total indicative ODA needs for the Goals[b]	**65**	**135**	**152**	**195**
Share of OECD/DAC countries' GNI (percent)	**0.23**	**0.44**	**0.46**	**0.54**
ODA to Least Developed Countries (% of OECD/DAC countries' GNI)	0.06	0.12	0.15	0.22
Absolute increase in ODA required (compared with 2002)	na	70	87	130
Difference between total ODA needs and existing commitments	**na**	**48**	**50**	**74**

income will grow over the 10 years,[8] the cost of meeting the Goals in all countries with adequate governance corresponds to 0.44 percent of OECD countries' GNI in 2006 and 0.54 percent in 2015 (compared with 0.23 in 2002 and 0.25 percent in 2003)—well below the 0.7 percent target that rich countries have committed themselves to (box 17.3).

We emphasize that overall assistance needs are likely to be higher since our estimates cover only investments that contribute directly to achieving the Millennium Development Goals. For example, we exclude official development assistance to stabilize greenhouse gas concentrations, to protect global fisheries, to countries of special geopolitical importance, and so forth. So, total ODA needs will likely approach the 0.7 percent target.

Box 17.3

The 0.7 percent ODA target and the Millennium Development Goals

Although the UN Millennium Project focuses its ODA needs assessments on country-level estimates of the assistance required to achieve the Goals, we do so within the context of developed countries' long-established international target of providing 0.7 percent of their national income as ODA. 2005 marks 35 years since this target was first affirmed by UN member states in a 1970 General Assembly Resolution:

> "In recognition of the special importance of the role that can be fulfilled only by official development assistance, a major part of financial resource transfers to the developing countries should be provided in the form of official development assistance. Each economically advanced country will progressively increase its official development assistance to the developing countries and will exert its best efforts to reach a minimum net amount of 0.7 percent of its gross national product at market prices by the middle of the decade." (UN 1970, paragraph 43)

This first deadline passed. Having fallen from 0.51 percent as a share of donor GNP in 1960 to 0.33 percent in 1970, ODA reached 0.35 percent in 1980. By 1990 ODA was at 0.34 percent and then fell to 0.23 percent in 2002, the same year the 0.7 target was reconfirmed by all countries in the Monterrey Consensus (OECD 2004d).

So far, only five countries have met or surpassed the 0.7 target: Denmark, Luxembourg, the Netherlands, Norway, and Sweden. In the past two years, however, six other countries have committed themselves to specific timetables to achieving the target before 2015: Belgium, Finland, France, Ireland, Spain, and the United Kingdom. Thus nearly half the membership of the OECD's Development Assistance Committee has now set a firm timetable for reaching 0.7 percent. The UN Millennium Project urges all developed countries to follow through on the Monterrey commitment "to make concrete efforts towards the target of 0.7." We urge that "concrete efforts" require a specific timetable, and specifically a timetable before 2015, the target date for the Goals.

The confluence of the 0.7 target and the Goals is an important one. As this report outlines, ours is the first generation in which the world can halve extreme poverty within the 0.7 percent envelope. In 1975, when the donor world economy was around half its current size, the Goals would have required much more than 1 percent of GNP from the donors. Today, after two and a half decades of sustained economic growth in developed countries, the Goals are utterly affordable. No new promises are needed—only a follow-through on commitments already made.

After adding incremental ODA needs (estimated in table 17.3) to baseline ODA, we adjust for countries unlikely to meet the minimum standards of good governance that form the basis of the Monterrey Consensus and are necessary before MDG interventions can be scaled up. To do this, we subtract $21 billion in 2006, or 28 percent of the aggregate MDG financing gap. By 2015 we assume that more countries will have passed this threshold and therefore subtract a smaller financing share for that year ($25 billion, or 19 percent of the MDG financing gap).

Next, we project that greater harmonization and reallocation of existing official development assistance can increase net assistance for the MDGs. By untying aid, aligning official development assistance with government priorities, and shifting away from project implementation toward program funding—as called for in the Rome harmonization agenda—donors can generate major savings. We assume that 20 percent of development assistance that is not currently directed toward the Goals, emergency assistance, or the operation of bilateral agencies can be redirected toward the Goals in 2006. By 2015 the share will rise to 30 percent. This lowers total ODA needs by $6–$9 billion.

We then add official development assistance for emergency assistance to support countries in crisis or experiencing natural disasters. In the face of rising population numbers and the growing impact of climate change, we project that emergency assistance will need to increase by 50 percent over the coming 10 years. A share of this funding should support the UN Immediate Response Account, which is currently underfunded.

The final item, "other ODA," includes a basic extrapolation of various kinds of official development assistance that are not related to the Goals (such as aid to countries of geopolitical importance for needs not covered in our costing). This is not a comprehensive measure of non-MDG needs. It is simply a baseline calculated on the basis of current ODA. We project that actual ODA needs for non-MDG-related goals—such as postwar reconstruction, the consolidation of new democracies, or the mitigation of climate change—will be considerably higher than this line.

The Monterrey Consensus calls for increasing official development assistance to Least Developed Countries to 0.15 to 0.20 percent of rich countries' GNI (UN 2002a). Consistent with this objective, our estimates suggest that aid to Least Developed Countries will increase from currently 0.06 percent to 0.12 percent in 2006 and 0.22 percent by 2015.

Despite some caveats (box 17.4), these estimates highlight three important insights about official development assistance (table 17.5).

- First, the Millennium Development Goals can be met within the 0.7 percent of GNI target that all developed countries endorsed in Monterrey. But due to current shortfalls from that target, ODA volumes need to rise beyond the commitments already made by donors—by $48 billion in 2006.

Box 17.4

Some caveats for the projections of official development assistance needs

The ODA estimation methodology presented here represents a pioneering effort at a bottom-up, integrated, country-level approach to MDG needs assessments. Even so, the results are subject to several sources of uncertainty and should not be interpreted as a definitive point estimate of MDG investment needs. Since only limited data are available on marginal costs and how they change as investments reach greater shares of a population, it is difficult to project the actual costs of service delivery into the future. We also assume that governments and donors alike can provide all investments efficiently. Failing to do so may have a substantial effect on the projected MDG financing gap. And although our analysis does account for many of the most important synergies across intervention areas, only a real-time scaling up of all interventions will show how they interact quantitatively.

The global ODA projections extrapolate results for five countries that have since been validated in a number of other countries. Any such extrapolation is an estimate at best, since a true global needs assessment would require detailed within-country assessments for every developing country. Moreover, we do not account for the possible impact of major events that might affect the cost of achieving the Millennium Development Goals globally or in specific regions—such as major natural disasters, armed conflict, climate change, or major financial crises. Any one of them could substantially alter the results here.

The projections of global official development assistance constitute our best estimate of what donors must be prepared to finance if they are to engage in honest discussions with countries about how to meet the Goals. They lay out the full set of "line items" to be adequately funded to achieve the Goals. Since the focus of the UN Millennium Project has been on quantifying MDG investment needs at the country level, our projections of debt relief required to meet the Goals, the need for enhanced emergency assistance, and regional MDG investment needs cannot substitute for a more detailed analysis.

- Second, the quality of ODA needs to improve substantially. Most incremental aid needs to be provided in the form of budget support or sector-wide approaches to support the scaling up of national programs under the MDG-based poverty reduction strategies. No distinction should be made between aid funding for capital and recurrent costs, because both need to be fully financed to meet the MDGs. This point is critical since current ODA is rarely used to support operating expenses, such as doctors' salaries, preservice training, or the maintenance of core infrastructure.
- Third, new ODA for the Goals must be much better targeted than is currently the case. While middle-income countries require enhanced debt relief and some additional aid, the bulk of official development assistance must focus on low-income countries. Funding for regional infrastructure and collaboration, as well as global scientific research, must also rise sharply.

Financing mechanisms for increasing the ODA envelope

MDG needs assessments call for a step increase in net official development assistance from $69 billion in 2003 to $135 billion in 2006, compared with existing commitments made by OECD/DAC member countries to increase

Table 17.5

Estimated ODA flows and gaps of Development Assistance Committee members based on existing commitments

Constant 2003 US$ billions

Country	Assistance at 0.44 percent of 2006 GNI[a]	Assistance commitment for 2006	Gap in 2006	Assistance at 0.54 percent of 2015 GNI[a]	Assistance commitment for 2015	Gap in 2015
Australia[b]	2.4	1.4	1.0	3.4	1.6	1.8
Austria[c]	1.2	0.9	0.3	1.7	1.1	0.7
Belgium[d]	1.5	2.1	none	2.1	2.7	none
Canada[e]	4.2	2.6	1.7	6.1	3.7	2.4
Denmark[f]	1.0	1.8	none	1.5	2.2	none
Finland[d]	0.8	0.7	0.1	1.1	0.9	0.2
France[g]	8.5	8.8	none	12.3	15.6	none
Germany[c]	11.6	8.4	3.2	16.7	10.0	6.7
Greece[c]	0.9	0.6	0.2	1.3	0.8	0.5
Ireland[h]	0.6	0.8	none	0.9	1.1	none
Italy[c]	7.0	5.1	1.9	10.1	6.1	4.1
Japan[i]	19.9	9.5	10.4	28.7	9.5	19.2
Luxembourg[j]	0.1	0.2	none	0.2	0.3	none
Netherlands[k]	2.4	4.2	none	3.5	5.1	none
New Zealand[l]	0.4	0.2	0.2	0.5	0.2	0.3
Norway[m]	1.1	2.4	none	1.6	2.8	none
Portugal[c]	0.7	0.5	0.2	1.0	0.6	0.4
Spain[g]	4.1	2.9	1.1	5.9	7.5	none
Sweden[n]	1.5	3.2	none	2.1	3.8	none
Switzerland[o]	1.6	1.4	0.3	2.4	1.7	0.6
United Kingdom[p]	9.2	8.5	0.7	13.2	16.8	none
United States[q]	54.5	22.3	32.2	78.7	27.2	51.5
Total	**135.0**	**88.4**		**195.0**	**121.5**	

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

a. Assumes 2 percent real annual GNI growth.
b. 2006 ODA/GNI target held constant through 2015.
c. 2006 ODA/GNI target held constant at 0.33 percent through 2015.
d. 2010 ODA/GNI target of 0.7 percent; commitment level held constant through 2015.
e. Assumes 5.5 percent real annual ODA increase (8 percent nominal increase less 2.5 percent inflation) through 2010; 2010 ODA/GNI target held constant through 2015.
f. 2006 ODA/GNI target of 0.83 percent held constant through 2015.
g. 2012 ODA/GNI target of 0.7 percent through 2015.
h. 2007 ODA/GNI target of 0.7 percent held constant through 2015.
i. 2006 ODA level held constant at $9.5 billion through 2015.
j. 2006 ODA/GNI commitment of 1 percent held constant through 2015.
k. ODA/GNI target of 0.8 percent held constant through 2015.
l. Assumed 2006 ODA/GNI level of 0.26 percent held constant through 2015.
m. 2005 ODA/GNI target of 1 percent held constant through 2015.
n. 2006 ODA/GNI target of 1 percent held constant through 2015.
o. 2010 ODA/GNI target of 0.4 percent held constant through 2015.
p. 2013 ODA/GNI target of 0.7 percent held constant through 2015.
q. Assumes 3 percent real GNI growth to 2006; for 2006 includes over $1.5 billion for the Millennium Challenge Account, nearly $2 billion for the Global AIDS Initiative, increased multilateral aid, and rephased expenditure on reconstruction in Iraq. ODA/GNI share projected to remain constant through 2015.

Source: OECD/DAC forthcoming.

ODA to $88 billion in 2006 (see table 17.5). The shortfall of roughly $48 billion is projected to stay constant through 2010 and may rise to $74 billion by 2015, assuming that assistance volumes increase according to the commitments already made.

Can donors finance the additional increase to raise official development assistance from 0.25 percent of their GNI in 2003 to 0.44 percent in 2006? The most direct way to further increase ODA volumes is of course to allocate increasing shares of national budgets to official development assistance. We recognize, however, that some donor countries face short-term fiscal constraints. While we urge all developed countries to commit to a specific year by which to achieve the 0.7 percent target they have set for themselves, other innovative financing mechanisms may be necessary—as discussed by Atkinson (2004) and Landau (2004). Prominent among recent suggestions are international taxation on financial transactions or carbon emissions, the use of IMF special drawing rights, and the International Finance Facility (IFF) proposed by the United Kingdom. We consider the IFF to be the most advanced and immediately practicable of all of the proposals.

The IFF would be a temporary financing mechanism to at least double development assistance between now and 2015. Importantly, we interpret "doubling" to mean a doubling of the share of ODA in donor GNP—that is, to reach at least 0.54 percent of donor GNP for the MDGs, rather than simply doubling the current dollar level of aid flows. The IFF will leverage additional money from the international capital markets by issuing bonds, based on legally binding long-term donor commitments. It responds to the need for the rapid scaling up, or "frontloading," of development assistance without placing undue constraints on rich countries' budgets. It also permits donor countries to achieve the overall ODA target of 0.7 percent of GNI by 2015.

In contrast to other proposals, the IFF can be rapidly implemented and does not depend on participation by all high-income countries. It offers the flexibility to align the level of financing with actual assistance needs by adjusting the issuance of bonds. And it enables donors to channel the funds through a range of disbursement mechanisms that can provide high-quality assistance, such as direct budget support, the International Development Association, the development funds of the regional development banks, and the European Development Fund. We encourage all developed countries to support the IFF in 2005, in time to start disbursing funds in 2006.

Immediate ODA needs for 2005

Further to the call to action in chapter 16, as part of the step increase of official development assistance by 2006, we call on donors to ensure that increased assistance is made available in 2005 for the following urgent categories:

- Assistance to countries and international agencies to enable all countries that wish to do so to prepare MDG-based poverty reduction strategies in 2005–06.
- Financing for the Global Fund to Fight AIDS, Tuberculosis, and Malaria, to fund the Quick Wins in HIV/AIDS ("3 by 5"), malaria (bed-nets and effective medicines), and TB control (DOTS).
- Dropping user fees for primary schools and essential health services, rehiring unemployed teachers and medical staff, and raising public sector salaries in developing countries as needed.
- Large-scale training, particularly for community health workers, agricultural extension workers, and community-based experts in infrastructure, to commence in 2005.
- Support for at least one dozen MDG fast-track countries in scaling up MDG-related investments beginning in 2005.