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Working Paper No. 467

**THE FINANCIAL REQUIREMENTS
OF ACHIEVING
GENDER EQUALITY AND WOMEN'S EMPOWERMENT**

Paper Prepared for the World Bank

by

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ABSTRACT

Although the Millennium Development Goals (MDGs) have been ratified in global and national forums, they have not yet been incorporated into operational planning within governments or international organizations. The weak link between the policies and the investments needed for their implementation is one barrier to progress. An assessment of the resources required is a critical first step in formulating and implementing strategies to achieve the MDGs.

This is especially true for policies to promote gender equality and empower women. Although enough is known about such policies to implement them successfully, the costs of such interventions are not systematically calculated and integrated into country-level budgeting processes. Using country-level data, the paper estimates the costs of interventions aimed at promoting gender equality and women's empowerment in Bangladesh, Cambodia, Ghana, Tanzania, and Uganda. It then uses these estimates to calculate the costs of such interventions in other low-income countries. Finally, the paper projects the financing gap for interventions that aim directly at achieving gender equality, first for the five countries, and subsequently for all low-income countries.

JEL Codes: F3, H5, J16, O2

Keywords: Millennium Development Goals, gender equality, cost estimates, financing gap, gender mainstreaming, public expenditure, macroeconomic policy, overseas development assistance

1. INTRODUCTION

In September 2000, world leaders committed to achieving the Millennium Development Goals (MDGs) by 2015- a set of interrelated development objectives that together define the basic minimum conditions for a decent life. The MDGs include halving poverty and hunger, ensuring universal primary schooling, reducing child and maternal mortality and infectious diseases, improving environmental sustainability and achieving gender equality and women's empowerment. Five years later, progress toward the goals is mixed. While many countries have made strides towards some of the MDGs, there is great variation between and within countries in the pace and level of change. The goals of reducing maternal mortality and achieving gender equality and women's empowerment face the greatest challenges across all countries.

Although the MDGs have been reaffirmed in global forums, they have not been incorporated into operational planning within governments or international organizations. The weak link between policies and the corresponding investments needed for implementation is one barrier to progress. Achieving the MDGs requires long-term planning, as well as short-term expenditure and policy formulation. Within countries a range of actions are essential, including identifying appropriate strategies, reforming policies and institutions, and investing sufficient resources in a coordinated manner to build local capacity to deliver and scale up interventions. An assessment of the resources required is a critical first step in formulating, implementing, and monitoring progress of strategies to achieve the MDGs.

This is especially true for policies to promote gender equality and empower women. A particular challenge for national governments and the international community is how to accelerate implementation of Millennium Development Goal 3 on gender equality and women's empowerment (henceforth MDG3) at the country level. As the UN Millennium Project Task Force on Education and Gender Equality pointed out, sufficient knowledge exists about policies and interventions to eliminate many forms of gender inequality and empower women (UN Millennium Project 2005b). Yet, this knowledge has yet to be systematically translated into comprehensive and large-scale change at the country level.

Too often, promising policy initiatives for gender equality and women's empowerment founder because insufficient resources are allocated to implement them. The shift of emphasis from women-specific projects to gender mainstreaming is thought by many to have exacerbated this problem because mainstreaming has not been linked to flows of funding across all sectors (UN Millennium Project 2005b). The routines of government resource allocation have not generated information about financing requirements and funding gaps for the achievement of gender equality and women's empowerment.

The financial costs of efforts to reduce gender inequality are difficult to calculate because gender inequality is both multi-dimensional and multi-sectoral.¹ Apart from a recent effort piloted by the UN Millennium Project, there have been few comprehensive attempts nationally or globally to estimate the full range of these costs. Where they exist, most estimates calculate only the costs of achieving gender equality in education.

This paper has two broad objectives. The first is to estimate, based on country-level analysis, the costs of interventions aimed at promoting gender equality and women's empowerment. We hope that this estimation can help identify the minimum resource envelope necessary to directly improve gender equality in low-income countries. The second objective is to estimate the share of all MDG investments that have the potential to improve outcomes for women and men, girls and boys. This exercise can help illustrate to what extent investments in other areas, if designed appropriately and accompanied by gender-mainstreaming interventions, can promote gender equality and women's empowerment.

The paper extends the methodology developed by the UN Millennium Project to estimate the costs of achieving the MDGs (UN Millennium Project 2005a). From among the interventions that form the basis for the Millennium Project cost estimates, it identifies those that promote gender equality and analyzes them to calculate the resources needed to achieve MDG3. The paper derives the costs of these interventions in five low-income countries—Bangladesh, Cambodia, Ghana, Tanzania, and Uganda. It then uses these estimates to calculate the costs of interventions to promote gender equality and women's empowerment in other low-income countries. Finally, the paper projects the financing gap for gender equality interventions first for the five countries and subsequently for all low-income countries.

The calculations presented here are a first approximation of the costs of financing gender equality. This paper should be seen as providing a methodology that can be further revised and implemented at the country level by governments, donors, and gender equality advocates. Ideally, the exercise within countries will be aligned with the budget and Medium Term Expenditure Framework (MTEF) planning exercises and the Poverty Reduction Strategy Papers (PRSP), contributing directly to expenditure planning in the different line ministries.

It is important to note that achieving gender equality and women's empowerment requires a fundamental transformation in the way societies allocate gender roles and responsibilities. Most strategies to achieve gender equality require a mix of investments and

¹ Another reason for under funding is that expenditures for gender equality are perceived to be additional to the core investment and to achieve only a marginal return when in fact they are essential for maximizing the return on the core investment (UN Millennium Project 2005b).

changes in legislation, political and administrative rules, social attitudes, and norms. Resources alone will not achieve gender equality; they must be complemented by other changes in societies. Nonetheless, ensuring adequate resources for interventions aimed at gender equality and women's empowerment is an important first step toward broader social transformation.

The paper is organized as follows. The next section discusses how we operationalize the concept of gender equality. Section 3 reviews other exercises to estimate the cost of the MDGs and the evidence from previous attempts to estimate the costs of attaining gender equality in education and the costs of interventions to achieve reproductive health. Section 4 describes the methodology developed by the UN Millennium Project to estimate the costs of achieving the full set of Millennium Development Goals. Section 5 explains how we expanded upon that methodology to estimate the costs of achieving MDG3 and gender equality within the other Millennium Development Goals. Sections 6 and 7 present estimates of the costs of gender equality interventions and the financing gap for such interventions in Bangladesh, Cambodia, Ghana, Tanzania, and Uganda. Section 8 scales these results up to an estimate of the costs of gender equality interventions and the financing gap in all low-income countries. The final section concludes with recommendations and next steps for donors, governments, and civil society advocates of gender equality.

2. CONCEPTUALIZATION OF GENDER EQUALITY AND WOMEN'S EMPOWERMENT

Most exercises that estimate the costs of the MDGs interpret MDG3 as the elimination of gender disparity in education. This is understandable because the time-bound target of MDG3 is to eliminate gender gaps in primary and secondary education. However, achieving gender equality and women's empowerment involves more than simply eliminating education gaps; it also requires equal economic opportunities, equal ownership and control over productive assets, freedom from drudgery, equal representation in decision-making bodies, and freedom from the threat of violence and coercion. Recognizing the broad spirit of the goal, the UN Millennium Project Task Force 3 on Education and Gender Equality adopted an operational framework for understanding gender equality in three dimensions:

- The *capabilities domain*, which refers to basic human abilities as reflected in education, health, and nutrition. These capabilities are fundamental to individual well-being and are the means through which individuals access other forms of well-being.
- The *access to resources and opportunities domain*, which refers primarily to equality in the opportunity to use or apply basic capabilities through access to economic assets (such

as land, property, or infrastructure) and resources (such as income and employment), as well as political opportunity (such as representation in parliaments and other political bodies). Without access to resources and opportunities, both political and economic, women will be unable to employ their capabilities for their well-being and that of their families, communities, and societies.

- The *security domain*, which is defined to mean reduced vulnerability to violence and conflict. Violence and conflict result in physical and psychological harm and lessen the ability of individuals, households, and communities to fulfill their potential. Violence directed specifically at women and girls often aims at keeping them in “their place” through fear.

The Task Force pointed out that these three domains are interrelated, and change in all three is critical to achieving MDG3 (UN Millennium Project 2005b). The attainment of capabilities increases the likelihood that women can access opportunities for employment or participate in political and legislative bodies but does not guarantee it. Similarly, access to opportunity decreases the likelihood that women will experience violence (although in certain circumstances, it may temporarily increase that likelihood). Progress in any one domain to the exclusion of the others will be insufficient to meet the Goal of gender equality. This conceptualization of gender equality implies that exercises to estimate the costs of interventions to achieve gender equality must consider interventions across all domains of gender equality, not in one domain alone.

Based on this conceptualization of gender equality, the Task Force identified seven strategic policy/intervention priorities for achieving MDG3 (see Box 1).

Box 1. Seven Strategic Priorities for Action on Millennium Development Goal 3

1. Strengthen opportunities for post-primary education for girls while meeting commitments to universal primary education.
2. Guarantee sexual and reproductive health and rights.
3. Invest in infrastructure to reduce women and girls’ time burdens.
4. Guarantee women and girls’ property and inheritance rights.
5. Eliminate gender inequality in employment by decreasing women’s reliance on informal employment, closing gender gaps in earnings, and reducing occupational segregation.
6. Increase women’s share of seats in national parliaments and local government bodies.
7. Significantly reduce violence against girls and women.

Source: UN Millennium Project 2005b

The first two strategic priorities—strengthening opportunities for post-primary education for girls while meeting commitments to universal primary education and guaranteeing universal access to a broad range of sexual and reproductive health information and services—represent the priority for strengthening women’s capabilities. The next four (investing in infrastructure to reduce women’s time burdens, guaranteeing girls’ and women’s property and inheritance rights, eliminating gender inequality in employment, and increasing women’s share of seats in national parliaments and local governmental bodies) reflect priorities for economic and political opportunity. And the final strategic priority—significantly reducing violence against girls and women—addresses the security domain. The methodology described in Section 5 develops a list of interventions for each of these seven strategic priorities to achieve gender equality and women’s empowerment.

3. ESTIMATING COUNTRY LEVEL COSTS OF ATTAINING ALL MDGs

There are several different approaches to developing cost estimates for achieving the full set of MDGs at the country level (see Box 2). Each approach gives differing cost estimates, based on underlying assumptions and calculations.

Box 2. Costing the MDGs: An Overview of Different Approaches

Aggregate ICOR based cost estimates (e.g. Devarajan et al. 2002; Mbelle 2003; AfDB 2002) calculate overall aggregate estimates of investment needed to achieve the goal of halving income poverty. The methodology involves calculating the economic growth rate needed to halve poverty, based on assumed poverty-growth elasticities, typically estimated through cross-national regressions. The investments needed to achieve the required growth rate is then calculated using a simple growth model, typically of the following specifications:

$$g_y = I/Y * 1/ICOR - p$$

where g_y is the per capita growth rate, p is the population growth rate, I is investment, Y is income and $ICOR$ is the incremental capital output ratio, also calculated through growth regressions. Cost estimates based on ICOR approach can be done at the national or global level. They are useful for providing a rough approximation of total investment needs but limited in their utility beyond such broad brush estimates. For example, poverty elasticity estimates are poor guides for predicting the future relationship between growth and poverty, since they are derived from marginal changes in income and poverty levels, and therefore cannot account for step increases in investment, or the change in the composition of investments; they are poor predictors of ICOR rates for the same reasons. In addition, they are unable to account for those MDG related investments that do not have a measurable impact on economic growth. While providing an overall magnitude of resources needed, such studies cannot provide guidance on budget programming, outlays, and planning.

Box 2. (continued)

Cost estimates based on input-outcome elasticities (Devarajan et al 2002; World Bank 2003) calculate the aggregate investment levels needed to achieve specific MDGs. This is done by estimating a production function for specific goals, based on a range of inputs. As in the case of aggregate ICOR studies, this methodology is useful in calculating overall resource needs.

However, it raises several methodological issues, especially from a gender perspective. It can only model a small number of sectors where production functions can be estimated based on historical elasticities. For the gender goal in particular, such production functions are difficult to model. As in the case of ICOR studies, such elasticities are modeled on marginal changes, and cannot predict the input-outcome relationship with step increases in investments. Even for goals where production functions can be estimated, only a small number of variables can be modeled, often leaving out important MDG investments. Finally, such estimates do not guide budget planning and allocation.

Average unit cost based estimates (Delamonica et al. 2001; GWP 2000) calculate investment needs based on current expenditures and gap in access or provision. Unit costs are derived by dividing current spending by the population covered; they are then applied to the population in need. This approach is based entirely on current expenditures; if the input mix changes in the future, the unit costs will no longer be applicable to derive total costs. Further, typically the population in need requires higher levels of investment (for example, in the case of excluded groups, special interventions will be needed) which means that investment projections based on current expenditures tend to understate the overall needs.

Interventions based needs assessments (Bruns, et al. 2003; United Nations and World Bank 2003, 2004; UN Millennium Project 2004) calculate bottom-up needs assessments based on an identification of relevant interventions across multiple sectors. Such estimates provide detailed resource needs in terms of financial, human resources, and infrastructure and are useful for planning and budget programming purposes. However, they calculate the resource needs for different sectors separately and are not set up to account for synergies, which need to be estimated later and built into the sector analysis iteratively, making this a time consuming and labor intensive process. This approach offers guidance for planning and budget programming, but links to macroeconomic variables need to be modeled separately.

Source: UN Millennium Project 2004

All long-term costing approaches described in Box 2 are imperfect in their ability to calculate total needs accurately. First, it is difficult to predict what the costs of interventions will be ten to fifteen years from the base line. It is also difficult to factor in the probability of shocks within the period. Second, most studies estimate only a small range of interventions necessary for achieving the MDGs, thereby limiting the scope of the financing strategy.

Another limitation of these aggregate or general costing exercises is that none have addressed the full range of gender equality needs. Indeed, some of the existing costing estimates may even contain gender biases because they do not recognize the economic value of women's unpaid work. So, for instance, many of the HIV/AIDS related costs may be under-estimated as home-based care is seen to be less costly than institution-based care because women's labor is not counted or valued.

As noted above, estimating the resource needs for achieving MDG3 is especially difficult. Gender outcomes are not easily derived from production functions that can be parameterized. Moreover, economic growth does not automatically translate into reductions in gender inequalities or improvements in women's well being (Seguino 2002). Actions to achieve gender equality cut across many different areas, raising the possibility of double counting. The approach described in Section 5 attempts to address each of these concerns.

3.1. Financing Interventions to Achieve Gender Equality in Education and to Provide Reproductive Health Services

Partly because of the difficulties described above, no approach until now has attempted to estimate a full set of comprehensive costs for interventions to promote gender equality and empower women. Previous exercises to estimate the financing requirements for gender equality interventions only estimate the costs in certain sectors, such as health or education. The World Bank (2001), for instance, estimates that achieving gender equality in primary education through universal enrollment would require an increase of slightly more than 3 percent a year in public spending on primary education in South Asia and the Middle East and North Africa, but as much as 30 percent a year in Sub-Saharan Africa.² It further notes that ensuring equity in secondary education would add to these costs, but the total would still be affordable for the majority of countries that are currently off-track for achieving that Goal.

Devarajan, et al. (2002) estimate that meeting the 2005 MDG target of gender parity in secondary education would cost about \$3 billion. In deriving this estimate, they assume constant average costs for enrollment and increasing the number of girls in school so that the ratio of girls to boys is 1:1 by 2005. Because the estimates refer to additional resource requirements and are based on average costs, the authors recognize they are likely to understate the incremental costs of reaching the gender equality target in education.

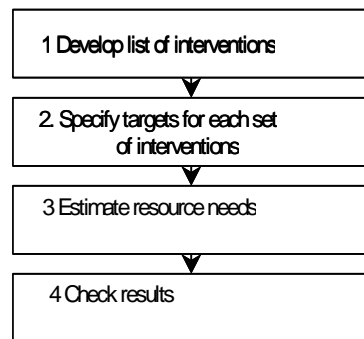
Other studies have attempted to estimate the costs of reproductive health. From a review of estimates of the financing necessary to achieve universal access to sexual and reproductive health services, the Alan Guttmacher Institute (AGI) and United Nations Population Fund (UNFPA) developed an intervention-based methodology and projected these costs at \$11 billion a year (in 2003 dollars)—\$7.1 billion to provide modern contraceptive services to current users and

² Using data on GNP, share of GNP spent on education, and the share of primary education in public education, the study first computes initial public spending on primary education. Then it calculates the necessary increase in public spending to achieve universal primary education. The calculation takes into account the price elasticity of demand for education for girls and boys and the price cut needed to increase demand and factors in the estimated decline in private spending due to reduced prices. Finally, it includes a nine percent increase in program costs.

\$3.9 billion to address unmet need. These estimates are higher than some others because they include labor, overhead and capital, as well as contraceptive supplies (AGI/UNFPA 2004). The costing exercise of Devarajan, et al. (2002) did not include reproductive health and did not provide separate estimates for the cost of meeting the maternal mortality goal. Instead they assumed that the costs of achieving the maternal mortality goal would be of the same magnitude as the costs for meeting the under-5 mortality goal.

4. THE UN MILLENNIUM PROJECT NEEDS ASSESSMENT APPROACH

The UN Millennium Project has developed an interventions-based, cross sector assessment that aims to estimate the human, infrastructure and financial needs of achieving the MDGs by 2015. The methodology, described in greater detail in Appendix 1, comprises the following steps for each sector:



The identification of interventions used in UN Millennium Project (2005a) was based on the relevant priorities and plans articulated by governments and NGOs within the countries, and on the recommendations from the UN Millennium Project Task Forces. The Millennium Project defines interventions as investments in goods, services or infrastructure that directly contribute to the achievement of the MDGs; they are distinct from policies and institutions.

Sectors in this analysis refer to the different areas of investments for specific MDGs (with the exception of MDG3); we term these MDG sectors.³ They include agriculture and rural development, education (covering primary and secondary education and adult literacy), health

³ MDG sectors may cover the activities of various line ministries. For example, agriculture and rural development could include activities implemented by Ministries of Agriculture, Water, Energy and Power, Roads, Sanitation, Labor, Science and Research, and Women's Affairs. The objective of this classification is to streamline all of the actions that contribute to a specific MDG, recognizing that many of these activities overlap and can be reclassified in different ways.

(including child and maternal health, malaria, HIV, TB, nutrition and health systems), water and sanitation, energy and roads, and improving the lives of slum dwellers.⁴ We do not include a gender sector because gender equality is not a stand-alone sector but a crosscutting issue. Rather, we group together specific interventions required for the realization of MDG3 that have not been included in the other sectors and we identify the gender equality-related interventions in the MDG sectors. This is explained in greater detail in Section 5.

In each sector, targets are set based on the MDG targets and resource estimates are based on local or regional unit costs.⁵ The results from all the MDG sectors are then aggregated and revised to eliminate double counting and to account for synergies in provision and impact. The resource needs are based on total cost estimation (including capital and recurrent costs, covering both current and incremental costs), and estimated annually from 2006-2015.

This is a sensible way to calculate the costs of specific MDG sectors. However, from a gender perspective, there are some important caveats about this methodology. First, the needs assessment includes only some of the actions necessary to meet the Goal of gender equality and empowerment of women. Although we have tried to develop an expansive list in the exercise below, it still likely excludes some interventions that may be important in particular country contexts. These would need to be identified through country-level planning exercises.

Second, and related to the first point, a gender needs assessment is possible only at the country level and meaningful only as part of a national poverty reduction strategy in which all stakeholders participate. To be credible, the analysis needs the inputs of all key stakeholders, including government officials at national, regional, and local levels, members of women's and other civil society organizations, and donors. The interventions to be costed need to be locally identified, based on nationally determined targets. Any assessment of needs has to be an iterative process that is refined over time on the basis of experience.

Third, simply knowing the costs of interventions to achieve gender equality and women's empowerment is not sufficient to achieve gender equality. Leadership and political will are necessary to allocate the resources. To be successful, interventions may also require changes in legislation, political and administrative rules, social attitudes, and norms. The needs assessment, therefore, should be seen as a minimal but necessary set of actions to meet the goal of gender equality.

⁴ Some MDG sectors are not included in the analysis in this paper, such as roads, science and technology, environment, and large-scale infrastructure, such as dams, because needs assessment numbers were not available and/or the allocation is particularly difficult to undertake. Moreover, many sector interventions are not aimed at any particular population and/or address multiple goals simultaneously (often through integrated interventions) so it is difficult to isolate accurately the gender component of their cost.

⁵ For a listing of MDG targets, see UN Millennium Project 2005a

Even with these caveats, the UN Millennium Project Needs Assessment approach is more appropriate than the others described in Box 2. This approach allows for a clear identification of interventions aimed specifically at improving outcomes for women within each sector, thus minimizing the possibility of double counting. It enables us to estimate the resource needs of a comprehensive set of interventions covering the multiple dimensions of gender equality. It can be extended to include different interventions (and costs) for different sub-groups of the population. Like all long-term costing approaches, however, it is limited in its ability to accurately calculate total MDG needs, but the results can be revised iteratively as fresh data become available, making estimates more reliable. Its scope allows for bold financing strategies, and it is therefore, preferred to the approaches discussed above.

Presently, many countries are implementing gender-responsive budgeting initiatives (GBIs), which seek to scrutinize the public budget from a gender equality perspective. Unfortunately, actual budgeting and planning processes are not disaggregated along the lines discussed below. In country-level budgeting processes, our classification of the gender equality interventions may need to be realigned within different line ministries. However, it is hoped that gender budget and other country-level planning processes will adapt the methodology developed here to illuminate what share of national budgets is being contributed to the achievement of gender equality.

5. METHODOLOGY FOR COSTING GENDER EQUALITY AND WOMEN'S EMPOWERMENT

UN Millennium Project (2005a) developed a list of interventions for each sector and estimated the per-unit capital and recurrent costs of implementing them. We classify each of those interventions according to whether the main objective is to promote gender equality or whether the main objective is to promote another goal such as reversing the spread of malaria. Based on this classification, we calculate the proportion of the cost of each intervention that can be attributed to promoting gender equality. The apportioned costs are then summed across interventions to obtain total costs attributable to promoting gender equality.

5.1. Classification of Interventions that Promote Gender Equality

We classify interventions that promote gender equality and women's empowerment in two ways. The first category of interventions explicitly aims to reduce gender inequality or empower women; we refer to these as GE interventions. The second category of MDG interventions is designed primarily for the achievement of other MDGs, for instance, the construction of rural

roads or health clinics, the provision of fertilizers or water services, and so forth. These interventions, henceforth referred to as NTGE interventions, can promote gender equality and may have the potential to help achieve MDG3, although that is not their primary purpose.

GE Interventions

There are two types of gender equality interventions. The first group covers those interventions that are aimed at gender equality and women's empowerment which fall outside of the various MDG sectors. These are denoted as MDG3 specific interventions. These interventions would be implemented through the ministry of women's affairs or a non-MDG sector ministry. (As a reminder, the MDG sectors are education, health, rural development, urban development and slum upgrading, water and sanitation, and energy.) For instance, interventions to reduce gender inequality in employment would be implemented through a ministry of labor. Interventions to reduce violence against women – such as mass media campaigns—might be implemented by the ministry of women's affairs. Box 3 gives examples of the various types of interventions in this category.

Box 3. Interventions to Achieve MDG3 Not Included in an MDG Sector

Strategic Priority 2: Guarantee Sexual and Reproductive Health and Rights

- Increase awareness and provide education on sexual and reproductive health and rights through mass media and community based programs
- Provide comprehensive sexuality education within schools and community programs.

Strategic Priority 5: Reduce Gender Inequality in Employment

- Promote access to work through vocational training programs and school-to-work transition programs for adolescent girls
- Provide care services (for children, the elderly, the disabled, and the sick) to allow women to work

Strategic Priority 6: Increase Women's Political Representation

- Provide training to women candidates in elections at the local, regional, and national level
- Provide training to women elected representatives at the local, regional, and national level

Strategic Priority 7: Combat Violence against Women:

- Prevent violence against women through awareness campaigns and education, hotlines, and neighborhood support groups
- Provide protection from violence through police and medical services, counseling and emergency housing, or short-term shelters to victims of violence
- Provide punishment for perpetrators of violence through legal redress.

Capacity-Building Interventions:

- Strengthen the capacity of governments to deliver the interventions identified above
- Strengthen ministries of women's affairs and gender focal points in other ministries
- Undertake institutional reforms through sensitization programs to train judges, bureaucrats, land registration officers, and police officers
- Invest in legal aid services to help women claim their rights and access the interventions identified above
- Improve registration systems for issuing identification documents to women (in those settings where applicable)
- Invest in data collection and monitoring activities to track gender outcomes

The second group of GE interventions includes interventions that are implemented within each MDG sector to help achieve gender equality and empower women in that sector. We refer to these as gender mainstreaming interventions. The sectors of education, health, rural development, urban development, water and sanitation, and energy all include interventions that aim to promote gender equality. For example, in rural development, special efforts to recruit and train women extension workers can help ensure that the national extension service reaches female farmers to the same extent as it does male farmers. In education, increasing retention of girls in

school may require special subsidies on the demand side, and special facilities such as toilets for girls on the supply side. Also included in gender mainstreaming interventions are investments that strengthen the capacity of the sector (and the ministry) to achieve gender equality, for instance, the costs of gender focal points in each line ministry, the costs of gender training for line ministry staff, the costs of gender-disaggregated research, and so forth. Box 4 provides examples of gender mainstreaming interventions in selected MDG sectors.

Box 4. Gender Mainstreaming Interventions

Education

- Gender-sensitive hygienic facilities
- Scholarships or subsidies for girls
- Female teacher salaries
- Male teacher salaries
- Gender focal point unit in the Ministry of Education

Health

- Community-based nutrition programs
- Micronutrient supplementation programs for adolescent girls
- Maternal health
- Child health*
- MTCT, MTCT Plus
- Human resources for child and maternal health
- Gender focal point unit in the Health Ministry

Rural Development

- Female extension workers
- Gender focal point unit in the Ministry of Agriculture

Slum Dwellers and Water and Sanitation

- Gender focal point units in the Ministries of Housing/Interior, Water, and Sanitation

* Excludes public nutrition. We attribute the costs of child nutrition to gender equality because of the impacts on a range of female empowerment outcomes (see Quisumbing and Maluccio 2000; Haddad, et al. 1997).

In the analysis in the next section, we report the results separately for MDG3 specific and gender mainstreaming interventions. We do this because we think it is important for donors, Ministers of Finance, and staff in line ministries to see the costs disaggregated in this way. In country-level planning exercises we would also encourage disaggregating GE costs into MDG3-specific costs and gender mainstreaming costs.

NGTE Interventions

The second category of MDG interventions covers those designed for the achievement of other MDGs. As noted above, they can promote gender equality and have the potential to help empower women. NGTE interventions include micronutrient supplementation programs for underweight children, the provision of fertilizers, water services, energy infrastructure, and so forth. Further examples are provided in Appendix 2.⁶

5.2. Apportioning the Costs for Gender Equality

Gender-Equality Targeted Interventions (GE):

At the country level, the costs at time t of interventions specifically designed to promote MDG3-specific and gender mainstreaming interventions, where there are p and q of each intervention, can be expressed formally as:

$$1. \quad C_{GE} = \sum_{t=2005}^{2015} \left\{ \sum_{i=1}^p GE3_{i,t} + \sum_{j=1}^q GEM_{j,t} \right\}$$

where $GE3_{i,t}$ is the cost of an MDG3-specific intervention i at time t and $GEM_{j,t}$ is the cost of a gender mainstreaming intervention j at time t .

Non-Targeted Interventions that Promote Gender Equality (NTGE)

To estimate the financial resources that contribute to promoting gender equality through interventions that do not specifically aim at gender equality, we need to estimate that share of the cost of the intervention that goes toward reducing the gender gap and maintaining female access to that service. The relevant gender gap in the education, health, and rural development sectors is in utilization of services. For instance, utilization in education can be captured by sex-disaggregated enrollment rates; utilization of rural credit programs can be captured by sex-disaggregated borrower rates, and so forth. Appendix 2 lists the relevant gender gaps for interventions in each sector that have sex-disaggregated data and provides the formulas for calculating the proportion of these intervention costs that can be attributed to promoting gender equality. These formulas are based on the assumption that changes in the provision of services in

⁶ In this paper, we only estimate these costs in the Ministries of Education, Health, Rural Development, Water and Sanitation, Energy, and Housing. Given the current lack of information on specific costs, e.g., gender training for ministry staff, data collection and research, support services, and so forth, the mainstreaming costs are likely to be an under-estimate.

these sectors will reduce the gap if it results in greater increases in women’s utilization of the service than in men’s.

Infrastructure interventions, such as water, sanitation, and energy services benefit all members of the households that receive them (men, women, and children) but they also address an important gender gap—the gap in time spent collecting water and fuel.⁷ In the case of infrastructure, public or private sector provisioning is replacing household provisioning, or in other words, reducing the unpaid labor of those household members (typically women and girls) who fetch the water and gather the firewood. Appendix 2 also lists the ways that gender gaps are measured for water and sanitation and energy interventions and provides the formulae for calculating the share of costs of these interventions that can be attributed to promoting gender equality.

The total cost of non-targeted gender interventions can be calculated in the following way. $NTGE_{k,t}$ is the cost at time t of non-targeted sector interventions that have a gender equality benefit, where there are s non-targeted interventions. Let $\alpha_{k,t}$ be the proportion of the costs of these interventions that can be attributed to promoting gender-equality at time t . The total cost of non-targeted interventions that can be attributed to promoting gender equality is therefore:

$$2. \quad C_{NTGE} = \sum_{t=2005}^{2015} \sum_{k=1}^s \alpha_{k,t} NTGE_{k,t}$$

where $\alpha_{k,t}$ is estimated separately for each intervention as described in Appendix 2.

Total Cost of Gender Equality

The total estimated cost of interventions to promote gender equality is the sum of all gender-equality promoting interventions and the share of the costs of non-targeted sectoral interventions that can be attributed to the promotion of gender equality. This is expressed formally as:

$$3. \quad C = \sum_{t=2005}^{2015} \left\{ \sum_{i=1}^p GE3_{i,t} + \sum_{j=1}^q GEM_{j,t} + \sum_{k=1}^s \alpha_{k,t} NTGE_{k,t} \right\}$$

⁷ Glick et al. (2004, p. iv) state that “Household access to publicly provided water supply is not the appropriate indicator to capture gender specific impacts. These impacts come in the form of time savings. For a descriptive benefit incidence analysis, one can make the assumption that the benefit is the reduction in the individual’s time spent in water collection made possible by the service.”

6. COUNTRY-LEVEL RESULTS

Table 1 reports the estimates of the average annual per capita costs of achieving gender equality in the five countries: \$37.24 in Bangladesh, \$46.69 in Cambodia, \$51.90 in Ghana, \$56.88 in Tanzania, and \$52.00 in Uganda. These figures represent between 35-49 percent of total MDG costs in Bangladesh, Cambodia, Tanzania, and Uganda and slightly more than half of total MDG costs in Ghana.⁸ They represent about 9 percent of 2003 GDP per capita in Bangladesh, 15 percent in Cambodia, 18 percent in Tanzania, and 19 percent in Ghana and Uganda.

The costs apportioned to gender equality in each sector represents the largest share of costs, ranging from 69-74 percent in Bangladesh, Cambodia, Ghana, and Uganda to 77 percent in Tanzania. The costs of gender mainstreaming interventions are more modest, representing about 19 percent of total costs to achieve gender equality in Bangladesh, 18 percent in Cambodia, 20 percent in Ghana, 16 percent in Tanzania, and 24 percent in Uganda.

Finally, the MDG3-specific interventions represent the smallest share of the total costs of interventions to achieve gender equality, ranging from 6 to 10 percent. Although the amounts seem small, it is important to remember that this category only comprises interventions that are not accounted for in other sectors and are critical to achieving gender equality in those sectors and in countries as a whole. Investment in MDG3-specific interventions and in gender mainstreaming provides a basis for the assumptions we have made in apportioning the costs of the interventions not targeted to gender equality. The portions are likely to be lower in the absence of spending on specific interventions and gender mainstreaming, since the latter ensures that interventions are designed to meet women's needs as well as men's needs, and to make them as accessible to women as to men.

⁸ Appendix 3 explains the assumptions used in the costing analysis.

Table 1. Average Annual Per Capita Costs of Achieving Gender Equality (2003 US\$)

	Bangladesh	Cambodia	Ghana	Tanzania	Uganda
MDG3 Specific Interventions	3.80	3.46	3.14	3.90	3.18
Costs of Mainstreaming Gender Interventions in MDG Sectors					
Education	0.23	0.22	3.31	1.50	1.84
Energy	0.03	0.02	0.01	0.07	0.05
Health	6.77	8.31	6.87	7.22	10.54
Rural Development	0.03	0.02	0.25	0.25	0.19
Slum Dwellers	0.03	0.02	0.02	0.07	0.05
Water and Sanitation	0.03	0.02	0.04	0.07	0.05
Total	7.12	8.59	10.49	9.17	12.71
Costs Apportioned to Promoting Gender Equality in MDG Sectors					
Education	6.05	8.86	11.06	6.61	7.55
Energy	8.00	13.57	8.12	11.69	8.88
Health	7.59	7.97	11.59	17.97	14.20
Rural Development	-	-	1.92	1.96	2.01
Slum Dwellers	1.36	1.35	0.97	1.51	1.07
Water and Sanitation	3.32	2.89	4.61	4.07	2.40
Total	26.32	34.64	38.27	43.81	36.12
Total Cost of Achieving Gender Equality	37.24	46.69	51.90	56.88	52.00
Total Costs of Achieving the MDGs	106.48	107.35	100.37	118.84	106.50
Gender costs as a percentage of the total cost of achieving the MDGs	35%	43%	52%	48%	49%
Per Capita GDP in 2003	395.38	313.37	275.86	308.70	276.54
Gender costs as a percentage of GDP in 2003	9%	15%	19%	18%	19%

Source: UN Millennium Project 2005a

Table 2 shows the total annual costs of all three categories of interventions to promote gender equality in each of the five countries from 2005-2015. The total costs for the period range from \$6.5 billion in Cambodia to \$50.3 billion in Bangladesh, with Ghana, Tanzania and Uganda in the middle range.⁹

⁹ Overall costs are estimated to grow exponentially, which is based on the assumption that countries will scale up more slowly in initial years. This assumption takes account of current trends in revenue generation in these countries in the next 3-5 years. In future exercises to estimate gender equality costs at the country level, scale-up functions will differ by interventions, based on sector-specific constraints to scaling up.

Table 2. Annual Costs of Mainstreamed Gender Equality Promoting Interventions (in Millions of 2003 US\$)

Country		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Bangladesh												
Cost of MDG3 Specific Interventions		228	261	277	307	358	441	583	0	1251	1980	6513
Cost of Mainstreaming Gender Interventions in Other Sectors:		796	894	988	1080	1141	1226	1310	1393	1477	1535	11840
Costs Apportioned to Gender Equality in Other Sectors		2666	2906	3137	3385	3653	3918	4202	4520	4858	5166	38411
	Bangladesh Total	3690	4061	4402	4772	5152	5585	6096	6740	7586	8681	56765
Cambodia												
Cost of MDG3 Specific Interventions		26	30	32	35	40	46	56	73	101	147	587
Cost of Mainstreaming Gender Interventions in Other Sectors:		93	105	117	129	137	148	158	169	179	185	1420
Costs Apportioned to Gender Equality in Other Sectors		345	379	412	448	482	519	556	595	637	673	5045
	Cambodia Total	464	514	561	612	659	713	771	836	916	1005	7052
Ghana												
Cost of MDG3 Specific Interventions		36	41	44	48	53	61	74	94	130	188	768
Cost of Mainstreaming Gender Interventions in Other Sectors:		259	287	317	347	369	402	435	471	511	546	3945
Costs Apportioned to Gender Equality in Other Sectors		932	1013	1155	1204	1286	1385	1482	1588	1710	1869	13624
	Ghana Total	1227	1341	1515	1599	1708	1848	1991	2154	2351	2603	18337
Tanzania												
Cost of MDG3 Specific Interventions		59	68	72	79	91	111	145	207	320	526	1678
Cost of Mainstreaming Gender Interventions in Other Sectors:		448	482	519	558	589	634	684	740	804	864	6321
Costs Apportioned to Gender Equality in Other Sectors		1695	1847	2075	2215	2391	2583	2771	2966	3188	3553	25284
	Tanzania Total	2202	2397	2666	2852	3071	3328	3600	3912	4312	4943	33283
Uganda												
Cost of MDG3 Specific Interventions		45	52	56	61	69	82	102	135	194	295	1090
Cost of Mainstreaming Gender Interventions in Other Sectors:		571	614	659	707	747	803	865	935	1014	1089	8003
Costs Apportioned to Gender Equality in Other Sectors		1858	2049	2265	2499	2744	2997	3262	3545	3848	4182	29248
	Uganda Total	2474	2715	2979	3267	3560	3881	4229	4614	5055	5566	38341

Source: Authors' calculations

Detailed information for the cost categories in each country is presented in Appendix 4.

7. ESTIMATING THE FINANCING GAP FOR GE INTERVENTIONS

The analysis in Section 6 found that between 35-52 percent of the total costs (or between \$37-\$57 per capita per year) of the MDGs can be directly attributed to the achievement of gender equality objectives. This is an important estimate for understanding the importance of multisector, gender-sensitive interventions. However, we cannot use this percentage to calculate the gender portion of the country-level financing gap. Between 67-76 percent of the gender costs comprise the apportioned “gender equality” costs in MDG sectors. We believe that these apportioned costs should not be counted as part of the gender equality financing gap because the sector

interventions will already be covered by general MDG financing mechanisms. As we noted earlier, the reason we have apportioned the sector costs in this way is to demonstrate the potential impact that resources in these sectors can have on gender equality.¹⁰ Thus, we calculate the financing gap based on direct gender equality interventions across all MDG sectors only.

To determine the financing gap for the five countries, we follow the UN Millennium Project methodology (UN Millennium Project 2005a). There are three broad sources of financing in this approach: household contributions, government resource mobilization, and external financial resources. The resources that can be raised within the country (through household contributions and increased government spending) are estimated first, leaving the residual as the “gap” which will need to be financed by donors (see UN Millennium Project 2005a for more detail on the estimation procedure).

Household contributions are determined based on ability to pay. The UN Millennium Project divides the population into three categories: The first category includes the proportion of the population below the poverty line that is assumed to make no contributions to payments for MDG interventions. The second category includes people who lie between the poverty line and two times the poverty line (corresponding broadly in this set of countries with the third and fourth income quintiles). This section of the population is expected to pay a proportion of the MDG costs. This proportion is calculated separately for each sector and includes interventions where there is either a proven case of partial payments improving efficient delivery (water, energy, rural development) and/or where there is a demonstrated ability to pay for certain services (specific interventions in secondary education). For primary education, health care, and MDG3 specific interventions, no contributions are estimated. The third category includes the top quintile of the population where it is assumed that the population will pay for all MDG services. Aggregating across these three categories of the population, and across different sectors, shows that household contributions in these five countries account for \$10-13 per capita.

Government resources for the MDG investments are based on projected increases both in the share of MDG spending in countries, as well as the overall increase in domestic revenue mobilization. The UN Millennium Project assumes that governments can mobilize an additional four percentage points of GDP toward spending on the MDGs. For the five countries included in this analysis, this implies an increase from about 4-7 percent to about 8-11 percent of GDP for

¹⁰ We stress that the general sectoral interventions will only promote gender equality to the extent that they are complemented by the gender mainstreaming and MDG3 specific interventions.

spending on the MDGs. Government contributions estimated in this way account for between 30-40 percent of total MDG needs.

Thus, between 40-47 percent of all MDG needs are thus estimated to be raised domestically. This still leaves a substantial financing gap of about half of the total needs – this is what we refer to as the MDG financing gap. This gap translates to between \$60-73 per capita per year.

We assume that the Millennium Project assumptions for apportioning costs by source of financing remain relevant for the analysis of the gender portion of the financing gap since household contributions and government resources are calculated independently of the composition of MDG needs.¹¹

The costs of gender equality promoting interventions in all MDG sectors comprise between 23-31 percent of the total requirements for promoting gender equality in the five countries (see Table 3). This translates into 18-27 percent of the total MDG financing gap. Though rarely included in national planning or budgeting processes and never fully covered by external assistance, MDG3 specific and gender mainstreaming costs are a critical part of an overall financing strategy to achieve all the MDGs. Donors should pay particular attention to this portion of the financing gap.

Table 3. Average Annual Per Capita MDG Costs and Financing Gaps (in 2003 U.S.\$)

	Bangladesh	Cambodia	Ghana	Tanzania	Uganda
MDG3 specific costs per capita	3.80	3.46	3.14	3.90	3.18
MDG mainstreaming costs per capita	7.12	8.59	10.49	9.17	12.71
Costs apportioned to promoting gender equality per capita	26.32	34.64	38.27	43.81	36.12
Annual gender needs per capita	37.24	46.69	51.90	56.88	52.00
Annual cost of gender interventions as a % of total gender equality needs	29%	26%	26%	23%	31%
Annual MDG needs per capita	106.48	107.35	100.37	118.84	106.50
Annual gender needs as a % of MDG needs	35%	44%	52%	48%	49%
Annual hh contributions per capita	10.97	13.18	11.30	11.90	10.08
Annual government contributions per capita	35.36	31.58	28.57	34.05	36.85
Annual financing gap per capita	60.15	62.59	60.50	72.89	59.57
Annual financing gap as a % of MDG needs	56%	58%	60%	61%	56%
MDG3 specific costs as a % of financing gap	6%	6%	5%	5%	5%
Gender mainstreaming costs as a % of financing gap	12%	14%	17%	13%	21%
MDG3+gender mainstreaming costs as a % of financing gap	18%	19%	23%	18%	27%

Source: Authors' calculations.

¹¹ Although it was not included in the UN Millennium Project financing analysis, we analyzed the impact of funding for rural development on gender equality because it is such an important sector for women farmers, the majority of whom are poor.

8. ESTIMATING THE MDG3 FINANCING GAP FOR LOW INCOME COUNTRIES

As noted above, we have used the financing gap estimates derived by the UN Millennium Project (2005a) in our estimation of the MDG3 financing gap for low-income countries. The total MDG financing gap is the difference between total MDG investment needs and domestic resource mobilization, assuming both a rise in government expenditures of up to four percent of GDP over the decade and household contributions based on ability to pay.¹² The MDG financing gap for low-income countries is \$73 billion in 2006, rising to \$160 billion by 2015.¹³ Using these estimates, we have projected the cost of interventions to achieve gender equality and empower women in low-income countries.

To obtain the cost of achieving gender equality in low-income countries, we first averaged the proportion of MDG3 specific investment needs and gender-mainstreaming investment needs over the five countries for each year from 2006-2015 (Table 4). We applied these averages to the total MDG investment needs in low-income countries and developed three scenarios for projecting how these MDG3 costs might be financed.

Table 4. Gender Costs as a Percentage of Total MDG Costs Averaged Across Bangladesh, Cambodia, Ghana, Tanzania, and Uganda

	2006	2010	2015
MDG3 specific needs as a % of MDG investment needs	2%	2%	6%
Mainstreaming needs as a % of MDG investment needs	10%	9%	8%
MDG3 specific and mainstreaming needs as a % of MDG investment needs	12%	11%	15%

Source: Authors' calculations

Scenario 1 assumes that gender equality interventions are not financed by domestic resource mobilization. In its review of the evidence, the UN Millennium Project Task Force found that sufficient funds are rarely allocated for gender equality interventions (UN Millennium Project 2005b). Moreover, gender-budget initiatives around the world have highlighted that most interventions for gender equality are financed off-budget, primarily from contributions from bilateral and multilateral donors (Elson 2005). Scenario 1 assumes that this trend will continue, and all of the gender equality interventions will be financed through external resources.

¹² Appendix 3 of Millennium Project (2005a) explains how aggregate MDG investment needs across low-income countries were calculated. Essentially, the Project first calculated the unadjusted investment need in each country and then adjusted those estimates for the relative price level in each country.

¹³ We follow the WDI classification of low income for grouping countries.

Scenario 2 assumes that government resources will partially support gender equality interventions. Empirical research shows that in those countries where such allocations are made, this proportion is generally quite small. On average, most gender budget initiatives have found that governments commit between 1-3 percent to two categories of interventions: women-specific programs and equal opportunity programs (Budlender, et al. 2002; UNIFEM 2002). Given this information, we assume that in 2006 governments commit one percent of public expenditure (the latter is assumed to be about 13.1 percent of GDP in low-income countries, net of debt repayments¹⁴) to gender equality interventions, and this is scaled up to three percent by 2015.

Scenario 3 assumes that the share of government resources spent on gender equality interventions is proportionate to the share of the gender equality intervention costs in total MDG costs, which is the assumption made by the UN Millennium Project analysis (UN Millennium Project, 2005a). Consequently, the financing gap for gender in Scenario 3 reflects the share of gender equality costs in total MDG costs.

Table 5 shows that Scenarios 1 and 2 produce similar financing gap estimates for gender equality interventions in 2006, between \$30 and \$28 billion. The financing gap under Scenario 3 for gender equality interventions is much lower in 2006, at \$8.6 billion. However, the financing gap changes substantially in 2015 under Scenarios 1 and 2. Under Scenario 1, the financing gap grows at the same rate as MDG costs to \$83 billion, but under Scenario 2, the financing gap decreases to \$73 billion as governments contribute \$10 billion from own-source revenues to gender equality interventions. Under Scenario 3, if governments commit domestic resources to gender equality interventions in the same proportion as their contributions to overall MDG interventions, the financing gap shrinks to just \$23.8 billion. Appendix 5 presents the financing gap projections for each year and the average for the period.

¹⁴ Based on the average, weighted by population, of government final consumption expenditure as a percent of GDP in low income countries in 2003 (World Bank 2005a).

**Table 5. Total Gender Costs and Source of Financing for Low-Income Countries
(in Billions of 2003 U.S. \$)**

		Scenario 1		Scenario 2		Scenario 3	
		2006	2015	2006	2015	2006	2015
Achieving the MDGs							
	Investment needs	251.7	560.1	251.7	560.1	251.7	560.1
	Domestic resource mobilization	178.9	399.9	178.9	399.9	178.9	399.9
	Financing gap	72.8	160.2	72.8	160.2	72.8	160.2
MDG3 Specific							
	Investment needs	5.3	35.9	5.3	35.9	5.3	35.9
	Domestic resource mobilization	0	0	0.5	2.5	3.8	25.6
	Financing gap	5.3	35.9	4.8	33.4	1.5	10.3
Mainstreaming Costs							
	Investment needs	24.4	47.3	24.4	47.3	24.4	47.3
	Domestic resource mobilization	0	0	1.5	7.5	17.3	33.8
	Financing gap	24.4	47.3	22.9	39.8	7.1	13.5
MDG3 Specific + Mainstreaming Costs							
	Investment needs	29.7	83.2	29.7	83.2	29.7	83.2
	Domestic resource mobilization	0	0	1.9	10.1	21.1	59.4
	Financing gap	29.7	83.2	27.7	73.2	8.6	23.8
	Financing gap (per capita 2003 US\$)	11	27	10	23	3	8

Source: Authors' calculations.

The assumptions used in Scenario 2 reflect the proportion of domestic resources currently allotted by governments to gender equality interventions. Experience from gender budget initiatives around the world suggests that even if governments assume an increasing share of the costs over time, they continue to rely on donor assistance for many gender-equality promoting interventions. We do not believe this is a viable scenario in the long-term; countries must assume greater responsibility for mobilizing domestic resources for gender equality interventions. Scenario 3 thus assumes a more active role for governments in mobilizing resources for gender equality; this is the scenario that we would encourage governments and donors to strive to attain in the long-term.

Domestic resources are particularly important for gender equality. First, they signal that a country is committed to achieving gender equality through investments of their own resources. They indicate that governments have taken “ownership” of the problem and intend to solve it. Second, only domestic resources can ensure longer-term sustainability for those interventions and activities that are needed to create the type of fundamental transformation in the way that societies conceive of and organize men’s and women’s roles and responsibilities.

Although domestic resources are key to supporting gender equality interventions in the long-term, external resources are important in the short-term to jump-start the allocation of domestic resources for gender-equality interventions in low-income countries. Yet, evidence suggests that donor financing is not currently sufficient to cover the full costs of gender equality

interventions (UN Millennium Project 2005b).¹⁵ There is thus a financing gap created by both the inadequacy of domestic financing and external resources for interventions to promote gender equality and women's empowerment.

9. A FUND FOR GENDER EQUALITY INTERVENTIONS

If gender equality and women's empowerment are to be realized, financial support for the interventions described in this paper needs to be commensurate with country needs. The UN Millennium Project estimates that in most low-income countries the costs of achieving all the MDGs will require substantial external resources, despite increases in domestic resource mobilization. This paper has illustrated that achieving gender equality requires investments in all the MDGs. At the same time, empirical evidence shows that gender equality investments are typically accorded low priority within budget allocations. This means that special attention is needed to make sure both MDG3-specific and gender mainstreaming interventions are systematically included in scaling up strategies to achieve the MDGs.

Based on this analysis, we recommend that donors constitute a special fund to support MDG3-specific and gender mainstreaming interventions in low-income countries. Averaging the estimates derived under Scenario 3, we calculate that about \$13 billion per year is needed for the next five years to accelerate implementation of these interventions in all low-income countries.¹⁶ This translates into \$4.44 per capita annually. For their part, countries will need to ramp up their financing to 34 billion per year for the next five years, which translates into \$11 per capita on average. Based on progress made, the resource estimates should be revised in 2011 to reflect current and emerging country needs.

The investment needs for gender equality interventions is small compared to overall commitments on ODA and even total MDG needs. If the OECD countries make good on their commitments to allocate 0.7 percent of their GDP to Official Development Assistance (ODA),

¹⁵ A recent analysis by the OECD-DAC (2005) of the percent of foreign assistance that promotes gender equality shows that between 1999-2003 donors gave approximately 18 percent (or \$3.1 billion) of total foreign assistance to programs and projects that had gender equality as a principal or significant purpose. (Principal refers to projects that would not have been undertaken without a gender equality objective; significant means that gender equality is an important but secondary objective of the activity). However, these numbers cannot be strictly compared to the analysis in this paper, as we do not have information on the external financing gap. However, the OECD-DAC data are the only available data on donor support for gender equality programs relative to total foreign assistance.

¹⁶ To rectify the historic under funding of gender equality interventions, and to increase the probably of success, we believe that funds should be frontloaded. We therefore use the annual average of the financing gap estimates of Scenario 3 for our recommendation.

this would result in \$200 billion per year in ODA. MDG3-specific and gender mainstreaming costs represent just 6.5 percent of this amount. This is an investment that is well worth the cost.

10. CONCLUSION

This paper attempts to illustrate, through a quantitative assessment, that investments that directly and indirectly promote gender equality and women's empowerment represent a significant share of total investments for the Millennium Development Goals. As we show, of the total MDG investments, 35-52 percent can be directly or indirectly attributed to the achievement of MDG3. In other words, any serious effort to promote gender equality and women's empowerment costs money—a fact often ignored by governments in both rich and poor countries. At the same time, our results show that these investments are affordable, given existing commitments made by donor governments of increasing official development assistance to 0.7 percent of GNP by 2015, and more recent commitments such as doubling aid to Africa by 2010.

Our analysis of non-targeted gender equality interventions (NTGE) shows that investments in other MDG sectors also have important pay offs for gender equality and women's empowerment if designed and implemented appropriately. In particular, investments in education, health and infrastructure are crucial to improving the lives of poor women; for the five countries we analyzed, between 31-74 percent of the investments in these areas could be directly attributed to improving gender outcomes. The policy implications of this analysis are clear: the multidimensional nature of gender implies that investments in a range of sectors and activities are needed concurrently to achieve MDG3.

Our analysis has also attempted to operationalize gender mainstreaming and link it to budgeting needs and flows of funding. We show that the costs of gender mainstreaming interventions represent 7-13 percent of total MDG needs. Gender mainstreaming requires specific resource allocation within sector investment plans, a fact that is often overlooked in the current discourse on gender mainstreaming. The gender mainstreaming interventions identified in this paper are critical for making the sector interventions successful.

On the other hand, gender mainstreaming alone may have limited impact in achieving gender equality and women's empowerment. Successful strategies combine gender mainstreaming with specific, targeted actions to promote MDG3. Investing for MDG3 is crucial for achieving all the other MDGs. Since over 90 percent of the investments to achieve gender equality are, in fact, implemented through other MDG sectors, governments cannot hope to achieve any of the MDGs without paying adequate attention to the specific interventions and

actions (and the accompanying investments) needed to reach underserved women in the population.

We encourage greater allocation of domestic resources towards promoting gender equality and women's empowerment. Our estimates show that for low-income countries, the financing gap for MDG3 specific and gender mainstreaming activities is in the range of \$8.6 billion (2006)–\$23.8 billion (2015). However, we recognize that external financing can be important to jumpstart an increase in domestic allocation. Based on Scenario 3 in Section 8 above, we recommend that donors commit resources in the range of \$13 billion annually to finance MDG3 specific and gender mainstreaming interventions in low-income countries in the next five years, and readjusted thereafter based on domestic resource commitments to these interventions.

Gender equality interventions should be part of a broader, comprehensive effort by national governments to achieve the MDGs. The inputs of key stakeholders, including government officials at national, regional, and local levels, members of women's and other civil society organizations, and donors, are critical to the success of the process. The interventions to be costed need to be locally identified based on nationally determined targets and refined over time on the basis of experience.

Finally, we must reiterate a point we made at the beginning of this paper. While adequate resources alone will not achieve gender equality, knowing both the specific interventions and their costs creates the conditions for the fundamental transformation that is required to achieve gender equality. Transformation of social norms and patriarchal structures can begin through policies, interventions, and projects that have adequate funding. Thus, the gender needs assessment, and associated financing gap analyses should be seen as critical tools for generating resources—and perhaps even leadership and political will—for gender equality and women's empowerment.

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Appendix 1

Example of UN Millennium Project cost estimation approach

This Appendix describes the Millennium Project needs assessment methodology for the education sector. It is excerpted, with permission by the authors, from UN Millennium Project (2004). The methodology for the other MDG sectors is described in UN Millennium Project (2004).

Step 1: Specify interventions required to achieve MDG2 (excerpted from UN Millennium Project 2004, page 194)

3 Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling		
Primary education	School infrastructure	Provision of schools, including classrooms, toilets (especially girls' toilets), furniture, and transportation facilities
	Teachers	Recruitment of teachers, especially female teachers, with provision of incentives (such as housing in rural areas where applicable and adequate salaries) and ensuring pre-service and regular in-service training
	Learning materials	Provision of textbooks and other learning materials such as stationery
	Curriculum reform*	Implementation of curriculum reform, where necessary, to improve education content
	Demand side incentives	Provision of uniforms, school meals (and/or take-home food rations where needed), special targeted subsidies to girls and other vulnerable populations (such as ethnic groups) and conditional cash transfers to parents (if appropriate) to reduce the opportunity cost of children attending school and increase attendance
Secondary education	School infrastructure	Provision of schools, including classrooms, toilets (especially girls' toilets), furniture, transportation facilities, and other facilities such as libraries, laboratories and sports facilities
	Teachers	Recruitment of teachers, especially female teachers, with provision of incentives (such as housing in rural areas where applicable and adequate salaries) and ensuring adequate pre-service and in-service training
	Uniforms and learning materials	Provision of adequate textbooks and other learning materials such as stationery
	Curriculum reform*	Implementation of curriculum reform, where necessary, to improve education content, with a focus on vocational and non-formal training as necessary to prepare students for transition to work
	Demand side interventions	Provision of uniforms, school meals (and/or take-home food rations where needed), special targeted subsidies to girls and other vulnerable populations (such as HIV/AIDS orphans) and conditional cash transfers to parents (if appropriate) to reduce the opportunity cost of children attending school and increase attendance
Higher education*	Higher education interventions	Extension and maintenance of higher education system, with a particular focus on science and engineering education
Adult literacy	Adult literacy programs	Implementation of adult literacy programs through trainers and volunteers and accompanied by mass media campaigns to increase awareness of the importance of literacy

Early Childhood Development	ECD interventions*	Provision of infrastructure and learning materials, as needed, hiring and training of teachers and care givers, and development of ECD curriculum
Hard-to-reach children	Special packages for hard-to-reach populations*	For example, introduction of distance education and emergency schooling in conflict areas

Sources: UN Millennium Project 2004, Bruns et al. 2003, World Bank 2002

**Step Two: Specify Targets and Estimate Resource Needs Required to Achieve MDG2
(excerpted from UN Millennium Project 2004, pages 95-98)**

4.4.1 Primary Education

Our approach to education needs assessments follows Bruns et al. (2003). The resource estimates for Tanzania and Uganda cover the full course of primary education. In the case of Ghana, we follow the government model of Compulsory Basic Education (9 years), which includes Primary and Junior Secondary education.

As required by the MDGs, we project net enrollment ratios (NER)¹⁷ to increase from 2000 levels to reach 100 percent by 2015. In addition to raising enrollment, countries need to increase primary completion rates (PCR) to ensure Universal Primary Education (UPE). Based on recommendations by the UN Millennium Project Task Force, our analysis requires that PCR reach 100 percent by 2015. In line with the recommendations by Bruns et al. (2003), we have adopted the following targets and parameters:

- The pupil-classroom ratio and the pupil-teacher ratio (PTR) falls to 40;
- At least one textbook is provided to each student each year;
- All forms of gender disparity are eliminated at the primary school level through the provision of targeted subsidies, toilets for girls and other interventions by 2005;
- 100 percent of all teachers are fully trained and qualified;
- One toilet is available per two classrooms (we assume separate toilets for boys and girls, so this translates into one toilet per 40 girls or boys);
- School meals are provided to 50 percent of all students (though the costs for this are aggregated under the hunger sector);
- Teachers' salaries are maintained at existing levels if they exceed 3.6*GDP per capita (World Bank 2002); if they are lower, we adjust them to this new level; and
- Non-salary recurrent expenditure is estimated based on actual expenditures, unless they are below the Bruns et al. (2003) norm of 33 percent of recurrent expenditure, in which case the latter value is used.

While Bruns et al. (2003) forms a benchmark for our resource estimates, we depart from the analysis in three important ways:

1. While we build improvement in the quality of education by moving towards target parameters (such as pupil-teacher ratio of 40), we do not separately estimate the

¹⁷ Defined as the number of students in a particular age group enrolled in school divided by the population of that same age group

differences in resource requirements resulting from increased efficiency and improved management systems.

2. We develop year-by-year needs assessments based on projections of the school-age population over the 11-year period (2005-15).
3. We calculate total costs rather than incremental spending needed to attain UPE. All unit costs are based on local or regional data.

As with other needs assessments, we emphasize that our analysis is restricted to input needs in terms of teachers, classrooms, textbooks, and so forth. Equally important for achieving good education outcomes are, of course, quality parameters, such as curriculum reform. These institutional and policy changes cannot be fully captured in a needs assessment and will have to be devised separately once the input needs have been identified.

For primary education, the main cause of variation in per capita costs are teachers' salaries, which make up 40 percent of total cost, classroom construction accounting for 32 percent of the total, and the size of the target student population based on current enrollment rates and the demographic distribution. For example, Ghana's target student population for primary education is much higher than in the other countries due to higher enrollment rates, which raises per capita costs of primary education. Due to the large share of resource needs that is accounted for by recurrent expenditure (in particular salaries) the education resource estimates are strongly correlated with GDP (PPP).

At this stage our analysis does not factor in the attrition of teachers from HIV/AIDS since much of the necessary data is unavailable. We therefore project that current attrition rates will remain constant. This is likely to understate attrition rates and therefore our cost estimates for universal primary education (UPE) unless HIV/AIDS treatment for teachers is rapidly scaled up. The resources needed for the growing number of HIV/AIDS orphans are included in our resource estimate. While the education estimate includes all school-related interventions, the health resource estimate accounts for care facilities, treatment and other non-school related expenses for HIV/AIDS orphans.

4.4.2 Secondary Education

Our projections of net enrollment rates, secondary school completion rates and transition rates from primary to secondary schools are based on 2000 data. To estimate the number of secondary school students by 2015, we project that the primary completion rate rises to 100 percent and that

the transition rate from primary to secondary schools reaches 80 percent by 2015.¹⁸ The net enrollment rate (NER) for secondary education is then calculated by modeling the inflow from primary schools and outflow of secondary school students based on graduation and drop-out rates.¹⁹

A full course of secondary education is modeled after the school system in each country. We assume that the following parameters are gradually met by 2015:

- The pupil–classroom ratio will go down to 40 or to corresponding national targets, depending on which is lower,
- The pupil-teacher ratio will reach 40 or the national target if the latter is lower,
- The pupil-textbook ratio will go down to 1,
- Gender disparity in NER will be eliminated at the secondary level by 2005,
- Teachers’ salaries are estimated at 1.5 times primary school teachers’ salaries,
- One toilet will be available for every two classrooms (i.e. one toilet per 40 girls or boys),
- The average school will have 500 students,
- Every school will be equipped with a library, a laboratory, and sports facilities (based on national targets for Uganda), and
- Non-salary recurrent expenditure is estimated to reach 50 percent of total recurrent expenditure.

All unit cost data is based on local and regional cost data. For secondary education, the principal cost driver is the size of the target population, which is lowest in Ghana and Tanzania. The reason is that our Ghana analysis only includes 3 years of Senior Secondary Education, while for Tanzania the initial net enrollment rate and transition rate is low compared to the other countries, which leads to a lower number of students in school. For this reason the costs of secondary education are therefore not comparable between Ghana and the other two countries.

4.4.3 Adult Literacy Programs

In our needs assessment model adult literacy programs are scaled up to achieve 100 percent adult literacy by 2015, so that every illiterate adult will participate in an adult literacy program over the coming 11 years. The interventions for adult literacy include the provision of instruction materials, training of instructors as well as payment of their salaries, and provision of personnel

¹⁸ For Tanzania we project the transition rate to rise only to 60 percent due to extremely low current levels of secondary school enrollment.

¹⁹ For example, the transition rate of students from primary to secondary schools in Uganda is targeted to rise from 39 percent to 80 percent by 2015. Based on dropout rates, the proportion of these incoming students who will complete secondary school is estimated to reach 84 percent, which translates into a target NER of approximately 28 percent by 2015.

to manage the literacy programs. A complete part-time course of adult literacy is expected to last one year. We assume that literacy programs will take place in existing schools or other public buildings, thus obviating the need for additional infrastructure investments. In specific cases, mobile units may be required to reach dispersed populations, but these have so far not been included in our analysis. The adult literacy costs vary less across countries since no capital investments are required and differences in recurrent costs are small.

Several interventions and considerations are not included in our preliminary education resource estimates.

Box 1: Interventions missing from preliminary resource estimates for Education

- Provision of Early Childhood Development Programs
- Capital costs of providing adult literacy
- Increased demand for teachers due to higher attrition rates due to HIV/AIDS
- Higher education

Appendix 2 NTGE Interventions

Education Interventions The relevant gender gap in the education sector is enrollment. For sufficient progress toward the MDGs in any given year, the education sector needs continued expenditure on the existing education system, as well as new capital and recurrent expenditure on the construction of new schools and the provision of new staff, new materials, and so forth. For simplicity, we use incremental²⁰ enrollment to estimate the proportion of capital costs that can be attributed to females and that to males, and current enrollment to estimate the proportion of the recurrent costs that go towards females and males. If fewer girls are in school than boys, the gender equality-promoting share of the capital costs of education sector interventions is the incremental enrollment of girls as a share of total incremental enrollment. This can be expressed mathematically as follows:

$C_{c,e,t}$ = capital cost, per new pupil²¹ of an education intervention, where c is capital cost, and e is an educational intervention in year t .

$C_{c,e,t} \delta M_{e,t}$ = capital cost of additional male pupils, where δ is the difference operator, and $M_{e,t}$ is the number of males enrolled in year t

$C_{c,e,t} \delta F_{e,t}$ = capital cost of additional female pupils, where δ is the difference operator, and $F_{e,t}$ is the number of females enrolled in year t

$C_{c,e,t} (\delta M_{e,t} + \delta F_{e,t})$ = total capital cost in year t

The proportion of total capital costs in year t that are attributable to promoting gender equality is:

$$\alpha_{c,t} = \delta F_{e,t} / (\delta M_{e,t} + \delta F_{e,t})$$

The proportion of the total recurrent cost in year t that is attributable to maintaining girls'

enrollment can be expressed mathematically as follows:

$C_{r,e,t}$ = recurrent cost, r , per pupil of an education intervention, e , in year t

$C_{r,e,t}(M_{e,t})$ = recurrent cost of all male pupils enrolled in year t

$C_{r,e,t}(F_{e,t})$ = recurrent cost of all female pupils enrolled in year t

$C_{r,e,t}(M_{e,t} + F_{e,t})$ = total recurrent cost in year t

$C_{r,e,t}(F_{e,t})$ = total recurrent cost of maintaining girls' enrollment in year t

The proportion of the total recurrent cost in year t of maintaining girls' enrollment at its level in year t is:

$$\alpha_{r,e,t} = F_{e,t} / (M_{e,t} + F_{e,t})$$

²⁰ Incremental refers to current year – past year.

²¹ Capital costs are accounted for in the year when the students use the new facilities. For simplicity, we assume that unit costs are the same for girls and for boys. Although there may be an argument for differential unit costs, this methodology takes account of the main differences by identifying the specific interventions needed to reach females. We therefore assume that all other non-targeted interventions have the same unit costs.

Female Teachers: A Special Case

Female teachers can promote gender equality and women's empowerment in two ways. They play the same role as male teachers in educating female students. Research has also shown that when fewer girls are enrolled in school than boys, female teachers can attract more girls to school (UN Millennium Project 2005b). To account for these two ways that female teachers promote gender equality, we apportion the costs associated with female teacher training and employment differently than those of other education interventions.

Female teacher training and employment interventions are classified as NTGE interventions, but a proportion of their costs are treated like FTGE (mainstreaming) interventions. Since the role that female teachers play in boosting girls' enrollment decreases as the gender gap in enrollment decreases, this proportion is estimated to be the distance of the girls' share of enrollment from 0.5. All of this proportion of the female teacher costs is attributed to gender equality. The remaining proportion of female teacher costs is treated in the same manner as other recurrent education costs. This can be expressed mathematically as follows:

$$\begin{aligned} C_{ft,e,t} &= \text{total cost associated with the hiring and training of a female teacher} \\ \varepsilon_t &= 0.5 - [F_{e,t} / (M_{e,t} + F_{e,t})] \\ \alpha_{r,e,t} &= F_{e,t} / (M_{e,t} + F_{e,t}) \end{aligned}$$

where ε_t is the proportion of the female teacher costs associated with boosting girls' enrollment in year t , $\alpha_{r,e,t}$ is the proportion of recurrent education costs attributed to gender equality, and $M_{e,t}$ and $F_{e,t}$ are the number of boys and girls enrolled in school in year t , respectively.

The proportion of the female teacher costs in year t attributed to the promotion of gender equality is:

$$\alpha_{ft,e,t} = \varepsilon_t + (1 - \varepsilon_t) \alpha_{r,e,t}$$

*Health Interventions*²²

The health sector includes a range of NTGE interventions.

- *Nutrition*

We do not have utilization data, so prevalence is used as a proxy. We apportion the cost of nutrition interventions targeting children under five according to the ratio of female prevalence of malnutrition to the total prevalence of malnutrition.

$$\alpha_n = P_{n,f} / (P_{n,m} + P_{n,f})$$

We assume that women and men benefit equally from population-wide nutrition interventions and, therefore, apportion half of their cost to our estimate.²³

²² This methodology does not apply to maternal health interventions.

²³ This assumption may need to be modified in countries where male food consumption is greater than female food consumption.

- *Infectious Diseases: HIV/AIDS, TB, and Malaria*

We do not have utilization data, so prevalence is used as a proxy. We use the ratio of female prevalence to total prevalence of each disease to apportion the cost of prevention and treatment interventions that can be attributed to gender equality. Since we do not have utilization rates for these services, we assume that they reach women and men suffering from the disease equally and apportion their costs as follows:

$$\alpha_d = P_{d,f} / (P_{d,m} + P_{d,f})$$

where α_d is the proportion of the cost of prevention and treatment that promotes gender equality and $P_{d,f}$ and $P_{d,m}$ are the prevalence rates of the disease among females and males, respectively. For each disease we use the latest available gender-disaggregated prevalence data and assume that the ratio of female to male prevalence does not change over time.²⁴

- *Health Systems*

We apportion half of the cost of the human resource requirements and infrastructure in the health sector (with the exception of resources dedicated to maternal and child health) to gender equality. This can be expressed mathematically as follows:

$$\alpha_{hr, t} = 0.5$$

Rural Development Interventions

The relevant gender gap in the rural development sector is in the access to inputs and services that improve the productivity of farmers. We apportion the costs of both recurrent and capital rural development interventions by estimating the ratio of average use of inputs or services by female smallholder farmers relative to male smallholder farmers multiplied by the female share of smallholder farmers. For example, we use gender disaggregated fertilizer usage data from Malawi (Pieri and Mukhopadhyay (1999)) as our proxy for current farm input and non-extension agricultural service use in time t in Ghana, Tanzania, and Uganda.

We are making the reasonable assumption that average female smallholder fertilizer use is influenced by their access to female extension workers and will rise as the proportion of female extension workers increases. We assume that when the ratio of female extension workers to male extension workers is equal to the ratio of female farmers to male farmers, then average female fertilizer use will

²⁴ This assumption may need to be modified in future work if sex-disaggregated utilization data can be located.

equal average male fertilizer use. We apportion farm input and non-extension services costs according to the following formula:

$$\alpha_{a,t} = (A_{f,t} / A_{m,t}) \times (E_f / E_m + E_f)$$

where $\alpha_{a,t}$ is the proportion of the cost of agricultural inputs and non-extension services that contributes to gender equality, $A_{f,t}$ and $A_{m,t}$ are average female and male utilization of fertilizer or other relevant inputs in year t , and $(E_f / E_m + E_f)$ is the ratio of female agricultural employment to total agricultural employment.²⁵

Infrastructure Interventions

The method for determining what portion of the costs of infrastructure promotes gender equality is analytically similar to the above examples, but the measurement of the gender gap is different.²⁶ The initial gap is not in terms of numbers of males and females utilizing the intervention but in terms of male and female time spent in providing the service, in the absence of the infrastructure. The provision of infrastructure saves time, and thereby narrows the gender gap in time spent in unpaid work.

Let us illustrate with the example of water:

$F_{w,t-1}, M_{w,t-1}$ = hours females and males, respectively, spend at time $t-1$ collecting water

$F_{w,t}, M_{w,t}$ = hours females and males, respectively, spend collecting water at time t , after the provision of a water tap to the household

$\delta F_{w,t}$ = female time saved by the intervention, where δ is the difference operator

$\delta M_{w,t}$ = male time saved by the intervention, where δ is the difference operator

$\delta F_{w,t} + \delta M_{w,t}$ = total time saved by the intervention

The proportion of the total cost of water intervention, w , that is attributable to reducing the gender gap in year t is:

$$\alpha_{w,t} = \delta F_{w,t} / (\delta F_{w,t} + \delta M_{w,t})$$

More generally, the proportion of the total cost of an infrastructure intervention, i , that is attributable to reducing the gender gap in year t is:

$$\alpha_{i,t} = \delta F_{i,t} / (\delta F_{i,t} + \delta M_{i,t})$$

where $\delta F_{i,t}$ and $\delta M_{i,t}$ are the amounts of time that females and males, respectively, save when the infrastructure, i , is introduced at time t . For energy interventions, we use the amount of time women and men spend collecting firewood as a proxy for time saved, and for both water and

²⁵ We make the simplifying assumption that this ratio does not change over time, although in future work, this could be modified.

²⁶ Sanitation is an exception. We treat sanitation like health systems, apportioning half of the cost of sanitation requirements to gender equality.

sanitation interventions, we use the amount of time women and men spend collecting water as a proxy for time saved.

The Value of Alpha

Table 2 provides the average value of alpha for interventions in each MDG sector from 2006-2015.

Table A.2.1. Average alphas from 2006-2015 for each MDG sector

		Bangladesh	Cambodia	Ghana	Tanzania	Uganda
Primary Education						
	Capital Costs	0.85	0.64	0.56	0.72	0.59
	Recurrent Costs	0.48	0.48	0.48	0.48	0.48
	Female Teachers' Salaries	0.49	0.49	0.49	0.49	0.49
Secondary Education						
	Capital Costs	0.51	0.53	0.43	0.58	0.64
	Recurrent Costs	0.49	0.48	0.47	0.47	0.43
	Female Teachers' Salaries	0.48	0.51	0.49	0.49	0.47
Adult Literacy		0.58	0.68	0.65	0.67	0.66
Nutrition						
	Infant	-	-	0.48	0.51	0.46
	Child	-	-	0.49	0.49	0.49
	Adult	-	-	0.5	0.5	0.5
Infectious Diseases						
	HIV/AIDS	0.17	0.3	0.56	0.6	0.56
	TB	0.24	0.29	0.31	0.31	0.36
	Malaria	0.45	0.3	0.5	0.5	0.5
Health Systems		0.5	0.5	0.5	0.5	0.5
Rural Development		-	-	0.59	0.39	0.67
Infrastructure						
	Water					
	Rural	0.55	0.5	0.57	0.74	0.74
	Urban	0.56	0.5	0.52	0.71	0.71
	Sanitation	0.5	0.5	0.5	0.5	0.5
	Energy					
	Rural	0.42	0.92	0.57	0.74	0.79
	Urban	0.42	0.92	0.46	0.74	0.83

Source: Authors' calculations.

Appendix 3

Assumptions Underlying the Coverage Targets and Cost Calculations

UN Millennium Project (2004) provides a detailed explanation of the assumptions underlying the resource estimates to achieve the MDGs in the five countries. Please refer to that document for the full set of assumptions underlying interventions in each sector. Below, we explain additional assumptions or changes relevant to the gender costing.

Throughout, we have used the OCED/DAC deflator to rebase estimates to 2003 U.S. dollars.

MDG3 Specific Interventions

The MDG3 specific interventions that are costed in this paper are:

- Community-based awareness campaigns for women's reproductive rights: coverage target is 100 percent of the country's female population by 2015. Average costs of the program correspond to the costs of a program that can potentially reach up to 35,000 people.
- School-based awareness programs for reproductive health and rights aimed to reach 100 percent of primary and secondary school students by 2015.
- Sensitization programs for public officials: coverage target is 100 percent of public officials (bureaucrats, judges, and police force) by 2015.
- Vocational training for female secondary school students: coverage target is 25 percent of the adolescent female population by 2015, except for Tanzania, where it is 40 percent.
- Training for women candidates standing for elections: coverage target is 100 percent of electoral seats.
- Interventions to address violence against women are based on domestic violence prevalence rates.
 - Mass media campaigns are assumed to run twice per year.
 - Counseling services: coverage target is 50 percent of women who have experienced abuse by 2015.
 - Shelters: coverage target is 10 percent of women who have experienced abuse by 2015.
- Strengthening women's ministries: We assume an average per capita cost of \$1.56. This number is based on the costs of the Ministry of Women's Affairs in Cambodia in 2004, which has been adjusted for the other four countries. Another method for obtaining unit costs of other countries would have been to calculate the budget of a similar ministry in those

countries as a proportion of the total budget but such data are both difficult to obtain and they vary enormously. We have adapted the costs of a reasonably well-funded ministry as the benchmark for the other countries.

Other important interventions identified by Task Force 3 that have not been costed in this exercise are sex-disaggregated data collection, monitoring and evaluation activities, school to work programs, minimum income guarantee schemes, public employment schemes, support to women's organizations, support to women elected representatives, legal, mediation and rehabilitation services for violence against women, and improved enforcement of anti-discrimination laws.

Gender Equality Mainstreaming Interventions

Education: We assume that females will comprise 50 percent of primary and secondary school teachers by 2015. Scholarships for girls are assumed to reach 50 percent of the female primary and secondary school population by 2015. It is assumed that there is one female toilet in every classroom catering to about 40 females by 2015, except for Tanzania where it is 20 females by 2015. Also included in this category are the costs of a gender focal point unit in the Ministry of Education. On average, we assume the unit has a professional staff 0.5% of the current civil service size (covering both central and provincial levels) with salaries based on middle-senior management scales within the civil service in each country. We do not include the costs of activities (e.g., training programs), supplies (e.g. vehicles), administrative personnel, and other materials that are needed for a gender focal point unit to function effectively, so total gender mainstreaming costs are likely to be underestimated.

Energy: The energy needs assessment targets households as the coverage population; therefore, there are no other specific interventions for gender mainstreaming other than the cost of a gender focal point unit (as per the Education note above) within the Energy Ministry.

Health: As noted in Box 4 in the text, all maternal and child health costs are assumed to be "mainstreaming" costs. Child and maternal health interventions include the IMCI package, immunizations, the neonatal package, antenatal care, skilled birth attendants and clean delivery, emergency obstetric care, contraception and family planning services, and safe abortions and care of complications. We assume universal coverage of essential health services by 2015.

Rural Development: The primary gender mainstreaming intervention is female extension workers, which are scaled up to the proportion of female smallholders in the smallholder farmer population by 2015. Each extension worker is assumed to service 205 households by visiting them at least twice in one year. Mainstreaming costs also include a gender focal point unit (as per Education note above) in the Ministry of Agriculture.

Slum Dwellers: The slum dwellers needs assessment targets households as the coverage population; therefore, there are no other specific interventions for gender mainstreaming other than the cost of a gender focal point unit (as per Education note above) within the Housing or Interior Ministry.

Water and Sanitation: The water and sanitation needs assessment targets households as the coverage population; therefore, there are no other specific interventions for gender mainstreaming other than the cost of a gender focal point unit within the Water and Sanitation Ministry (as per Education note above).

Other MDG Sectors

Education: Interventions for building classrooms, developing curricula, and providing the operational costs of running a school system are included in the overall education needs assessment. Needs are based on enrollment rates in these countries and aim for 100 percent completion in primary education by 2015 and a transition rate of 80 percent for secondary education by 2015, except for Tanzania where the target transition rate is 60 percent by 2015.

Energy: Includes rural and urban electrification, rural and urban off-grid energy devices, and clean cooking fuels.

Rural Development: Includes chemical fertilizers, fertilizer trees, green manure, improved seeds, shallow wells, gravity irrigation, storage tanks, and pumps.

Health: Infectious diseases include ARV therapy, the basic UNAIDS HIV prevention and care package, Artemisinin combination treatment for malaria, insecticide treated bed nets, and IRS, DOTs, and DOTs plus.

Water and sanitation: Specific interventions for water and sanitation fall into four broad categories: Extension, rehabilitation, and operation of water supply and treatment infrastructure; extension, rehabilitation, and operation of sanitation and wastewater treatment infrastructure; promotion of hygienic behavior by households and proper use of water and sanitation facilities through hygiene education and behavior change programs; and extension of infrastructure for water storage and transport coupled with Integrated Water Resources Management (IWRM) to

ensure adequate supply of water for domestic, agricultural, and industrial use, as well as ecosystem functioning.

Appendix 4

Country Data and Figures

Table A.4.1. Per Capita Costs of Achieving Gender Equality in Bangladesh (2003 US\$)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Annual Average
Costs of MDG3 Specific Interventions	1.49	1.67	1.75	1.91	2.18	2.64	3.43	4.78	7.10	11.06	3.80
Costs of Mainstreaming Gender Intervention in MDG Sectors											
Education	0.13	0.15	0.16	0.18	0.20	0.23	0.26	0.29	0.33	0.38	0.23
Energy	0.0319	0.0313	0.0309	0.0303	0.0297	0.0292	0.0287	0.0282	0.0277	0.0272	0.0295
Health	4.98	5.49	6.00	6.43	6.67	7.03	7.37	7.68	7.98	8.12	6.77
Rural Development	0.0319	0.0313	0.0309	0.0303	0.0297	0.0292	0.0287	0.0282	0.0277	0.0272	0.0295
Slum Dwellers	0.0319	0.0313	0.0309	0.0303	0.0297	0.0292	0.0287	0.0282	0.0277	0.0272	0.0295
Water and Sanitation	0.0319	0.0313	0.0309	0.0303	0.0297	0.0292	0.0287	0.0282	0.0277	0.0272	0.0295
Total	5.24	5.76	6.29	6.74	6.99	7.38	7.74	8.08	8.42	8.60	7.12
Costs Apportioned to Gender Equality in MDG Sectors											
Education	3.81	4.15	4.52	4.96	5.40	5.93	6.55	7.37	8.29	9.54	6.05
Energy	7.80	7.93	7.99	7.98	8.11	8.09	8.11	8.10	8.15	7.74	8.00
Health	4.84	5.51	6.23	6.90	7.47	8.05	8.59	9.06	9.46	9.75	7.59
Slum Dwellers	0.97	1.04	1.12	1.20	1.29	1.38	1.48	1.59	1.71	1.83	1.36
Water and Sanitation	2.31	2.38	2.47	2.54	2.61	2.70	2.80	2.99	3.79	8.61	3.32
Total	19.73	21.01	22.32	23.57	24.88	26.16	27.53	29.11	31.39	37.47	26.32
Total Costs of Achieving Gender Equality	26.45	28.44	30.36	32.22	34.06	36.18	38.69	41.98	46.91	57.14	37.24

Figure A.4.1. Bangladesh

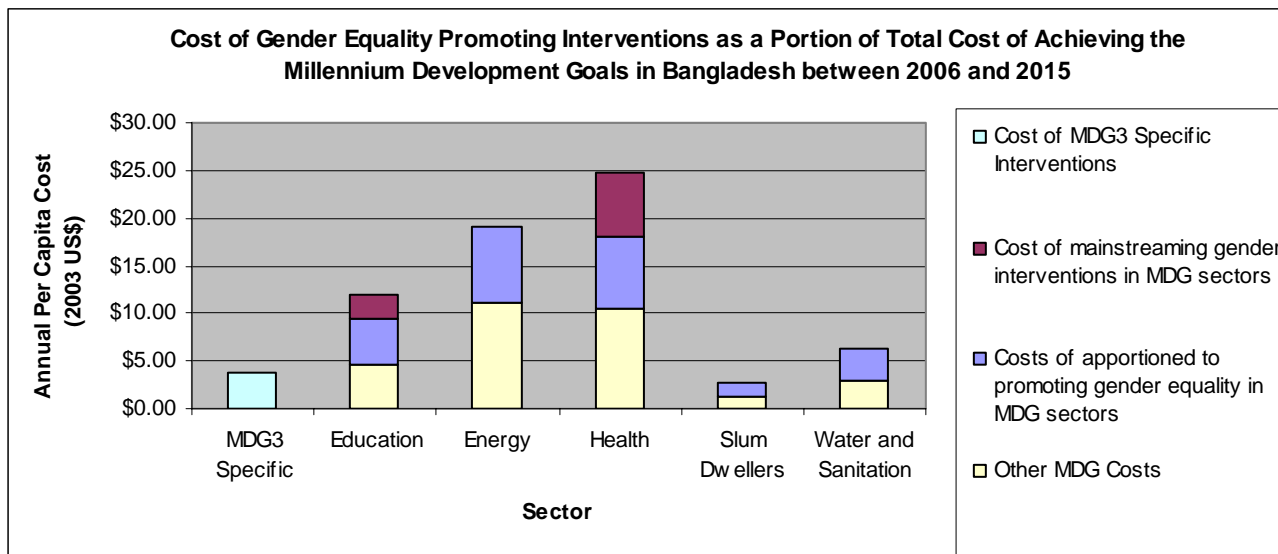


Table A.4.2. Per Capita Costs of Achieving Gender Equality in Cambodia (2003 US\$)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Annual Average
Costs of MDG3 Specific Interventions	1.74	1.96	2.07	2.23	2.45	2.80	3.32	4.20	5.72	8.10	3.46
Costs of Mainstreaming Gender Intervention in MDG Sectors											
Education	0.15	0.17	0.18	0.19	0.21	0.23	0.24	0.26	0.28	0.30	0.22
Energy	0.0177	0.0172	0.0169	0.0165	0.0161	0.0158	0.0154	0.0151	0.0148	0.0145	0.0160
Health	6.11	6.72	7.35	7.89	8.15	8.64	9.04	9.46	9.79	9.91	8.31
Rural Development	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.0160
Slum Dwellers	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.0160
Water and Sanitation	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.0160
Total	6.34	6.96	7.60	8.15	8.42	8.94	9.35	9.78	10.13	10.27	8.59
Costs Apportioned to Gender Equality in MDG Sectors											
Education	7.02	7.28	7.57	7.95	8.29	8.77	9.26	9.89	10.69	11.91	8.86
Energy	11.07	11.73	12.41	12.96	13.49	14.05	14.51	14.99	15.36	15.08	13.57
Health	5.20	5.91	6.59	7.24	7.78	8.42	8.95	9.49	9.91	10.21	7.97
Slum Dwellers	0.99	1.05	1.13	1.20	1.28	1.37	1.46	1.57	1.68	1.79	1.35
Water and Sanitation	1.58	1.72	1.88	2.05	2.24	2.48	2.74	3.11	3.88	7.23	2.89
Total	25.86	27.69	29.58	31.40	33.07	35.09	36.93	39.06	41.51	46.22	34.64
Total Costs of Achieving Gender Equality	33.94	36.60	39.25	41.78	43.95	46.82	49.60	53.04	57.36	64.59	46.69

Figure A.4.2. Cambodia

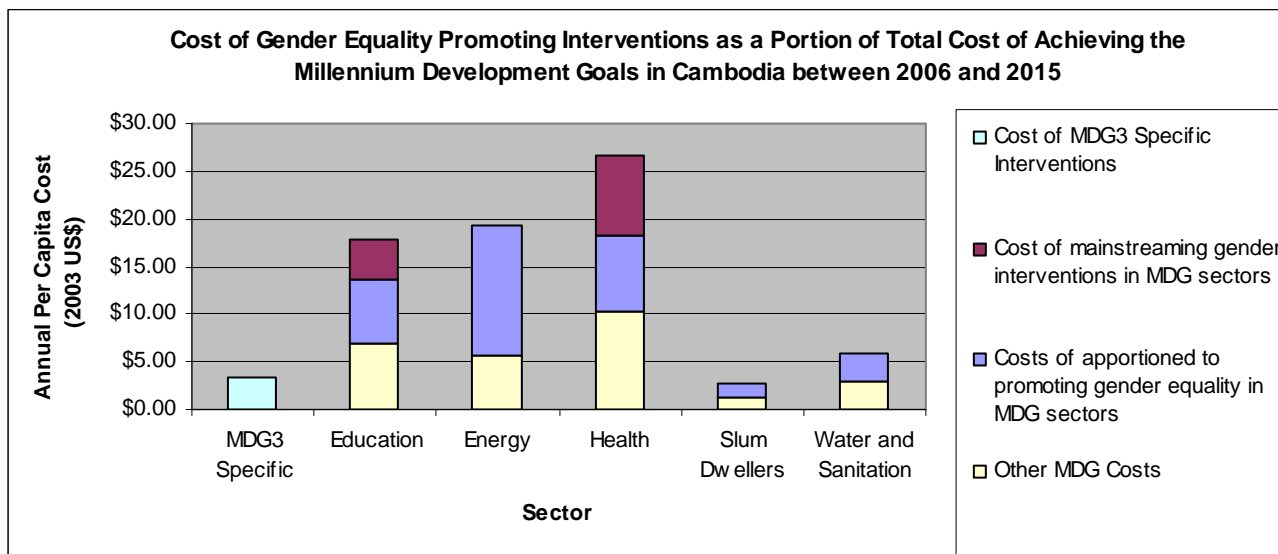


Table A.4.3. Per Capita Costs of Achieving Gender Equality in Ghana (2003 US\$)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Annual Average
Costs of MDG3 Specific Interventions	1.64	1.83	1.92	2.05	2.24	2.53	3.00	3.77	5.11	7.28	3.14
Costs of Mainstreaming Gender Intervention in MDG Sectors											
Education	1.79	1.98	2.22	2.50	2.83	3.24	3.70	4.26	4.91	5.68	3.31
Energy	0.0076	0.0074	0.0073	0.0071	0.0070	0.0068	0.0067	0.0066	0.0065	0.0064	0.0069
Health	5.55	5.95	6.34	6.66	6.73	7.03	7.28	7.54	7.76	7.82	6.87
Rural Development	0.22	0.22	0.22	0.22	0.23	0.24	0.25	0.28	0.32	0.37	0.25
Slum Dwellers	0.0180	0.0176	0.0173	0.0169	0.0166	0.0163	0.0160	0.0157	0.0154	0.0152	0.0165
Water and Sanitation	0.0408	0.0399	0.0392	0.0384	0.0376	0.0369	0.0362	0.0356	0.0349	0.0344	0.0374
Total	7.62	8.21	8.84	9.44	9.85	10.56	11.29	12.14	13.04	13.93	10.49
Costs Apportioned to Gender Equality in MDG Sectors											
Education	9.45	9.51	12.29	10.69	10.67	11.05	11.21	11.58	11.83	12.32	11.06
Energy	6.88	7.17	7.49	7.76	8.02	8.31	8.55	8.81	9.18	9.03	8.12
Health	8.12	9.00	9.90	10.75	11.46	12.24	12.88	13.47	13.90	14.21	11.59
Rural Development	0.76	0.86	0.99	1.16	1.37	1.69	2.08	2.64	3.33	4.33	1.92
Slum Dwellers	0.70	0.75	0.80	0.85	0.91	0.98	1.05	1.13	1.21	1.30	0.97
Water and Sanitation	3.06	3.15	3.26	3.37	3.50	3.68	3.86	4.20	5.40	12.59	4.61
Total	28.96	30.44	34.74	34.59	35.93	37.95	39.63	41.83	44.85	53.77	38.27
Total Costs of Achieving Gender Equality	38.22	40.48	45.50	46.08	48.01	51.05	53.92	57.75	63.00	74.98	51.90

Figure A.4.3. Ghana

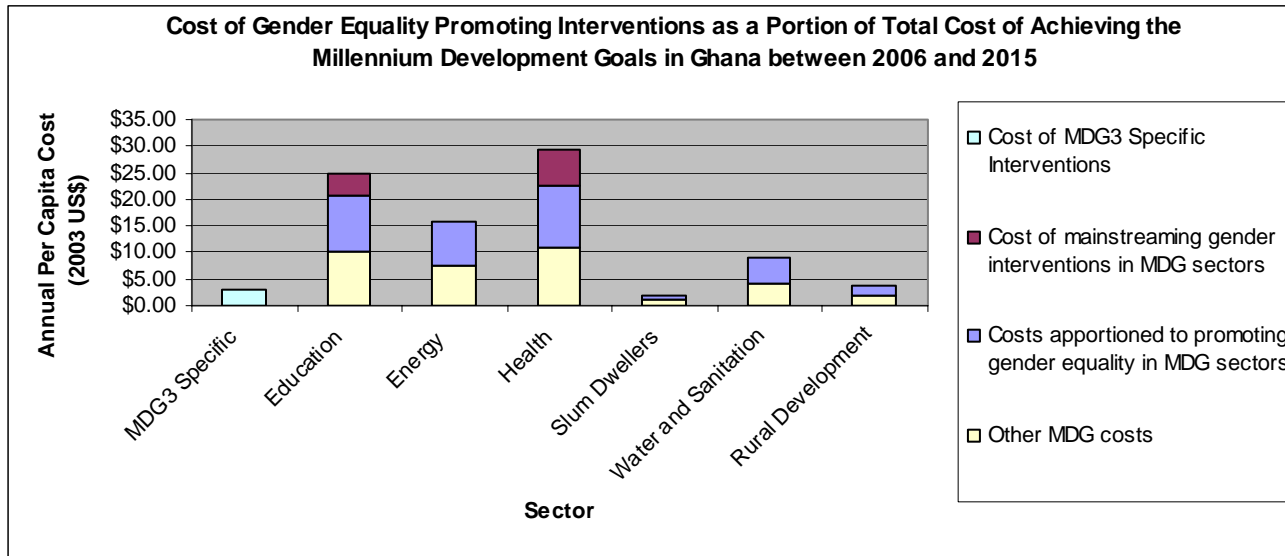


Table A.4.4. Per Capita Costs of Achieving Gender Equality in Tanzania (2003 US\$)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Annual Average
Costs of MDG3 Specific Interventions	1.55	1.73	1.81	1.96	2.21	2.64	3.40	4.76	7.24	11.65	3.90
Costs of Mainstreaming Gender Intervention in MDG Sectors											
Education	0.58	0.70	0.85	1.02	1.22	1.46	1.74	2.07	2.45	2.89	1.50
Energy	0.0707	0.0695	0.0682	0.0671	0.0659	0.0648	0.0636	0.0624	0.0613	0.0602	0.0654
Health	6.56	6.75	6.93	7.11	7.13	7.29	7.44	7.58	7.72	7.68	7.22
Rural Development	0.13	0.14	0.16	0.17	0.20	0.23	0.27	0.33	0.40	0.49	0.25
Slum Dwellers	0.0707	0.0695	0.0682	0.0671	0.0659	0.0648	0.0636	0.0624	0.0613	0.0602	0.0654
Water and Sanitation	0.0707	0.0695	0.0682	0.0671	0.0659	0.0648	0.0636	0.0624	0.0613	0.0602	0.0654
Total	7.48	7.80	8.14	8.50	8.74	9.18	9.64	10.17	10.75	11.25	9.17
Costs Apportioned to Gender Equality in MDG Sectors											
Education	5.33	5.55	5.79	6.08	6.39	6.71	6.98	7.34	7.70	8.18	6.61
Energy	10.16	10.56	10.94	11.31	11.65	11.98	12.26	12.52	12.76	12.78	11.69
Health	11.40	12.83	14.53	16.26	17.86	19.37	20.64	21.65	22.38	22.77	17.97
Rural Development	0.80	0.91	1.07	1.24	1.49	1.77	2.18	2.65	3.32	4.20	1.96
Slum Dwellers	1.08	1.16	1.24	1.33	1.43	1.53	1.64	1.76	1.89	2.03	1.51
Water and Sanitation	2.76	2.89	3.05	3.24	3.47	3.73	4.13	4.71	5.62	7.16	4.07
Total	31.53	33.90	36.61	39.45	42.29	45.10	47.84	50.62	53.67	57.11	43.81
Total Costs of Achieving Gender Equality	40.56	43.43	46.57	49.92	53.24	56.93	60.88	65.55	71.66	80.01	56.88

Figure A.4.4. Tanzania

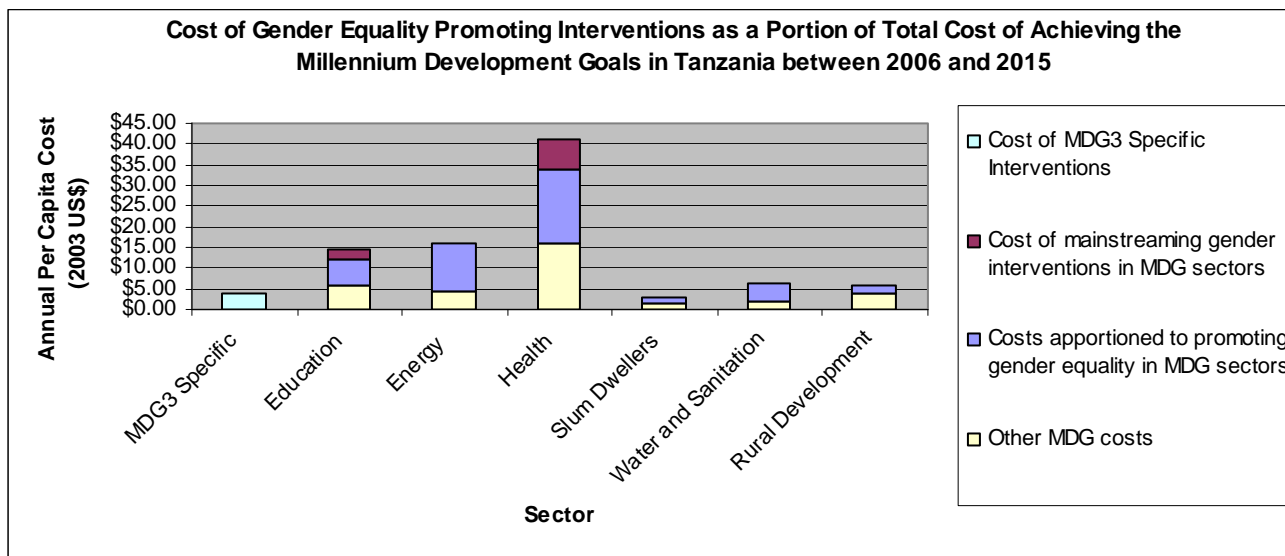
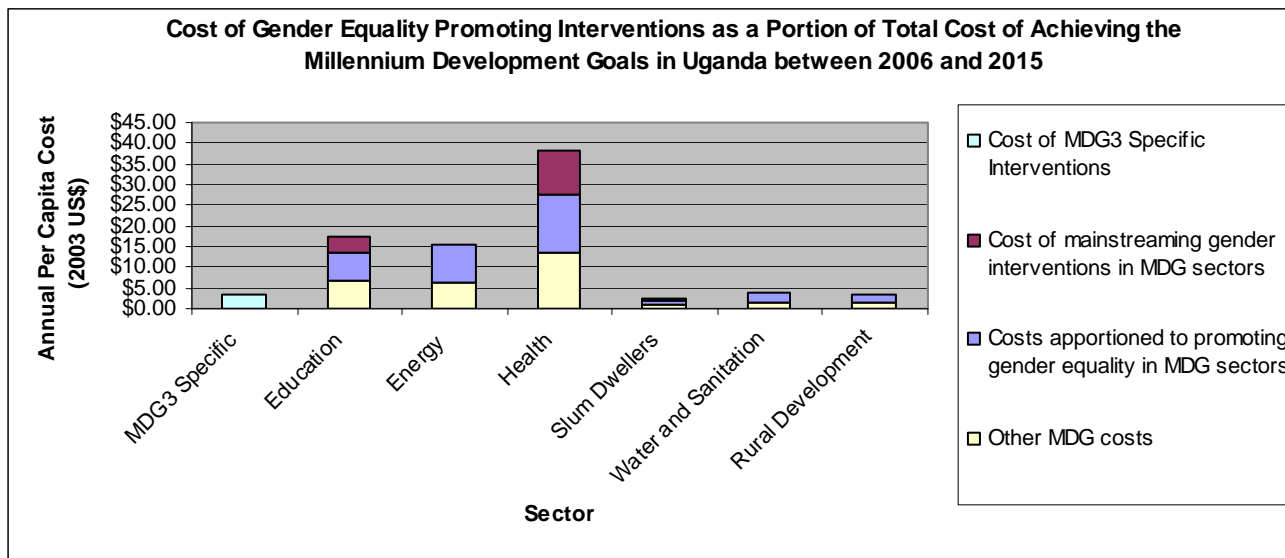


Table A.4.5. Per Capita Costs of Achieving Gender Equality in Uganda (2003 US\$)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Annual Average
Costs of MDG3 Specific Interventions	1.62	1.80	1.88	2.00	2.19	2.48	2.97	3.81	5.28	7.75	3.18
Costs of Mainstreaming Gender Intervention in MDG Sectors											
Education	0.74	0.90	1.09	1.30	1.54	1.82	2.14	2.52	2.95	3.44	1.84
Energy	0.0540	0.0521	0.0503	0.0485	0.0469	0.0452	0.0436	0.0421	0.0406	0.0392	0.0462
Health	9.42	9.75	10.08	10.35	10.42	10.66	10.89	11.11	11.31	11.37	10.54
Rural Development	0.08	0.09	0.10	0.11	0.13	0.15	0.19	0.25	0.33	0.46	0.19
Slum Dwellers	0.0540	0.0521	0.0503	0.0485	0.0469	0.0452	0.0436	0.0421	0.0406	0.0392	0.0462
Water and Sanitation	0.0540	0.0521	0.0503	0.0485	0.0469	0.0452	0.0436	0.0421	0.0406	0.0392	0.0462
Total	10.40	10.90	11.41	11.90	12.23	12.76	13.35	14.01	14.71	15.39	12.71
Costs Apportioned to Gender Equality in MDG Sectors											
Education	6.11	6.32	6.55	6.85	7.22	7.54	7.92	8.44	8.92	9.60	7.55
Energy	6.44	7.07	7.68	8.25	8.79	9.28	9.75	10.20	10.60	10.77	8.88
Health	9.94	10.79	11.83	12.89	13.87	14.86	15.79	16.65	17.39	18.00	14.20
Rural Development	0.98	1.08	1.24	1.40	1.62	1.87	2.21	2.64	3.18	3.87	2.01
Slum Dwellers	0.84	0.88	0.93	0.98	1.03	1.09	1.15	1.21	1.28	1.35	1.07
Water and Sanitation	1.37	1.47	1.59	1.73	1.91	2.14	2.44	2.86	3.51	4.98	2.40
Total	25.68	27.62	29.82	32.10	34.45	36.78	39.25	42.00	44.87	48.57	36.12
Total Costs of Achieving Gender Equality	37.70	40.32	43.11	46.00	48.86	52.03	55.58	59.82	64.87	71.71	52.00

Figure A.4.5. Uganda



Appendix 5

Scenarios for Projecting the Gender Financing Gap in Low-Income Countries

Scenario 1: All gender equality interventions are externally financed.

Table A.5.1. Scenario 1 (2003 U.S.\$ billions)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average
Achieving the MDGs											
Investment needs	251.7	273.8	297.5	323.8	352.9	386.0	421.9	463.2	509.0	560.1	384.0
Domestic resource mobilization	178.9	196.7	216.2	236.7	259.1	283.5	308.8	337.3	367.0	399.9	278.4
Financing gap	72.8	77.1	81.2	87.0	93.9	102.6	113.1	126.0	142.0	160.2	105.6
MDG3 Specific											
Investment needs	5.3	6.0	6.4	6.9	7.8	9.3	11.7	15.8	23.2	35.9	12.8
Domestic resource mobilization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financing gap	5.3	6.0	6.4	6.9	7.8	9.3	11.7	15.8	23.2	35.9	12.8
Mainstreaming Costs											
Investment needs	24.4	26.3	28.4	30.6	32.2	34.9	37.5	40.6	44.1	47.3	34.6
Domestic resource mobilization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financing gap	24.4	26.3	28.4	30.6	32.2	34.9	37.5	40.6	44.1	47.3	34.6
MDG3 Specific + Mainstreaming Costs											
Investment needs	29.7	32.3	34.8	37.5	40.1	44.2	49.2	56.5	67.3	83.2	47.5
Domestic resource mobilization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financing gap	29.7	32.3	34.8	37.5	40.1	44.2	49.2	56.5	67.3	83.2	47.5
Financing gap (2003 US\$ per capita)	11	12	12	13	14	15	17	19	22	27	16

Scenario 2: Governments commit one percent of public expenditure to gender equality interventions in 2006, scaled up to three percent by 2015.

Table A.5.2. Scenario 2 (2003 U.S.\$ billions)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average
Achieving the MDGs											
Investment needs	251.7	273.8	297.5	323.8	352.9	386.0	421.9	463.2	509.0	560.1	384.0
Domestic resource mobilization	178.9	196.7	216.2	236.7	259.1	283.5	308.8	337.3	367.0	399.9	278.4
Financing gap	72.8	77.1	81.2	87.0	93.9	102.6	113.1	126.0	142.0	160.2	105.6
Government financing of MDG3 specific and gender mainstreaming interventions											
Percentage of public expenditure allocated towards MDG3 specific and gender mainstreaming interventions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public expenditure allocated towards MDG3 specific and gender mainstreaming interventions	1.9	2.5	3.2	3.9	4.7	5.6	6.5	7.6	8.8	10.1	5.5
MDG3 Specific											
Investment needs	5.3	6.0	6.4	6.9	7.8	9.3	11.7	15.8	23.2	35.9	12.8
Domestic resource mobilization	0.5	0.6	0.8	1.0	1.2	1.4	1.6	1.9	2.2	2.5	1.4
Financing gap	4.8	5.4	5.6	6.0	6.7	7.9	10.1	13.9	21.0	33.4	11.5
Mainstreaming Costs											
Investment needs	24.4	26.3	28.4	30.6	32.2	34.9	37.5	40.6	44.1	47.3	34.6
Domestic resource mobilization	1.5	1.9	2.4	2.9	3.5	4.2	4.9	5.7	6.6	7.5	4.1
Financing gap	22.9	24.4	26.1	27.7	28.7	30.7	32.6	34.9	37.5	39.8	30.5
MDG3 Specific + Mainstreaming Costs											
Investment needs	29.7	32.3	34.8	37.5	40.1	44.2	49.2	56.5	67.3	83.2	47.5
Domestic resource mobilization	1.9	2.5	3.2	3.9	4.7	5.6	6.5	7.6	8.8	10.1	5.5
Financing gap	27.8	29.7	31.6	33.6	35.4	38.6	42.7	48.9	58.5	73.2	42.0
Financing gap (2003 US\$ per capita)	10	11	11	12	12	13	14	16	19	23	14

Scenario 3: The share of government resources for gender equality interventions is proportionate to the share of GE interventions in total MDG costs.

Table A.5.3. Scenario 3 (2003 U.S.\$ billions)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average
Achieving the MDGs											
Investment needs	251.7	273.8	297.5	323.8	352.9	386.0	421.9	463.2	509.0	560.1	384.0
Domestic resource mobilization	178.9	196.7	216.2	236.7	259.1	283.5	308.8	337.3	367.0	399.9	278.4
Financing gap	72.8	77.1	81.2	87.0	93.9	102.6	113.1	126.0	142.0	160.2	105.6
MDG3 Specific											
Investment needs	5.3	6.0	6.4	6.9	7.8	9.3	11.7	15.8	23.2	35.9	12.8
Domestic resource mobilization	3.8	4.3	4.6	5.1	5.8	6.8	8.6	11.5	16.7	25.6	9.3
Financing gap	1.5	1.7	1.7	1.9	2.1	2.5	3.1	4.3	6.5	10.3	3.6
Mainstreaming Costs											
Investment needs	24.4	26.3	28.4	30.6	32.2	34.9	37.5	40.6	44.1	47.3	34.6
Domestic resource mobilization	17.3	18.9	20.7	22.4	23.7	25.6	27.5	29.6	31.8	33.8	25.1
Financing gap	7.1	7.4	7.8	8.2	8.6	9.3	10.1	11.0	12.3	13.5	9.5
MDG3 Specific + Mainstreaming Costs											
Investment needs	29.7	32.3	34.8	37.5	40.1	44.2	49.2	56.5	67.3	83.2	47.5
Domestic resource mobilization	21.1	23.2	25.3	27.4	29.4	32.4	36.0	41.1	48.5	59.4	34.4
Financing gap	8.6	9.1	9.5	10.1	10.7	11.7	13.2	15.4	18.8	23.8	13.1
Financing gap (2003 US\$ per capita)	3	3	3	4	4	4	4	5	6	8	4