Public Policies for Human Development

Achieving the Millennium Development Goals in Latin America

Edited By

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Preface

Over the past ten years, the United Nations Development Programme (UNDP) has coordinated a number of comparative studies on the macroeconomic performance, poverty and inequality in Latin America and the Caribbean. Completed projects include macroeconomic policies and poverty during the 1980s and 1990s,[1] the impact of balance-of-payments liberalization on income distribution and poverty,[2] and the impact of trade liberalization and free trade agreements on distribution and poverty.[3] These studies were all collaborative efforts involving other UN agencies (including the Economic Commission for Latin America and the Caribbean, UN-ECLAC, and the United Nations Department of Economic and Social Affairs, UN-DESA), as well as renowned international research institutes (including the International Food Policy Research Institute, IFPRI, in Washington D.C., and the Institute of Social Studies, ISS, in The Hague) and the multilateral development banks (World Bank and the Inter-American Development Bank). Most importantly, however, the studies brought together high-level researchers and policymakers from most (that is, 16 or more) countries in the region in order to obtain the best possible insights in country-specific conditions and the reasons for success or failure in reducing poverty and improving human development. The studies clearly revealed that while countries fairly uniformly engaged in Washington-consensus style economic reform measures, the outcomes in terms of growth, income inequality and poverty have been quite diverse because of different institutional settings, economic structures and human resource endowments. The more common finding, though, was that the market-oriented reforms did not yield the progress towards higher and sustained growth and substantial poverty reduction promised by the advocates of the reforms. Furthermore, inequality remains unchanged at very high levels.

Rather than evaluating the performance of past policies, the present book takes a more forward looking approach. It assesses what feasible financing strategies policymakers in the region would be advised to follow in pursuance of the United Nations' millennium development goals (MDGs) and their achievement in 2015. The studies relate to similar concerns as those of the previous projects, though: how to make macroeconomic policies more conducive to support sustained growth and reduce the still widespread poverty and inequality in the region. In addition, the present study also addresses the question how such policies could ensure sufficient levels of public spending in support of improvements in human development in terms of ensuring that all children complete at least primary education, that child and maternal mortality rates are brought down substantially and that all of the region's population has adequate access to basic sanitation. In doing so, the study keeps an economy-wide perspective

as progress on human development and increased resources allocated towards social services will affect the composition of the labour supply, change relative prices, and may exercise financing constraints in different parts of the economy. This provides great value added over more sector-based needs assessments for achieving the MDGs as the analysis shows that the macroeconomic repercussions strongly influence the cost estimates of the resources needed to achieve the goals in education, health and sanitation. The model-based approach of the study also enables policymakers to get a better sense of whether their country is "on track" or "off track" towards the achievement of the MDGs. Standard assessments of that kind typically make linear projections based on past performance. The analyses in the present study simulate whether with a continuation of existing policies the goals can be reached or whether greater efforts are needed and, if so, how the additionally required resources can best be mobilized. While the region has made much human progress, severe deficits remain and achievement of the MDGs clearly will require important additional efforts. The study concludes these are affordable for all countries, but it will require that some hard choices in favour of social development and, in most countries, at the expense of higher taxes will have to be made.

As in the previous projects, also this study was a collaborative endeavour. The study was initiated by UNDP's Regional Bureau for Latin America and the Caribbean, which also organized the funding for the project. The World Bank also provided financial support and, importantly, the core modelling framework— the MAquette for MDG Simulations (MAMS)— which was applied and further developed in the country studies conducted for this project. UNDESA and the ISS provided expertise in helping adapt the MAMS framework to the Latin American context, the methodologies for the social sector analysis and the microsimulations. ECLAC and the Inter-American Development Bank provided institutional and financial support to facilitate the implementation of several of the country studies.

In order to obtain answers as close as possible to country realities, the project conducted the investigation in collaboration with teams of local researchers and policymakers in nineteen countries in the region. Combining country expert knowledge with a common, rigorous modelling methodology to assess feasible financing strategies to achieve the MDGs ensured both a high degree of realism and policy relevance in the analysis and maximum comparability. Without the input of the country experts, most appearing as chapter authors in this volume, this undertaking would not have been possible. The investigation took place over a period of two and a half years, during which four workshops were held at which the research methodology was agreed and refined and intermediate results were discussed and compared. UNDP country offices in Uruguay, Venezuela, Guatemala, and Chile offered invaluable support in making these events happen.

Samuel Morley of IFPRI provided crucial ideas and impetus to the conceptualization of the project and at various project workshops he helped place the sophisticated modelling exercises back into the reality of Latin American development. We also thank Hans Timmer and Jaime Saavedra at the World Bank for their support throughout the project and their suggestions for the project's design.

The coordinators of the project received invaluable research support from Martín Cicowiecz, research fellow at *Centro de Estudios Distributivos, Laborales y Sociales* (CEDLAS) of *Universidad Nacional de La Plata*. He was instrumental in the further development of the modelling techniques and their application in each of the countries. Furthermore, his enthusiasm and dedication to the project helped create the right kind of team spirit among all country teams and he managed to solve an infinite number of problems for the country teams and get their models running. The country experts from the Research Centre of the *Universidad del Pacífico* (CIUP), Peru, besides preparing their own country study also provided support in the analysis of determinants of MDG achievements to the country team of Guatemala. Sherman Robinson of the University of Sussex gave most valuable methodological advice during several of the project's workshops. We are also grateful to Cornelia Kaldewei of UN-DESA who assisted in making sense out of the mass of country-specific results while providing support to the comparative country analysis as presented in Chapter 2.

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Notes

1 See Enrique Ganuza, Lance Taylor and Samuel Morley, eds. (1998). *Política macroeconómica y pobreza en América Latina y el Caribe*, Madrid: Ediciones Mundi-Prensa (for UNDP).

2 See Enrique Ganuza, Ricardo Paes de Barros, Lance Taylor and Rob Vos, eds. (2001). *Liberalización, desigualdad y pobreza: América Latina y el Caribe en los 90*, Buenos Aires: EUDEBA (for UNDP); and Rob Vos, Lance Taylor and Ricardo Paes de Barros, eds. (2002). *Economic Liberalization, Distribution and Poverty. Latin America in the 1990s*, Cheltenham (UK) and Northampton, MA: Edward Elgar Publishers.

3 See Rob Vos, Enrique Ganuza, Samuel Morley and Sherman Robinson, eds. (2006). *Who Gains from Free Trade? Export-led Growth, Inequality and Poverty in Latin America*, London, New York: Routledge; and Enrique Ganuza, Samuel Morley, Sherman Robinson and Rob Vos, eds. (2004). *Quién se beneficia del libre comercio? Promoción de exportaciones y pobreza en América Latina y el Caribe en los 90*, Bogotá: Alfaomega.

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1
Overview

Rob Vos, Marco V. Sánchez and Enrique Ganuza

Progress towards the human development goals in Latin America

Poverty in Latin America and the Caribbean tends to be lower than in most other developing country regions. The region also scores better in terms of education and health achievements. Social indicators reveal substantial progress in terms of human development in recent decades. Nonetheless, on several counts progress has been slower than in other parts of the developing world. In terms of the Millennium Development Goals (MDGs), agreed upon by all countries in the world in the framework of the 2000 Millennium Declaration of the United Nations, increased efforts will be needed to meet the established targets by 2015. Regarding access to primary education and reducing child mortality, the countries in Latin America and the Caribbean have been able to keep pace with fast growing East Asia, for instance. However, where it comes to reducing extreme poverty, the region has made very little progress since 1990, with the share of the population living on less than one dollar a day barely falling (see Figure 1.1). In contrast, fast and sustained economic growth in many of the countries in East Asia has contributed to a substantial decline in poverty in that part of the world. Also progress in expanding the coverage of drinking water and basic sanitation has been relatively slow on average in the Latin America and the Caribbean.

Per capita income growth in the region reached a meagre 1.8 per cent per annum between 1990 and 2008, well below the average welfare improvements witnessed in the 1960s and 1970s and also underachieving compared with other parts of the developing world. Growth in the region also tends to show substantially higher volatility than elsewhere (United Nations, 2008). Stronger recent growth performance in the region since 2003 was greatly helped by a buoyant world economy and favourable commodity prices, but has not been enough to overcome the discontent with the outcomes of the drastic economic reform measures introduced by most countries of the region since the late 1980s. The

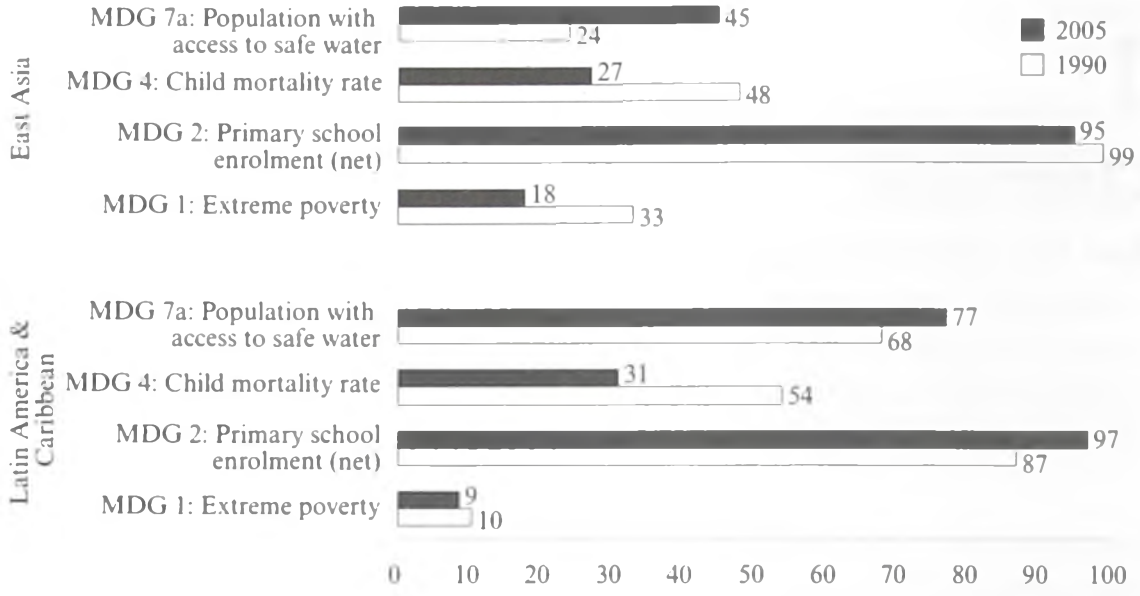

Figure 1.1 Progress towards the MDGs in East Asia and Latin America and the Caribbean, 1990-2005[a]

Source: United Nations (2007).

[a] All indicators are in per cent, except MDG 4 which defines under-five mortality per 1,000 live births.

far-reaching liberalization of trade, capital flows, financial sectors and domestic markets for goods and services in the countries of the region, among others, formed the showcase of the Washington Consensus, but failed to yield high sustainable growth. Volatility in capital flows and world commodity markets exercised an even stronger influence on stop-go economic cycles in the countries of the region and economic opening seems to have done little in support of reducing poverty and pervasive income inequality, as predecessor studies to the present volume have pointed out (see Vos and others, 2002, 2006). Those earlier studies emphasized that insufficient human development, manifested among other things through constraints in the supply of skilled workers, is one element in explaining the limited capacity of the countries in the region to take greater advantage of potential gains from opening borders to international trade and investment. Those studies also concluded that existing income inequality would hamper more of economic growth trickling down to the poor, thereby also limiting the resources for the poor to invest in education and better health.

The MDG agenda adopted under the auspices of the Millennium Declaration should provide the impetus to reinvigorate efforts to invest in human development which had been pretty much undervalued by the Washington Consensus. The MDG framework is foremost an advocacy tool for putting poverty reduction, improvement in primary education, child and maternal mortality, gender equality and a sustainable environment to the forefront of priority setting in public policies. As such, it does not identify specific sets of policies that would need to be put in place to achieve the targets that are to be achieved by 2015. Such policies need to be defined at the country level and embedded in broader

national development strategies. Hence to assess the different dimensions of development strategies and policies oriented at the achievement of the MDGs, there are at least three crucial questions that must be answered. First, what is the trajectory that the country will follow under current policies and investments, and what is the likelihood of achieving the goals (or a subset of them) in those circumstances? If projections based on a continuation of existing policies suggest important departures from the desired outcomes, then the second question is: What changes in development strategy, institutions, policies, and investments may be needed to achieve the goals? To answer the second question requires analysis of the links between policy choices and economic outcomes—the subject matter of much of development economics. A related third question is: What are the costs of different strategies, policies, and investment alternatives, including the macroeconomic adjustment costs of alternative financing options?

By seeking answers to these questions, the present study analyzes the feasibility of timely reaching goals in 18 countries in Latin America and the Caribbean, covering practically all of the region's population and GDP.[1]

For a variety of reasons, the most important being insufficient data availability, this study will not cover all MDGs and the related specific targets but will explicitly consider the following goals and specific targets which countries will be attempting to reach by the year 2015:

- MDG 1 – Eradicate extreme poverty and hunger: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day.[2]
- MDG 2 – Achieve universal primary education: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.
- MDG 3 – Promote gender equality: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015.
- MDG 4 – Reduce child mortality: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate.
- MDG 5 – Improve maternal health: Reduce by three quarters, between 1990 and 2015, the maternal mortality rate.
- MDG 7 – Ensure environmental sustainability: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

An integrated analytical framework for assessing MDG strategies

The process of selecting the best policy interventions and estimating their costs is particularly difficult because there are likely trade-offs and synergies among MDGs as well as economy-wide effects that need to be taken into account.

Investing in children's nutritional status and health (MDGs 1 and 4) will result in better performance at school (MDG 2). This is an example of synergy. Governments with limited resources and wishing to prioritize spending on education and health services may find little fiscal revenue left for maintaining and investing in general physical infrastructure. The result could be that there is an improvement in education and health outcomes (MDGs 2, 4, and 5) but at the cost of lower output growth and income poverty reduction (MDG 1). Poorly maintained road and transportation infrastructure also could limit the accessibility of schools and health centres and thereby limit the effectiveness of public expenditures in these areas. These are examples of possible trade-offs in priority setting in public spending and outcomes for the various goals. If achieving the education and health goals implies hiring of additional teachers and health workers in large amounts, their wages, and with it the cost of the policy intervention, are likely to go up since such skills are not in unlimited supply. If, to finance the required increase in spending on education, health and basic sanitation, taxes will have to increase this may also affect disposable incomes of the poor and this then may indirectly affect the achievement of the MDGs. If financing involves more foreign aid or external borrowing, the real exchange rate might appreciate hurting output and employment in export sectors. These are examples of undesirable economy-wide, general-equilibrium effects. At the same time, of course, countries with a better educated and healthier work force likely are able to sustain stronger productivity growth supporting higher welfare in the long run. This likely entails an intertemporal trade-off, as there may be growth costs associated with enhanced investment in the human capital of the younger population now to obtain those future welfare gains.

Ideally policy makers should possess a tool for MDG analysis which helps identify the determinants and the costs of MDG achievement which would capture all synergies, trade-offs, input-output linkages, and economy-wide effects. At the same time, it should be transparent, easy to understand and adaptable, compatible with expenditure planning processes in line ministries, implementable even in a context with severe data limitations, and capable of simulating impact of policies in specific country settings.

Unfortunately, in real life no such tool exists. In practice, policymakers, academics and international organizations have used a variety of approaches to estimate the potential effects and costs of policy interventions to achieve the MDGs, including needs assessments and other sectoral approaches and macro approaches ranging from relatively simple poverty-growth elasticity estimates to more complex multi-sector general equilibrium models.

Needs assessments and other sector approaches

The "needs assessment" approach has been applied in an increasing number of countries. Many of these assessments have been supported by the work

developed through the United Nation's Millennium Project (United Nations Millennium Project, 2005). The approach tries to identify which interventions are needed in any specific context and estimate the related resource needs in terms of finance, infrastructure and trained personnel. This analysis is subsequently used to calculate the magnitude by which public expenditures need to be "scaled up" in order to reach the MDGs. When fit into the broader public sector budget framework of a nation, it may also serve to identify financing gaps. As such, it may provide inputs for negotiations with donors and multilateral financial institutions in order to ensure adequate resource mobilization. In essence, the approach does no more than one would minimally expect governments to undertake when trying to match budgets with plans for enhancing performance in education, health or water and sanitation. In practice, however, many developing countries show weak capacity to engage in such result-oriented budgeting as critical assessments of poverty reduction strategy papers have indicated (see, for example, ODI, 2003). The needs assessments have helped fill such lacunae in many instances.

Analytically, the needs assessment approach is best compared with cost-effectiveness studies for social sectors. Such studies seek to assess with greater quantitative precision which are the determinants of access to and/or outcomes in education, health and so on. A version of the human capital model derived from economic theory typically underlies the related microeconometric analysis (see, for example, Glewwe, 2002). Using micro and sector data sets, the analysis seeks to quantify the relative impact of each determinant on expected outcomes. For example, by how much should school subsidies or the supply of trained teachers increase to achieve a one-percent increase in school enrolment. After subsequent use of information about unit costs an idea can be obtained of the most cost-effective interventions. While similar in approach, in practice needs assessments more typically focus entirely on "supply side effects" (for example, the need for more school infrastructure, teachers, textbooks, and so on) without considering "demand factors" (such as household income, parent's education, child's health and other socio-economic characteristics of households and individuals). Consistent with the human capital approach, demand factors feature more prominent in cost-effectiveness analyses, but studies with complete specifications more typically consider both supply and demand-side determinants. Other shortcomings of the needs assessments, as conducted in practice, include the lack of consideration of the synergy effects, of the existence of possible non-linearities in the effectiveness of policy interventions, and of macroeconomic trade-offs of the kinds suggested above. Further, the needs assessments also do not consider the impact of scaled-up public expenditures on education, health, water and sanitation on income poverty.

Macro approaches

Income poverty is the main focus of the so-called "poverty-growth elasticity approach". In its most rudimentary form, it builds on an extension of the Harrod-Domar growth model to calculate the required investments that will be needed in order to reach a target growth rate.[3] To estimate the costs of achieving the goal of halving extreme poverty, assumed or estimated parameter values are added for the country's poverty-growth elasticity, which measures the amount of poverty reduction for each per cent of per capita output growth, and the incremental capital-output ratio (ICOR), which is a broad measure of the productivity of investment. The approach then can be used for calculating how much investment is needed for a country to halve poverty by 2015. This approach may be combined with a broader macroeconomic framework, as currently being implemented in several Asian countries (Seth and Kathiwada, 2007), adding a role for required investments in education and health, national savings, and domestic and external sources of finance.

While adding a link to income poverty and a link to macroeconomic variables, this approach also has important weaknesses. In particular, assuming a constant poverty-growth elasticity and ICOR over a prolonged period of time seems far from realistic. By definition, the poverty-growth elasticity will change as mean incomes rise or the poverty incidence falls.[4] Also, one may expect an MDG-oriented public investment strategy to affect income distribution, which in turn will affect the poverty-growth elasticity. The macroeconomic framework, as applied, assumes constant-price projections of required public investment outlays, which along with a constant ICOR and generally Keynesian model features under excess supply capacity, may well lead to optimistic projections of growth and hence of poverty reduction, under the given assumptions.

Agénor and others (2005) combine a macro model with an MDG module in a framework that requires relatively little data, but does use econometrically estimated parameters. On the other hand, the macro model is highly aggregated: it has only one production sector and it does not include intermediate inputs, factor markets, or factor wages (rents). These considerations limit its ability to analyze key aspects of MDG strategies such as how the direct exchange rate and labour market repercussions of scaled-up government programmes differ depending on whether the programme emphasizes, for example, education or infrastructure. Also, its high level of government and labour market aggregation makes it less informative for fiscal analysis.

The links between growth, service delivery, MDG achievements and financing outlined above demonstrate that a more sophisticated and coherent framework is needed. The analysis must consider macroeconomic factors and trade-offs between objectives. For example, increases in foreign aid (borrowing or grants, although the latter is less common in most of the countries in Latin America and the Caribbean) lead to concerns over the possibility of "Dutch

disease" effects, characterized by real exchange rate appreciation and a structural erosion of the capacity to produce tradables (for exports or the domestic market); a capacity that may be needed in the future. If, on the other hand, the MDG strategy is financed via increases in taxes or domestic borrowing, then private sector growth, investment, and consumption are all likely to be affected negatively. This could offset some of the gains the MDG strategy is trying to achieve. It may imply less progress on poverty reduction and, indirectly, towards the achievement of other MDGs because of effects on household incomes and consumption. A related critical issue is the pace at which large programmes should be scaled up. Rapid initial expansion may drive up costs more quickly and could be more expensive in real present value terms. On the other hand, given time lags, especially in education, expanding investment too slowly may make it impossible to achieve the MDGs by 2015.

Such limitations do not turn such studies into meaningless exercises. Any modelling exercise is bound by its assumptions and the amount of realism those contain. They may well serve contexts with severe data limitations which leave the application of fairly simple frameworks as a second-best option.

An integrated macro-micro framework

In the present volume, we take a somewhat more ambitious approach. The analysis is based on a comparative economy-wide model framework that accounts for both the microeconomic determinants of needs satisfaction in education, health and drinking water and basic sanitation and macroeconomic trade-offs in the financing of public spending options directed at satisfying those needs. The analysis further considers synergies between degrees of progress towards education, health, access to drinking water and basic sanitation, and poverty reduction goals. As explained in detail in Chapters 2 and 3, an integrated framework building on three sets of methodologies has been used in all country studies in this volume.

First, microeconomic and sector analyses of determinants of outcomes for MDGs 2, 4, 5 and 7 are undertaken along the lines of the aforementioned cost-effectiveness studies and needs assessments. Human capital models were estimated to identify the influence of both supply and demand factors on outcomes in education, health and drinking water and sanitation. Regarding MDG 2, the demand for primary and other levels of schooling is a function of student behaviour (enrolment, repetition, graduation). Student behaviour, in turn, depends on the quality of education (identified by variables such as classroom availability and student-teacher ratios), the income incentives (the expected wage premium from education), the under-five mortality rate (a proxy for the health status of the student population), household consumption per capita (a proxy for the capacity to pay for education and opportunity costs) and the level of public infrastructure (a proxy for the effective distance to school). Regarding

MDGs 4 and 5, under-five and maternal mortality are considered to be determined by the availability of public and private health services, household consumption per capita, the level of public infrastructure (a proxy for the effective distance to health centres and hospitals), and the coverage of water and sanitation services. Access to drinking water and basic sanitation was modelled as a function of household consumption per capita, the provision of such services by public or private providers and the level of public infrastructure. Country-specific conditions were considered in the case studies through adding additional explanatory and control variables.

Second, the findings of the analysis of MDG determinants are subsequently inserted into an economy-wide framework, as recently developed at the World Bank as an analytical tool to help countries think through the requirements and implications of scaling up resources to achieve the MDGs. The framework is labelled MAMS (***Ma****quette* for **M**DG **S**imulation) and was originally presented in Lofgren (2004). It has been extended and applied in the context of the present study covering 18 countries in Latin America and the Caribbean. Chapter 3 provides a detailed description of the version of MAMS applied to these country cases. MAMS has been built from a fairly standard computable general equilibrium (CGE) framework with dynamic-recursive features but incorporates a special module which specifies the main determinants of MDG achievement and the direct impact of enhanced public expenditures on MDG-related infrastructure and services. MAMS has been designed to help analysts and policymakers perform policy experiments (such as alternative financing scenarios) that consider the economy-wide implications of scaling up public expenditures in order to reach the MDGs.

Third, the achievement of the goal for reducing income poverty is defined in the integrated macro-micro framework as a function of the overall general equilibrium effects from dynamic adjustments in production, employment, wages and other relative prices, as well as changes in the quality of human capital through MDG-related expenditures. The final outcome for income poverty can be estimated by looking at the outcomes for per capita household income and consumption for different household groups. However, CGE models can typically only specify a limited number of representative households, which results in insufficient detail regarding changes in the distribution in order to be able to make robust statements regarding the poverty outcomes. In consequence, the CGE analysis is supplemented by a method of microsimulations that takes the labour market outcomes (unemployment, employment structure, relative remunerations, and skill composition) from the CGE for different types of workers and applies them to a micro data set (such as a household survey) to obtain the required details about income distribution for the poverty analysis. Chapter 2 details this approach which fits a recent tradition of combining economy-wide modelling instruments with micro level data of the full income distribution.[5]

Main findings

The integrated macro-micro framework allows to assess what would be required to achieve the MDGs, including what type of actions to be undertaken at the sector level, realistic estimates of the macroeconomic costs, and how macroeconomic trade-offs of alternative financing strategies might be dealt with. The framework also provides policy makers with a more appropriate tool to establish whether the country is "on track" or not towards the goals. Existing studies often try to establish this by looking at past trends and projecting those trends forward in linear fashion. The past need not be a good predictor of the future and what may be more important is to establish what resources and mechanisms are currently in place in support of the achievement of the MDGs and take into consideration possibly decreasing marginal returns in the effectiveness of social spending in achieving the MDG. In MAMS, this situation is identified through a "business-as-usual" scenario of trends under continued existing policies and given exogenous circumstances. If this baseline scenario does not meet the given MDG targets, countries are said to be "off track" in this framework and the effectiveness of additional or alternative policies can be readily measured against this benchmark. In the "MDG scenarios", public expenditures are scaled up to the level required to reach the targets set for MDGs 2, 4, 5 and 7 and the economy-wide implications are assessed by comparing the MDG scenario results with what would be the simulated outcome of "business-as-usual".

Against this analytical backdrop, the selected country studies presented in Chapters 4 to 12 and the comparative analysis of Chapter 2 demonstrate that achieving the MDGs is within reach for most Latin American and Caribbean countries. Additional efforts to those currently undertaken will be needed. The country analyses also show that in most cases the cost of the additional public spending are low to moderate in macroeconomic terms. Even so, alternative financing mechanisms to cover those costs need to be assessed carefully as these tend to generate macroeconomic trade-offs. These findings can be detailed in four points.

First, the poverty reduction target is within reach, even with unchanged policies, in six countries of the region, including the most populous ones, Mexico and Brazil. This results under the assumptions of a baseline scenario which would reflect continued good economic performance from around 2003. For 12 of the 18 countries, however, baseline output and employment growth would not suffice to meet MDG 1. The goals for safe drinking water and basic sanitation (MDG 7) are more uniformly achievable with continued existing efforts in most countries of the region. The region is also making good progress in improving primary school enrolment, but keeping all children in primary school until graduation remains a big challenge in nearly all of the countries of the region, with the exception of Cuba, and, possibly, Chile, Costa Rica

and Mexico. All countries have made significant progress in reducing child mortality, but efforts will need to be stepped up in most countries in order to reduce early childhood deaths by two thirds by 2015. Only Chile and Cuba appear to be "on track" for this goal. Estimates of maternal mortality are subject to measurement errors, but the best available evidence for the region suggests very little progress and, again, only Chile and Cuba seem to be "on track" for this related target.

Second, these findings indicate that additional efforts have to be made to achieve the MDGs for education, health and drinking water and basic sanitation. The country studies estimate the required additional public spending on MDG-related services in the order ranging from about 1–1.5 per cent of GDP per annum in the cases of Peru, Costa Rica, Ecuador, and Jamaica to an annual additional cost of 4–6 per cent of GDP in Mexico, Nicaragua, Honduras, and Guatemala. Only for Cuba and Chile, which are the countries that should be able to achieve the goals under 'business-as-usual' policies, no additional costs would need to be incurred. For most countries, however, the additional cost would be less than 3 per cent of GDP, which seems moderate in macroeconomic terms, although it would imply substantial increases (sometimes a doubling) from base-year levels.

The additional resources would have to be spent effectively on improving the availability and quality of educational services, health care delivery systems and basic sanitation provisioning. What this entails precisely for sector policies will vary from country to country depending on initial conditions and institutional settings, but typically it would imply a focus on improving school inputs and enhancing teacher quality, as well as increased access to health services, and enhanced coverage of vaccination programmes and basic sanitation. Further, improving general infrastructure (including roads and energy supply) are found to help improve the accessibility and functioning of health and education services, thereby supporting the achievement of the goals indirectly. However, meeting the MDGs is not only a matter of expanding social spending in these directions. The country studies show strong effects from improved socioeconomic conditions at the household level, as better education helps improve health outcomes and vice versa, and improved income situations of households generally also contribute to enhancing access to health and education. The latter implies that reducing income poverty should also help achieve the other MDGs.

This brings us to the third main finding, which is that a public spending strategy in pursuance of MDGs 2, 4, 5 and 7 is not sufficient to achieve the target for poverty reduction. The model-based analyses did not consider specific interventions to reduce income poverty, but rather assumed poverty outcomes to result from the employment and income effects generated throughout the economy under the business-as-usual and MDG strategy scenarios.

The aggregate demand injections through the simulated increases in required public spending on education and health services and on drinking water and sanitation infrastructure in most cases does not induce sufficiently strong employment and income distribution effects to make adequate progress towards the targeted poverty reduction. In most country cases, moderate to high average GDP growth under both the business-as-usual and MDG scenarios would generate rather modest employment growth. In fact, in only four country cases, namely Brazil, Guatemala, Honduras and Nicaragua, would the MDG strategy induce a significantly stronger decrease in income poverty as compared with the scenario of unchanged trends and policies.

High income inequality remains an obstacle for more aggregate growth to trickle down to the poor in Latin America and the Caribbean. As one may expect, the country studies show that the MDG strategy generally reduces the supply of unskilled workers as more and more boys and girls complete primary education and also more tend to continue into secondary-level education. Over time, the supply of skilled workers increases. Also the demand for better educated workers tends to increase with the expansion of skill-intensive social services. In many of the country cases, the net effect is a shift in real wages in favour of unskilled workers, but overall, the impact on income inequality at the household level is rather weak, at least over the time period up to 2015.

Consequently, without additional policy interventions, most of the poverty reduction effects of the MDG strategy depend on the aggregate effects on employment and mean incomes. It may be argued that improved education and health of the working population will facilitate faster productivity growth and this could accelerate poverty reduction. Such gains will take time to mature, though, among others because of the length of schooling cycles, and most likely will kick in after 2015.

Fourth, the financing strategy matters. Assessing strategies to finance the increase public spending for the MDGs, the country studies generally find that foreign financing is less costly –in terms of required increases in public spending– than domestic borrowing or increased taxation. This is so because domestic resource mobilization by the government tends to crowd out disposable incomes or private investment to some degree, and this in turn would reduce private spending on MDG related services and require the government to step in more in order to reach the goals. There are, however, important macroeconomic trade-offs to consider in the case of an MDG strategy financed through external borrowing or foreign grants. Foreign financing tends to generate a stronger appreciation of the real exchange rate and weaker export growth than in the case of a strategy based on domestic resource mobilization. Furthermore, a strategy based on external borrowing would lift public debt to unsustainable levels in virtually all country cases. Such limitations to foreign financing put the burden on domestic resource mobilization. Domestic government

borrowing, however, appears to generate a rather strong crowding-out of private spending and would also lift total public debt to unsustainable levels in most country cases. As a result, increasing the tax burden seems the core option for countries to consider. Effective tax burdens in most countries of the region are low by any standard, suggesting ample scope for a tax-financed MDG strategy. This probably should be a priority in all countries, but as the studies in this volume make clear, the nature and extent of a feasible tax reform needs careful assessment from case to case.

Impact of the global economic crisis

A substantial slowdown in the progress towards the Millennium Development Goals (MDGs) should be expected as a consequence of the global economic crisis that emerged in 2008. At the time the country studies for this report were undertaken, Latin American countries along with other parts of the developing world enjoyed robust rates of income growth. The outlook has become much less bright with the intensification of the financial crisis in the United States in mid-2008 which quickly spread to become a global economic crisis that is also hitting hard on Latin American economies. Rising unemployment and underemployment, drops in per capita incomes and less government revenue will also affect both public and private spending and no doubt imply significant setbacks in the progress made towards the MDGs. The precise magnitude of the setback is difficult to estimate at this point and will vary from country to country according to existing fiscal policy space and institutional capacity to respond to the crisis.

The framework presented in this volume can also be applied to make an ex-ante assessment of the possible impact of the crisis on the MDGs and reassess the costs and macroeconomic implications of putting countries back on track towards achievement of the goals by 2015. A recent study by Sánchez and Vos (2009) using the model framework used in this volume's country studies but applied only to six of the countries (Bolivia, Brazil, Chile, Costa Rica, Honduras and Nicaragua) addressed the following questions in this context: (i) to what extent will the global economic crisis affect MDG achievement? (ii) how much additional public spending will be needed to achieve the MDGs by 2015 owing to the negative impact of the crisis? (iii) will governments still be able to find sustainable funding for their MDG strategies? and (iv) to what extent will increased MDG spending operate as an effective counter-cyclical response for economic recovery?

For this analysis a new baseline scenario was generated projecting a prolonged recession in all countries during 2009-2010 and a slow but gradual recovery towards pre-crisis growth levels by 2015. The region's low-income countries (Bolivia, Honduras and Nicaragua) would fall substantially further off track towards the MDGs for primary school completion, child and maternal

mortality, and access to drinking water and basic sanitation. Brazil, Chile and Costa Rica seemed well on track towards achieving most of the goals by 2015, would fall short in meeting several targets because of the crisis.

Reassessment of the MDG costs suggest that the governments of Bolivia, Honduras and Nicaragua would need to spend an extra 1.5 to 2.0 per cent of GDP per year on education, health and basic services between 2010 and 2015 to achieve the MDGs, as compared with the pre-crisis scenario. This would come on top of an additional required annual social spending of 2 per cent of GDP in Bolivia, 5 per cent in Nicaragua, and 7 per cent in Honduras, in absence of the crisis as reported in this volume.[6] For Brazil, Chile, and Costa Rica, the required additional spending caused by the expected impact of the crisis would be between 0.5 and 1.5 per cent of GDP per annum. Clearly, additional costs of this magnitude further stretch government finances and in most of these cases (with the exception of Chile and Costa Rica) would lead to unsustainable increases in public debt if financed through external or domestic borrowing and, consequently, could become a source of macroeconomic instability in the future if recovery and sustained growth do not set in swiftly. Tax financing would also become much less feasible in most of these cases (again with the exception of Chile and, possibly, Costa Rica) given that the tax burden would need to be increased substantially further, which in turn could delay recovery as it would depress recovery of domestic demand.

These financing concerns are further corroborated by the relatively mild impact on growth of the additional increases in social spending in the short run. While exerting a counter-cyclical effect, the immediate gain in aggregate demand growth is estimated to be less than the cost to the government as a share of GDP. As a result, the fiscal stimulus provided by the MDG scenario may not be sufficient for these economies to return to pre-crisis levels of economic growth and employment as spending on MDG-related services represents relatively low shares of aggregate demand in these countries. Stronger growth effects are likely to emerge over time as improved education and health outcomes underpin stronger productivity growth. The counter-cyclical response becomes much stronger if the MDG strategy is complemented by needed investments in public infrastructure. For a full recovery, however, other factors need to contribute as well, especially the resumption of external demand. This will require globally concerted stimulus measures to take effect. In the meantime, the low-income countries would need additional external financial support in the form of aid and/or debt relief in order to create the required additional fiscal space and avoid an insurmountable rise in external debt. A main conclusion of the pre-crisis scenarios as analyzed in this volume holds even more strongly in the crisis situation and the road to recovery, namely that careful macroeconomic management will be required to avoid growth costs elsewhere in the economy—especially a loss of competitiveness in export sectors owing to appreciation of

the real exchange. The upshot is that counter-cyclical macroeconomic policies can be feasibly aligned with long-term development objectives if carefully managed and supported by the international community.

Concluding remarks

Bearing the above in mind, achievement of the MDGs remains within reach for countries in Latin America and the Caribbean. The analyses in this volume make clear that this implies much more than priority setting in social spending or finding the additional resources to finance the costs of the MDG strategy. Equally important is to ensure careful management and integration of macroeconomic and social sector policies. The study also makes clear that enhanced spending on MDG-related services and further progress towards the education, health, and drinking water and basic sanitation goals by themselves do not guarantee that income inequality will be reduced or poverty reduction targets will be met. Additional policies will need to be put in place to foster structural change in Latin American economies conducive of stronger employment growth and greater absorption over time of an increasingly educated labour force. The analysis of this volume aims at providing practical and country-specific frameworks for assessing policy options and trade-offs when addressing the challenge of reaching sustained and equitable growth.

Notes

1 The analysis was also undertaken for Venezuela, but the case study could not be fully completed on time to be included in this volume. The 18 countries included are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Peru and Uruguay.

2 This poverty line was used to estimate income poverty as part of the internationally comparable set of MDG indicators of the United Nations until 2007. In 2008, new estimates by the World Bank led to establishing the international threshold for extreme poverty at $1.25 per day per person valued at purchasing power parity (PPP). The present study uses the previous poverty line as the country studies were completed in 2007.

3 See Devarajan and others (2002) and Kakwani and Sun (2006).

4 The elasticity is defined as $\varepsilon_P = (\partial P/\partial y)\cdot(y/P)$, where P is the poverty incidence and y stands for mean per capita income. Hence, a higher mean per capita income or a lower poverty incidence will increase the elasticity and less economic growth would be needed to reduce poverty.

5 See Bourguignon and others (2002), Ganuza and others (2002) and Vos and others (2006) for a discussion of parametric and non-parametric microsimulations methods and their application in conjunction with CGE model analysis. Appendix A2.1 of Chapter 2 of this volume spells out the non-parametric microsimulation method as applied to the 18 country cases in Latin America and the Caribbean.

6 Chapters 2 and 9 report for the case of Honduras that the additional required annual social spending would be between 4.3 and 5.1 per cent of GDP per annum—depending

on the financing strategy—in order to achieve the MDGs, rather than the 7 per cent as reported in Sánchez and Vos (2009). This difference is explained by the fact that, unlike Sánchez and Vos, the authors of Honduras' country study (Chapter 9) included the positive impact of increased investment in public infrastructure on MDG achievement and economic growth as part of the country's simulated MDG strategy.

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