



The World Bank

UN-DESA

Realizing the MDGs through Socially Inclusive Macroeconomic Policies in Africa

Project Objectives and Methodology

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Outline presentation

1. Workshop and project objectives and key questions to be answered
2. Proposed overall methodological framework
3. Caveats and things to keep in mind
4. Implementation of framework in Uganda, Senegal and South Africa
 - Overall set-up
 - Steps to be taken for country studies

1. Workshop and Project Objectives

Project Objectives

- Capacity building for analyzing MDG strategies relevant for participant countries
- Help conduct country-level policy analysis assessing feasible strategies to achieve the MDGs
- Further inform country assessments through international comparison

Workshop Objectives

- Introduce the project's objectives and methodology
- Provide examples of past applications of project methodology, and of other methodologies
- Identify prerequisites for the successful implementation of the project, particularly regarding country-team organization and technical backstopping
- Provide country teams with an initial training in the project's methodology
- Discuss data availability and needs for tailoring the methodology to country-specific conditions
- Define the timeframe of the project and plan next steps.

Some key questions regarding MDG strategies

- What does it take to achieve the MDGs?
 - What are MDG determinants?
 - How would MDG achievement influence other aspects of economic and social development?
- Do we know we are “on track” to achieve the goals?
- Do we know how much it will cost and can we afford achieving the goals?
- What policy options do we have in financing the MDG strategy? What are the trade offs when:
 - Scaling up aid or borrowing abroad?
 - Enhancing domestic resource mobilization?

2. Methodology: An Economy-Wide Approach

- Public spending policies and foreign aid flows targeting the MDGs have strong effects throughout the economy.
- These feed back on the MDG indicators through markets for labour, goods, services, and foreign exchange.
- Therefore, economy-wide analysis of MDG strategies is necessary as a complement to sectoral studies (education, health, etc.).

Why modelling approach?

- No model is perfect, but allows think through relevant interactions (but there are *do's* and *don'ts* discussed below)
- Allows to simulate alternative policies and inform about pros and cons about each in a rigorous manner
- Simulate “on track” or “off track” using ‘business as usual’ scenario rather than projections based on past trends

Some alternative approaches

- **Elasticities approaches** – UNDP/RPC-Brasilia and others
 - Too aggregate, constant elasticities, past trends need not be predictor of future
- **Needs Assessments** – UN Millennium Project
 - Partial analysis, some costing estimates seem unrealistic, linear projections
- **Integrated macro framework** – UNDP/IMF project
 - MDG costing plus macro model
 - Useful macro framework but no real feedback mechanisms, no supply constraints, fixed prices, no dynamic effects

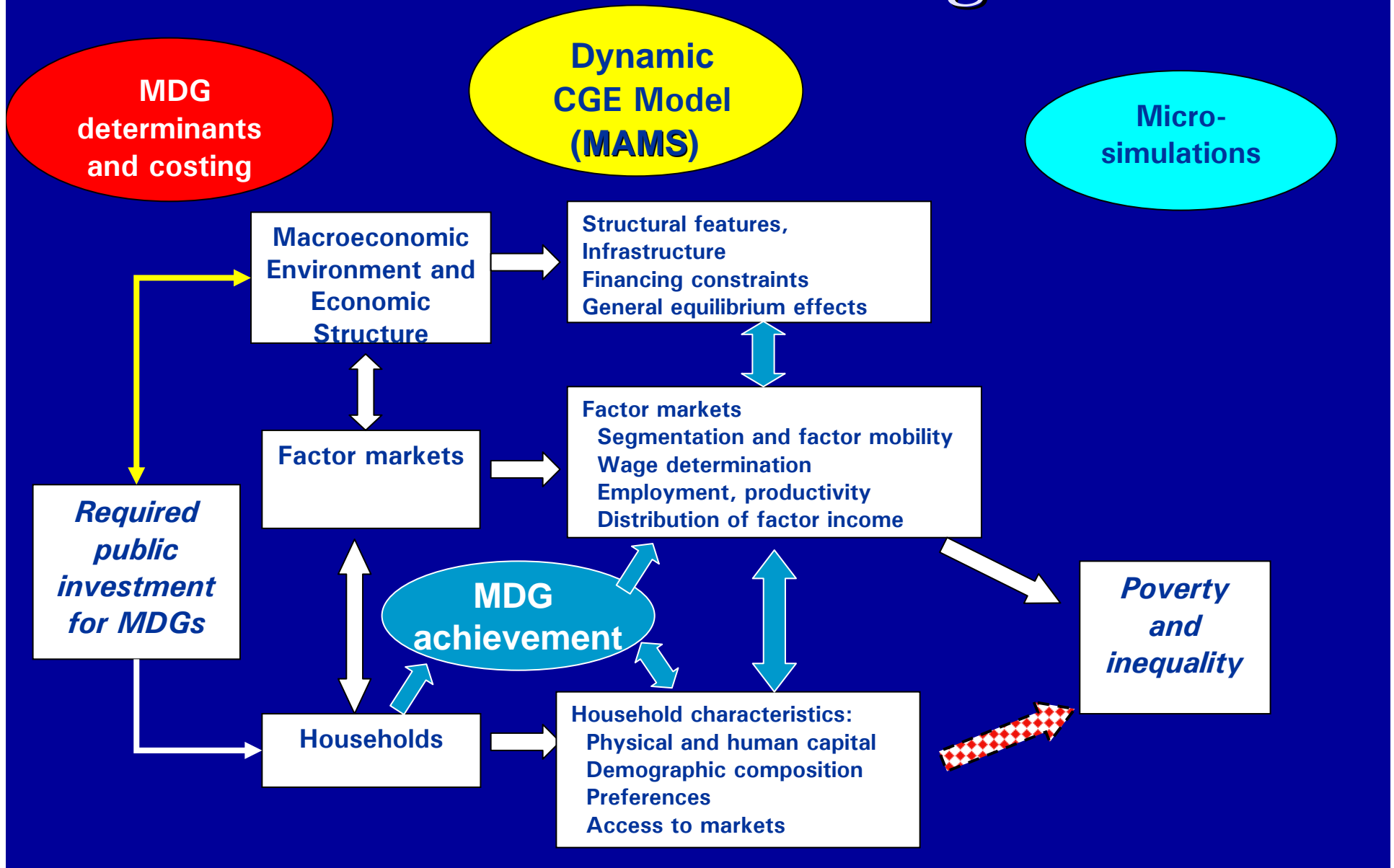
UN-DESA/UNDP/WB project

- **MAMS: Maquette for MDG Simulations.**
 - Economy-wide (dynamic CGE) simulation model to analyze MDG strategies in different countries.
 - Dynamic MDG module
- **Sector analysis of MDG determinants and of interventions** needed to achieve MDGs in education, health, water and sanitation
 - Microeconomic analysis of determinants of access to schooling, infant mortality, etc.
 - Costing exercise, considering household behaviour
- **Microsimulation methodology**
 - Take labour market or household consumption outcomes of CGE simulations and link to household survey data to simulate impact on poverty and inequality

A probed approach...

- UN-DESA/UNDP/World Bank application in 19 Latin America and the Caribbean countries
 - Project completed, results have been published and applied
 - Enabled further development of MAMS
- Follow-up projects being implemented in Middle East and North Africa (Egypt, Jordan, Morocco, Tunisia, and Yemen) and Asia (Indonesia, Kyrgyzstan, Philippines, and Uzbekistan).
- Other World Bank project applications in Africa (Ethiopia was pilot application)

Macro-micro linkages



MDG targets

- MDG 2: 100% primary school completion by 2015
 - Gender inequality (MDG 3) in education access
- MDG 4: Reduce child mortality by two-thirds by 2015
- MDG 5: Reduce maternal mortality by three-quarters by 2015
- **MDG 6: Combat HIV/AIDS**, Malaria and other major diseases
- MDG 7: Halve proportion of people without access to drinking water (7a) and basic sanitation (7b) by 2015

MDG determinants

- **What is needed to get all children in school and make them complete all grades?**
 - Build more school infrastructure?
 - Improve quality of other school inputs (teachers, textbook supplies)?
 - Increase access to school by improved household income and demand subsidies?
 - All of the above?
- **What is needed to reduce child mortality?**
 - Better nutrition?
 - Expansion of immunization programs?
 - Improving maternal-child health facilities?
 - Better education?
 - All of the above?
- **Are there synergies across the MDGs?**
- **What is the direct cost of interventions to achieve MDGs?**
- **Are there diminishing marginal returns to the inputs?**

MAMS: Determinants of MDG outcomes

MDG	Service per capita or student	Consumption per capita	Wage incentives	Public infrastructure	Other MDGs
2-Primary schooling	X	X	X	X	4
4-Under-five mortality	X	X		X	7a,7b
5-Maternal mortality	X	X		X	7a,7b
6-HIV/AIDS	X (?)	X (?)			2
7a-Water	X	X		X	
7b-Sanitation	X	X		X	

MAMS: economy-wide framework

Some basic features:

- Most features are familiar from standard open-economy, dynamic-recursive CGE models.
- Dynamic MDG block, feeds back on labour market, prices, etc.
- MAMS typically covers MDGs 1 (poverty), 2 (primary school completion), 4 (under-five mortality rate), 5 (maternal mortality rate), 7a (water access), and 7b (sanitation access).
- Will include HIV/AIDS (MDG 6) in this project
- Flexible in classification of commodities, production sectors, labour categories, institutions.
- Assess trade-offs of alternative financing strategies and accounts for synergies during MDG achievement

Microsimulations

- MDG-1: Income poverty is endogenous to overall economy-wide interactions
- MAMS/CGE: too aggregate household and labour categories (insufficient detail of income distribution)
- Microsimulations:
 - Use full household survey data
 - Impose counterfactual labour market outcomes from MAMS/CGE simulations on full income/consumption distribution
 - Calculate poverty and inequality outcomes
- “Top-down” approach

3. Some caveats:

Do we really need a macro or CGE model?

- A few do's and don'ts
- Don'ts
 - If you think it is a black box: DON'T!
 - If you believe data constraints deem the model incredible: DON'T
- Do's
 - Model can inform and stimulate policy dialogue
 - Model is “owned” by policy makers and transparent for other stakeholders
 - Use model framework to mobilize better information

Do we have sufficient data?

- Social Accounting Matrix (if you don't have one we will help you construct or adapt one for MAMS)
- Social sector data (inputs, outputs) that can be linked to household survey data and budget data
- Recent household survey
- Access to all these data

4. Project Implementation (“Who” and “How”)

- Studies implemented by **national country teams** (**researchers and policy makers**) in each country
- Adapt to country needs
- Training of country teams in analytical methodology (workshops, in-country missions, “teleworking”)
- Continuous technical back stopping by international team of experts
- Knowledge sharing through international/regional workshops (→ improvement methodology)

Implementation of Country Studies

("How to" in eight steps)

- 1. **Country narrative:**
 - Economic performance and vulnerabilities
 - Has growth been pro-poor?
 - Trends towards MDGs
 - Policy reforms: do they seem to produce pro-poor outcomes?
- 2. **Construction (update) and adjustment of SAM for MAMS (macro first, and then detailed matrix)**
- 3. **CGE core (without MDG) model calibration**
 - Find plausible values for key parameters
 - Calibrate static CGE
 - Calibrate recursive dynamic CGE and baseline

“How to” in eight steps

- 4. MDG determinants analysis and calibration of MDG module:
 - MDG 2: microeconomic analysis of determinants of schooling performance
 - MDG 4, 5 and 6: microeconomic analysis of determinants of child and maternal mortality and prevalence/incidence HIV/AIDS
 - MDG 7: cost estimates and demand elasticities for access to drinking water (7a) and basic sanitation (7b)
 - Partial-equilibrium budget requirements for achieving MDGs

“How to” in eight steps

- 5. **Policy simulation analysis with full MAMS**
 - Translate microeconomic analysis results to MDG block of CGE
 - Calibrate full CGE and baseline
 - Assess feasibility of achieving MDGs under different policy scenarios
 - Assess investment (budget) requirements for MDG achievement
 - Assess macroeconomic trade-offs of scaling up public spending for MDGs

“How to” in eight steps

- 6. Microsimulations:
 - Assess poverty and inequality effects of CGE (MAMS) model outcomes
 - In principle, same methodology as in previous project but applied in dynamic setting
- 7. Putting everything together
 - Country papers with interpretation of results and integration with country narrative.
- 8. Comparative country analysis
 - Common patterns and country-specific conditions
 - Possibly: any broader implications of region-wide MDG achievement?
 - Lessons learned

Adaptation to country context

- MDGs: MAMS considers MDG1, 2, 4, 5, and 7.
 - How should we include HIV/AIDS (MDG-6)?
- MDG targets: are there specific national targets?
- MDG determinants: are given determinants the most relevant? Should and can we capture others?
- What sector and social group detail is relevant?
- How does your economy function with regard to price and wage setting, fiscal adjustment, exchange rate regime and access to foreign finance, etc.? Set rules for market adjustment and macroeconomic closure rules.

What other policy questions to consider?

- Productivity effects of MDG achievement?
 - Think about time lags involved
 - Can we find plausible parameters?
- Productivity effects of improvements in infrastructure?
 - Same: what time lags, which parameters?
- Exogenous shocks (e.g. to food and energy prices) and MDG achievement?
 - Requires adequate disaggregation of commodities

Workshop agenda

Today:

- What are issues in your country?
- What can we get out of this kind of analysis? Latin American experience
- Discussion issues for adaptation methodology to country needs

Tomorrow:

- Methodology in detail:
 - (a) Sector analysis of MDG determinants
 - (b) Data requirements (I): SAM building for MAMS

Friday:

- (b) Data requirements (II): non-MDG data base MAMS
- (c) Data requirements (III): MDG data base
- “Clinics” with country teams on data and project implementation
- Next steps and summary

Presentations on web site: www.un.org/esa/policy