UNDP   **UN-DESA**   **UN-ESCAP**

Assessing Development Strategies to Achieve the MDGs in Asia and the Pacific

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 Asia and the Pacific
    - 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 studies 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 projection 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/RCC-Colombo)
  - MDG costing plus macro model
  - Useful macro framework but no real feedback mechanisms, no supply constraints, fixed prices, no dynamic effects
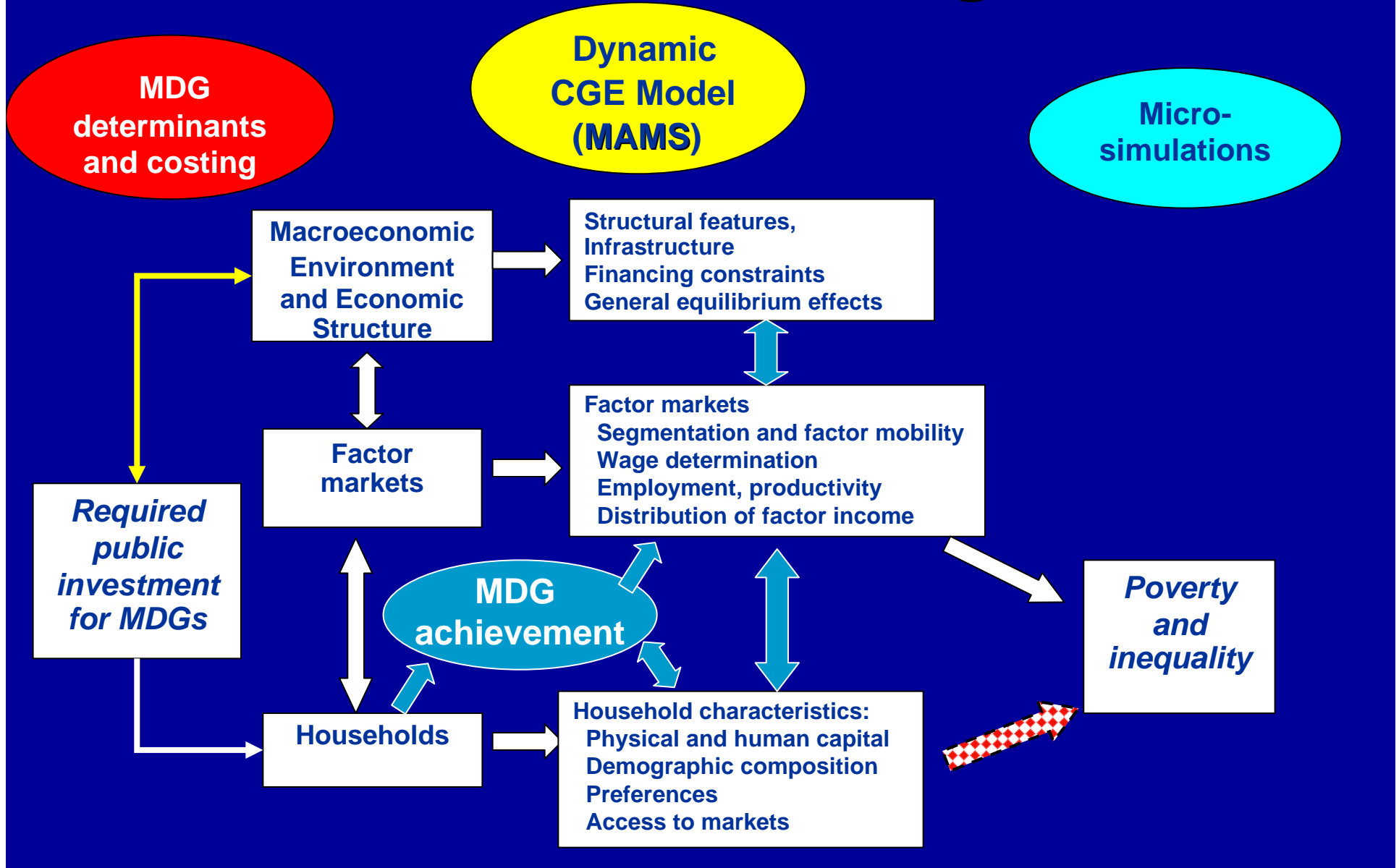
UN-DESA/UNDP/UN-ESCAP Public policies for MDGs project

- **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**
  - Translate labour market outcomes of CGE simulations into impact on poverty and income distribution at household level using micro datasets

Integrated Macro-Micro Approach for MDG Analysis (IMMAMA) has been tested…

- UN-DESA/UNDP/World Bank application in 19 Latin America and the Caribbean countries, with support from UN-ECLAC and IDB.
  - Project completed and publication forthcoming.
  - Enabled further development of MAMS
    - [MAMS was piloted by World Bank to analyze MDG strategies and scaling up of aid in Ethiopia]
- Follow-up UN-DESA/UNDP/World Bank project being implemented in five Arab States (Egypt, Jordan, Morocco, Tunisia, and Yemen).
- Start up later this year of similar exercise in Africa with first tier of countries, including Senegal, South Africa, and Uganda

Macro-micro linkages

MDG determinants and costing

Dynamic CGE Model (MAMS)

Micro-simulations

Macroeconomic Environment and Economic Structure

Structural features, Infrastructure
Financing constraints
General equilibrium effects

Required public investment for MDGs

Factor markets

Factor markets
Segmentation and factor mobility
Wage determination
Employment, productivity
Distribution of factor income

MDG achievement

Poverty and inequality

Households

Household characteristics:
Physical and human capital
Demographic composition
Preferences
Access to markets

MDG determinants

- MDG targets (from 1990 base year):
  - 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 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	Consump-tion per capita	Wage incen-tives	Public infra-structure	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
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).
- 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 distribution
  - Calculate poverty and income distribution 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

We need sufficient data

- Social Accounting Matrix (if you don't have one we will help construct one)
- 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)

MVS

MVSC6   I would add more detail on how country teams are ideally expected to be formed, work and organize themselves.

Important is to highlight that there should be a team leader and that country-team members must have some specific qualifications.

Make explicit the point that we expect the "right" people to be participating in the workshops.

All of this can be brought up in light of the experience for LAC and the Arab countries.
Marco Sanchez, 14/08/2008

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: microeconomic analysis of determinants of child and maternal mortality
  - MDG 7: cost estimates and demand elasticities for access to drinking water (7a) and basic sanitation (7b)
  - Partial-equilibrium budget requirements for achieving MDGs
- 5. **Policy simulation analysis with full MAMS model**
  - 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

"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, 7.
    - What about MDG-3 (gender)?
- 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?
- External shocks (higher food and energy prices) and MDG achievement?
  - Requires adequate disaggregation of commodities

Workshop agenda

Today:

- Reality check: country narratives
- Compare **IMMAMA** with alternative approaches

Tomorrow:

- What can we get out of it? Latin American experience
- Methodology in detail: (a) Sector analysis of MDG determinants; (b) MAMS + data requirements
- Discussion adaptation methodology to country needs

Friday:

- Methodology in detail: (b) MAMS + data requirements (continued); (c) microsimulation methodology
- "Clinics" with country teams on data and project implementation
- Next steps and summary

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