MODELING COMPONENT

David LABORDE

AGRODEP Model Component Coordinator

Steering Committee Virtual Meeting
July, 2012 • Washington, DC

Simulation Models

1. Multi country, Multi sector general equilibrium model. A specific version of the MIRAGE model is developed to facilitate capacity building activities and further developments.

2. Single country, general equilibrium models. The IFPRI single country model and the PEP single country model are used.

3. Multi markets partial equilibrium models. This models category will cover spatial and non spatial equilibrium models.

4. Partial equilibrium trade models. These partial equilibrium models will focus on trade issues at the tariff line level and are aimed to provide key tools for supporting trade negotiations.

Econometric Models

1. Econometrics models of trade. Different gravity type models will be presented.

2. Supply and Demand estimation models. Standard supply/demand estimation procedures will be provided.

www.agrodep.org

- Only partial achievements in 2011 targets

- Two type of explanations
  - External: Transaction costs and timely process to define the right framework for collaborating with partners and third parties (marginal cost vs average cost, IP rights)

  - Internal: difficulty in the hiring process

- Catch-up in 2012
- Still maintaining the innovation targets

www.agrodep.org

3

- *PEP Single country, general equilibrium model:* GAMS code and documentation for a specific version of the PEP single country CGE model will be produced. Learning tools to debug a CGE (Q1).

- *Multi-market partial equilibrium model:* GAMS code and model documentation have been completed and are ready for final validation (Q1).

- _Partial equilibrium trade model_: GAMS code, Excel workbook, and documentation of a partial equilibrium model that focuses on trade issues at the tariff line level (HS6) is being developed (Q2-Q3).

- _Multi country, multi sector general equilibrium model_: a specific version of the global MIRAGE model, MIRAGRODEP, is being developed to facilitate capacity building activities. GAMS code and documentation for MIRAGRODEP will be produced (Q2-Q3).

- _Poverty analysis: Top down approach for GE and PE:_ Documentation, STATA and GAMS codes for poverty analysis using household survey and simulation model results or exogenous price shocks using a top down approach (Q2-Q3)

- _Econometric models of trade:_ Literature review and STATA model code for a gravity type model is under review (Q3-Q4).

- _Supply and demand estimation models:_ Literature review and model code for standard supply/demand estimation procedures will be developed (Q3-Q4).

- *Endogenous Saving behavior in CGE:* Identification of the inter-temporal framework and household saving determinants to generate endogenous saving rates in the MIRAGRODEP model with one representative household (Q1-Q2). Documentation and GAMS code for MIRAGRODEP model with endogenous savings with be developed (Q3-Q4).

- *Research on natural resources management:* Model features needed to address the specificities of natural resources management will be identified (Q2-Q4) and implemented in *A partial equilibrium approach*: Documentation and model code for a first PE model about natural resources management will be produced (Q4)

- *Stochastic Partial Equilibrium : Including Optimal Storage Behavior:* Documentation, solver, and model code examples for PE models on price stabilization and optimal storage policy with perfect expectation will be developed (Q2-Q3)

- *Impact Assessment Tool Box*: Documentation and model code will be developed (Q3-Q4).

- *Econometrics of price transmission:* Review of literature, documentation and STATA code for price transmission analysis will be developed (Q3-Q4)