

# THE MACRO-MICRO APPROACH FOR THE EVALUATION OF PUBLIC POLICIES

*The ISMEA experience*

*Antonella Finizia*

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# MAIN POINTS

- What is ISMEA
- Micro-macro approach
- The ISMEA models
- Macro simulations
- Work in progress
- Critical issues and conclusions

# WHAT IS ISMEA

Institute of services for the agro-food markets

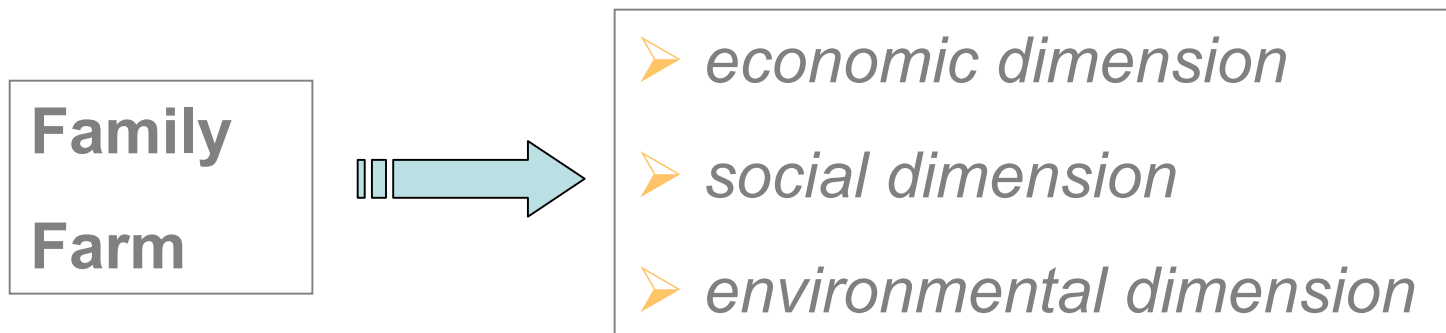
Linked to the **Italian Ministry for agricultural and food policy (MiPAAF)**, it is involved in:

- farm and agro-food market information (prices, production, consumption)
- studies and research on the agro-food chain
- financial and insurance services to farmers
- support to public decisions
  - **policy simulations**
  - technical assistance

# MICRO-MACRO APPROACH

## The micro level: the farm household

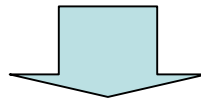
- The farm household can be considered as a macro-economy in miniature
- The family takes decisions about production and consumption



# MICRO-MACRO APPROACH

## The micro-macro link

- The macro level can be obtained by aggregation from the micro level (zooming out) and vice versa
- A unique source of data is the basis for both the micro and the macro models



**The ISMEA Survey on socio-economic conditions of Italian agriculture** was designed having in mind these theoretical model

# MICRO-MACRO APPROACH

## The ISMEA survey

Five surveys together

- Farm budget data
- Input/Output
- Time Use Budget
- Household Consumption Survey
- Household Income Survey

*The questionnaire modules were defined in coherence with other surveys (Inea, Istat, Bank of Italy), to integrate the information*

# MICRO-MACRO APPROACH

## The ISMEA survey

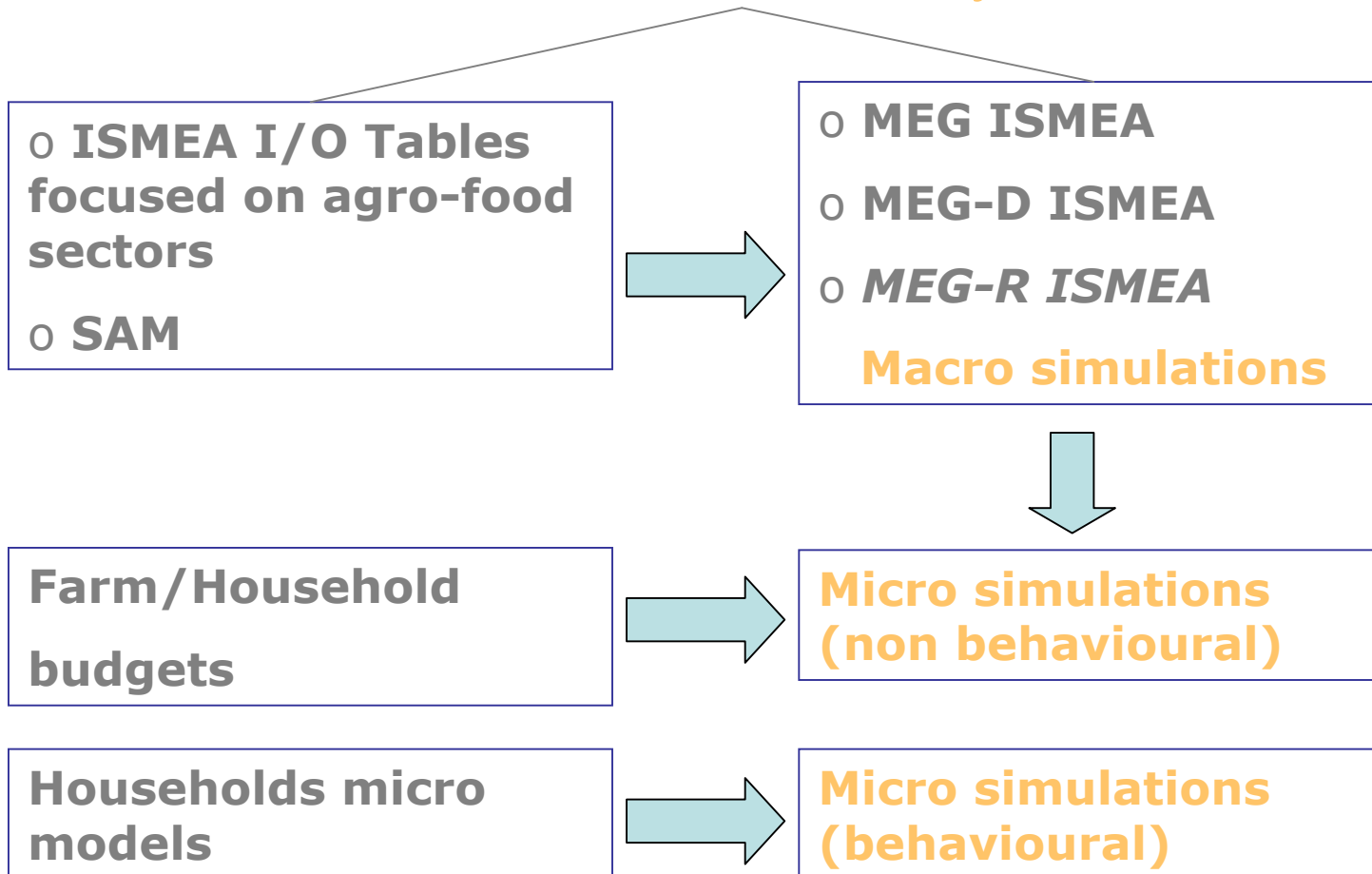
Was designed to give all the information needed to evaluate the impacts of policy changes

- **economic impact on farms** (farm income)
- **socio-economic impact on households** (life style, welfare)

*7 family farm typologies were defined, which represents different targets for economic policy*

# ISMEA MODELS

## The ISMEA Survey



# MACRO SIMULATIONS

## The Ismea CGE model peculiarities

- It is focused on the **agro-food sector**, which is very disaggregated: 23 sectors for Agriculture, Forestry and Fishery, 13 for food industry, 7 for other industries strictly linked to agriculture, 2 for services.
- the SAM distinguishes **7 types of farm households; 1 group rural households; 3 urban households classes**
- it includes the **CAP market policy tools**

# MACRO SIMULATIONS

## Which simulations?

### ➤ Policy simulations

In 2004, MEG was used to evaluate the possible impacts of Luxembourg CAP reform simulating different decoupling options.

We are now working to simulate the consequences of milk quotas abolition, with MEG-D.

*Our clients are mainly MiPAAF; Unions of farmers*

# MACRO SIMULATIONS

## Which simulations?

### ➤ Simulations of future competitive scenarios

In 2005 and in 2007 different scenarios have been simulated to evaluate the competitiveness of Italian agriculture and food industry in 2015, considering different hypothesis for CAP, international prices and productivity evolution in the medium term.

*Our clients are: MiPAAF; Federalimentare (Food Industries Federation)*

# MACRO SIMULATIONS

## Which simulations?

In 2007, an integration with GTAP CGE model has been experimented.

- A research regarding the role of three giants in the world market: Brazil, China, India, and the competitive scenarios for the Italian agro-food system.
- A conjunct INEA-ISMEA study about milk quota scenarios, commissioned by MiPAAF.

*International price variations generated by GTAP model are included in the shock for MEG-D exogenous variables.*

# WORK IN PROGRESS

## Macro simulations

- **Updating the data-base**
- **Regionalisation**, by construction of 3 SAM (North, Centre, South of Italy) and three integrated CGE models.
- Constant upgrading in **modelling agriculture**, following the deep evolution of the sector.

# WORK IN PROGRESS

## From macro to micro

In macro CGE models:

- farms don't leave the market and don't enter in the market (the "no production" option is not considered)
- Even partial use of factors (land, labour) is not possible
- Household members different choices can't be described

*It is important to follow both the macro and micro approach.*

*At **micro level**, we can better study the family behaviour in reaction to a shock.*

# CRITICAL ISSUES

## Data needs

*The existence of a gap between official statistics for agriculture and policy needs has now been recognized by EC and Eurostat*

The most important aspects are:

- Connections between agriculture and food industry
- Farm households characteristics and income estimations
- Links between the agro-food system and the rural economy
- Risk management in agro-food sector (market risks, credit, food safety)

# CONCLUSIONS

- The approach conceived more than ten years ago is still modern and even more valid now that the CAP moves from market policy to rural policy.
- One positive aspect of our models is their flexibility, which consent to integrate in the macro models changes in policy tools (for example, decoupling) or to distinguish sectors or regions; this is possible because we have the microdata coming from a unique, coherent source.
- The demand of policy makers for quantitative evaluations is increasing and especially for analysis at regional and micro level.
- The integration of data sources at institutional level is a way to overcome the lack of information.