

2.3. Calibration of the Supply module

15 - 18 Jul 2026

Poll results

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Survey (1/6)

004

What is the purpose of a model calibration?

Reproduction of the observed values in case no shock is applied ✓



Generating random data for sensitivity analysis



Assuring realistic system behavior when a shock is applied ✓



Estimating the model's parameters without real-world data



Survey (2/6)

004

Which of the following is not a step of PMP calibration?

The model is forced to reproduce the observed activity levels.

☐ 0 %

The dual values (shadow prices) of the constraints are used to modify the objective function.

☐ 0 %

The new model is employed for simulations.

☐ 0 %

Fixing dual values of the preferable activities. ✓

☒ 100 %

Survey (3/6)

003

When selecting the linear and quadratic pmp terms which of the following conditions should hold?

(1/2)

Marginal costs of the preferable activities = shadow prices of the preferable activities

☐ 0 %

Shadow prices of the preferable activities = variable costs of the preferable activities

☐ 0 %

Marginal costs of the preferable activities = observed prices of the preferable activities = variable costs + shadow prices of the preferable activities



100 %

Survey (3/6)

003

When selecting the linear and quadratic pmp terms which of the following conditions should hold?

(2/2)

Shadow prices of the preferable activities = 0

☐ 0 %

Survey (4/6)

004

Which of the following is not a characteristic of preferable activities?

Constrained by calibration constraints

☐ 0 %

Constrained by resource constraints ✓

☒ 50 %

Dual values of the calibration constraints are 0 ✓

☒ 100 %

Dual values of the calibration constraints are not 0

☐ 0 %

Survey (5/6)

004

What values is the CAPRI model calibrated to?

Estimated trends ✓

☒ 0 %

Observed values of the base year

☒ 75 %

Observed values of the simulation year

☐ 0 %

Thuenen baseline

☐ 25 %

Survey (6/6)

004

Which of the following PMP specification methods is used in CAPRI?

Paris approach

☐ 0 %

Exogenous elasticities approach

☐ 0 %

Exogenous elasticities approach + exogenous dual value for land balance and milk quotas



100 %

Average cost approach

☐ 0 %

3.1_Market_Model_Intro.pptx

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What is a Multi-Commodity Model?

More than one output market for all sectors written in physical and valued terms with an objective function

 33 %

One output market, but not general equilibrium, written in valued terms

 0 %

More than one output market, written in physical and valued terms, system of equations without an objective function



 67 %

The units of the market model are...

... quantities (tonnes). ✓



... activity data (hectares, heads).



... utility. ✓



... prices. ✓



... trade flows. ✓



Survey (3/6)

004

Functional forms are often taken such that...

...they are consistent with economic theory. ✓



50 %

...they express highly complex non-linear relationships as this helps the solver.



25 %

...they are derived from profit functions under the FOC. ✓



75 %

...they are difficult to calibrate to observed or trend values.



25 %

Survey (4/6)

004

International trade is presented in CAPRI market model...

...to allow the simulation of trade policies. ✓



...to link trade costs, import/export prices with domestic markets. ✓



...in a net trade approach.



...in form of an Armington approach, with quality differences between origins to let consumers differentiate.



Survey (5/6)

003

Exogenous scenario parameters in the market model are...

...income (GDP development). ✓



...bilateral trade flows.



...crushing yields. ✓



...import tariffs. ✓



...prices.



Survey (6/6)

003

Convergence is achieved between the supply model and the market model ...

...via price and quantity exchange. ✓



...via manual test and different scenarios.



...by iterations of the supply and market model. ✓



...using a Markov chain approach.



2_3_Overview of the supply module.pptx

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Survey (1/11)

0 0 4

Scenario files which can be selected from the task (run scenario with and without market model) are stored in the folder

..\gams\pol_input ✓



25 %

..\gams\pol_input\userScens ✓



75 %

..\gams\scen



50 %

Survey (2/11)

004

**Additional result type identifier (debug option)
allows to add to the.gdx result file name located
in \output\results\capmod**

automatically the date

☐ 0 %

an additional string (text) to the file name to avoid that results files
from different task with similar names are not overwritten



☐ 100 %

an additional text string to find the file better in the result folder ☒

☐ 50 %

Survey (3/11)

004

The equation of the supply model are defined in the file:

simu_supply.gms

☐ 25 %

model_supply.gms

☒ 75 %

supply_model.gms ✓

☐ 0 %

sets.gms

☐ 0 %

Survey (4/11)

003

What are the two main modules (models) of CAPRI?

Supply and manure market

☐ 0 %

Market and supply model ☒

☒ 100 %

entitlement trade module and GHG permit

☐ 0 %

CGE and PE model

☐ 0 %

Survey (5/11)

003

What is the regional disaggregation in the supply module?

Countries

☐ 0 %

Member state

☐ 0 %

Nuts2 ☒

☒ 100 %

Survey (6/11)

003

What is the coverage of the supply models (1/2)

EU27 ✓



Western Balkan ✓



Norway ✓



Turkey ✓



Russia



Survey (6/11)

003

What is the coverage of the supply models
(2/2)

UK ✓



Survey (7/11)

003

The regional MP model ..

are connected during the optimization



operate independent ✓



are solved using optimization approaches ✓



Optimize gross value added ✓



Survey (8/11)

003

What are the advantages of mathematical programming models?

Input allocation to various production activities using an explicit optimisation



less data demanding



behavioural function



explicitly model technological and policy constraints ✓



Survey (9/11)

003

What are the most important constraints in the supply model?

(1/2)

feeding ✓



crop nutrient ✓



political constraints ✓



environmental constraints ✓



labor capacities



Survey (9/11)

003

What are the most important constraints in the supply model?
(2/2)

financial

 0 %

machinery capacities

 67 %

land constraints 

 100 %

Survey (10/11)

004

The objective function contains ..

subsidies ✓



50 %

revenues & variable costs ✓



100 %

fixed cost for labour



50 %

costs for land



100 %