



# Model and extended functionalities

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# A couple of remarks before starting...

- Quick overview of the main recent EUROMOD model developments
  - New developments + updates to existing features
  - Software (presented by Bianey), input data (will be presented by Albane)
- Result of the collective effort of many people (**big thanks to all!**)

# Outline

## 1. Model releases

## 2. Add-ons and model extensions:

### 2.1. Increasing the accuracy of simulations:

- The Labour Market Add-on (LMA)
- Running EUROMOD on admin. data

### 2.2. Extending the scope of EUROMOD:

- The Indirect Tax Tool (ITT)
- The EUROMOD Wealth Extension (EWIGE)

## 3. Other functionalities:

3.1. Improving EUROMOD summary statistics: In-depth Analysis plugin

3.2. Increasing the usability/transparency: JRC-EUROMOD Interface

3.3. Enlarging the interaction with other models: QUEST, EDGE-M3, EUROLAB

# 1. Model releases

# 1. Model Releases

- Open source since January 2021 (Public release EUROMOD I3.0+).
- For the first time, two new beta versions of the model have been publicly released during the year on the new EUROMOD website (<https://euromod-web.jrc.ec.europa.eu/access-euromod>):
  - **EUROMOD I3.40+** (April 2021) – including improvements and updates to 2020 and previous systems. Model adapted to use input data based on SILC 2019 for 22 countries (a new record for this time of the year!).
  - **EUROMOD I3.86+** (September 2021) – 2021 policies for 26 EU countries (all except SE). First time we are publicly releasing the current policy system in September of the same year!
- New stable release will be coming out by the end of December/beginning of January

# 2. Add-ons and model extensions

## 2.1. Increasing the accuracy of simulations: *the Labour Market Add-on – LMA (1)*

- **Motivation:** new forms of labour market transitions due to the pandemic
  - Transitions to monetary compensation (MC) schemes
- Work started in Y11 and continued in Y12
- Very **flexible** tool:
  - Labour market transitions can be simulated directly within EUROMOD using the “TransLMA\_cc” policy
  - Running the model with the LMA add-on allows for the simulation of both:
    - Actual labour market shocks (e.g. for the pandemic and the recovery period)
    - Counterfactual scenarios (e.g. absence of MC schemes)

## 2.1. Increasing the accuracy of simulations: *the Labour Market Add-on – LMA (2)*

- Very **flexible** tool (cont'd):
  - Allows for the modelling of the duration of each transition (relaxed the rule of yearly transitions)
  - Possibility to simulate shocks in self-employment income in countries where monetary compensation schemes for self-employed are not simulated
- **Statistics** on labour market transitions:
  - Released within the models thanks to the National Teams and the close collaboration with the Flash Estimate ESTAT Team
  - Y12 release will include up-to-date statistics covering all quarters of 2020
  - Continued collaboration with ESTAT for 2021 statistics (and beyond)



## 2.1. Increasing the accuracy of simulations: *running EUROMOD on admin. data*

- **Motivation:** improve modelling capacities and increase the accuracy of simulations as an alternative to survey data
- Work developed in the context of **Technical Assistance** to Member States
- Finalised projects:
  - **Greece** (Council of Economic Advisors): fully functional version of EUROMOD running with input data based on a sample of PIT returns + social security data
- Ongoing projects:
  - **Slovakia** (Council for Budget Responsibility): construction of input data for SIMTASK, based on a pool of administrative datasets
  - **Lithuania** (MoF and MoSSL): adaptation of EUROMOD to be used with a pool of administrative datasets
  - **Romania** (MoF): adaptation of EUROMOD to be used with personal income tax returns

## 2.2. Extending the scope of EUROMOD: *the Indirect Tax Tool - ITT*

- **Motivation:** importance of indirect taxation on government revenues, distributional matters and others (e.g. tax shifts, green taxation, etc.).
- Developing of a **new ITT** aiming to: (1) increase the number of countries, (2) improve the imputation of expenditures & (3) enhance the integration of the tool into EUROMOD
- First version of the **tool with 18 MS has been successfully developed** by Leuven, Essex and Praxis.
- By end of the year, the remaining 9 member states will be included.
- For each country, the **2010 and 2019 policy systems** will be available. They will run on updated & **matched 2010 HBS – 2010 SILC**.
- **Main developments under discussion:**
  - public release of the tool and yearly update;
  - use of newly released 2015 HBS;
  - matching HBS with latest SILC data.

## 2.2. Extending the scope of EUROMOD: *the EUROMOD Wealth Extension - EWIGE*

- **Motivation:** large increase in private wealth over the past 40 years in Europe, whereas tax revenue from wealth-related taxes remains low
- **Household Finance and Consumption Survey (HFCS)** as alternative EUROMOD input data -> overcome EU-SILC's limitations
- Modelling of **wealth-related policies** and capital income (17 countries; 2017 last policy year) -> External collaboration with the University of Antwerp and University of Insubria
- Future update of wealth policies in EUROMOD:
  - Statistical matching of HFCS variables to EUROMOD as an alternative (ongoing pilot study by JRC.B2)
  - New collaboration of JRC.B2 and HFCN/ECB to explore how future waves of the HFCS can be used and prepared for EUROMOD
  - Possible integration into the EUROMOD Master Version (tbc)

# 3. Other functionalities

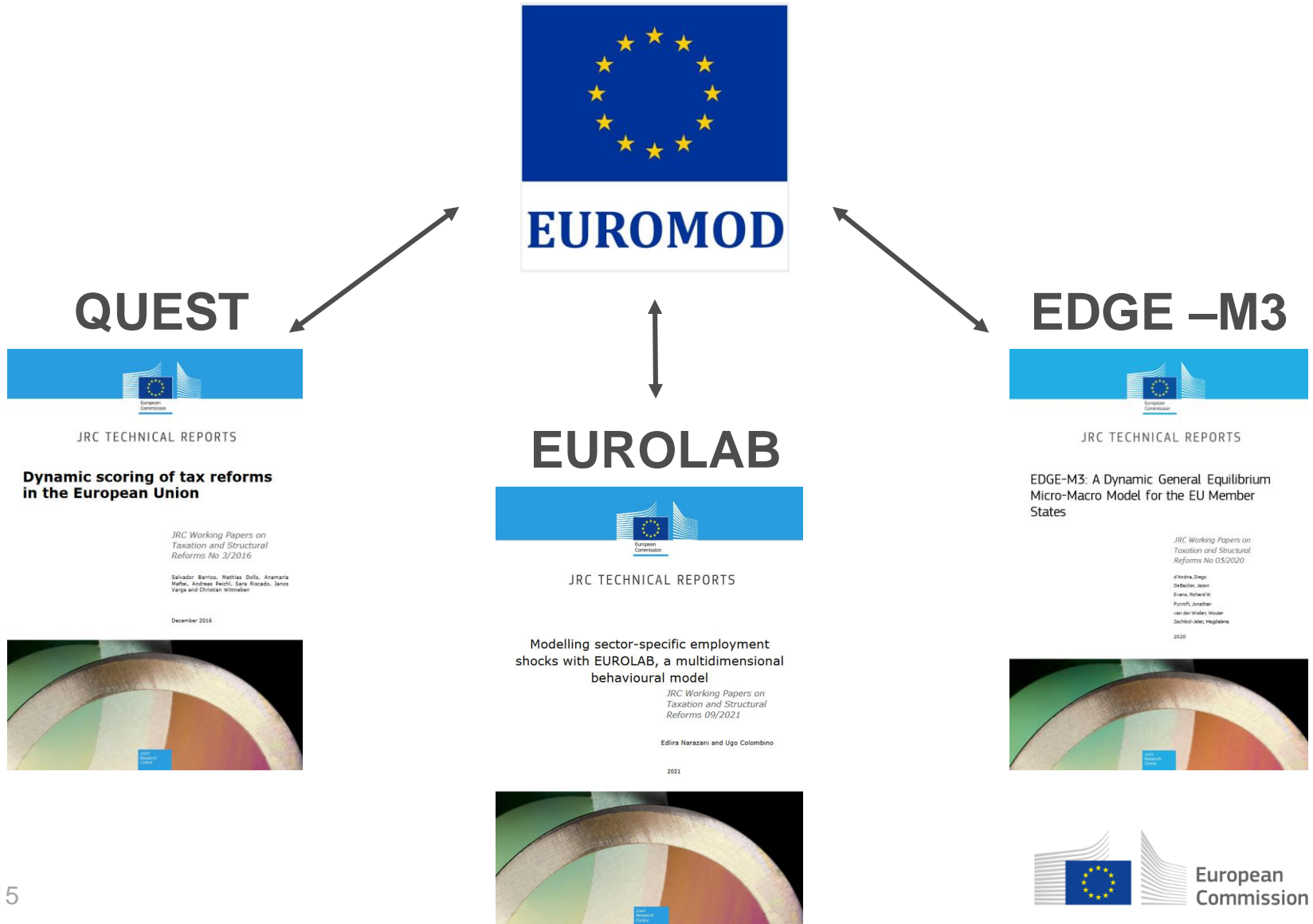
## 3.1. Improving EUROMOD summary statistics: *the In-depth Analysis plugin*

- Fully **customisable statistics presenter** for analyzing baseline-reform scenarios
- Sets of 18 customized tables and **parameters can be saved and re-used**
- Three categories, all offered for any breakdown variable and target population:
  1. **Fiscal** (4 tables) → full disaggregation of taxes and benefits: totals and taxpayers/beneficiaries for each
  2. **Distributional** (8 tables) → totals, means, winners/losers
  3. **Inequality and poverty** (6 tables) → inequality, progressivity, redistribution and AROP rates and gaps
- Results shown on screen and exportable to Excel

## 3.2. Increasing the usability/transparency: *the EUROMOD-JRC Interface*

- **Simplified online interface** of EUROMOD that allows to run parametrical simulations on PIT and SIC reforms for all EU countries
- Continuously updated: latest version based on EM I3.0+, including **2020 policies**
- New developments (since June 2021):
  - Simulations can be now also run on a set of **hypothetical households** produced with HHoT
  - Estimations of the fiscal **impact of discretionary tax measures in the medium-term** are now available
  - Possibility to **save simulated reforms** for further use
  - Web adapted to be **mobile-friendly**
- **Next step:** include parameters for benefits to simulate reforms

# 3.3. Enlarging the interaction with other models:



# Thank you



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