

# EUROMODNEWS



# The tax-benefit microsimulation model for the European Union

**EUROMOD** is a tax-benefit microsimulation model for the European Union (EU) that enables researchers and policy analysts to calculate, in a comparable manner, the effects of taxes and benefits on household incomes and work incentives for the population of each country and for the EU as a whole.

As well as calculating the effects of actual policies it is also used to evaluate the effects of tax-benefit policy reforms and other changes on poverty, inequality, incentives and government budgets.

EUROMOD is a unique resource for cross-national research, designed to produce results that are comparable across countries and meaningful when aggregated to the EU level.

EUROMOD is managed, maintained, developed and updated by the **Microsimulation Unit**, a team of researchers in ISER. This is done in collaboration with national experts.

The current version of EUROMOD represents the accumulation of technical developments and expertise over a number years and involving a large team of people. For more information on the design and development of EUROMOD click here. 

[www.iser.essex.ac.uk/euromod](http://www.iser.essex.ac.uk/euromod)



# EUROMOD shows a new face

Run EUROMOD		Countries	Country Tools	Administration Tools	Add-Ons	Applications	Help & Info
		AT BE BG CY C2 DE DK EE EL ES FI FR HU IE IT LT LU LV MT NL PL PT RO SE SI SK SL UK					
	loaded						
Policy	Grp/No	UK_2009	UK_2010	UK_2011	UK_2012	Comment	
11	+  tscee_tsce_uk	on	on	on	on	SIC: employee and self employed national Insurance contribution	
12	+  tscer_uk	on	on	on	on	SIC: employer national insurance contribution	
13	+  buncet_uk	on	on	on	on	BEN: contributory unemployment benefit (Job Seekers Allowance)	
14	+  boahrt_uk	on	on	on	on	BEN: pensioner's annual heating allowance (Winter Fuel Allowance)	
15	+  bch_uk	on	on	on	on	BEN: child benefit	
15.1	+  fr_BenCalc	on	on	on	on	Child Benefit: amount	
15.1.1	comp_cond	1	[IsNtMchld] #1	[IsNtMchld] #1	[IsNtMchld] #1	[IsNtMchld] #1	First child entitled to receive...
15.1.2	#_N	1	1	1	1		
15.1.3	#_M	1	1	1	1		
15.1.4	comp_perElig	1	\$CBFirst	\$CBFirst	\$CBFirst	\$CBFirst	this amount   par69
15.1.5	comp_cond	2	[IsNtMchld] #2	[IsNtMchld] #2	[IsNtMchld] #2	[IsNtMchld] #2	From second child on, each child is entitled to receive...
15.1.6	#_N	2	2	2	2	2	
15.1.7	#_M	2	99	99	99	99	
15.1.8	comp_perElig	2	\$CBOther	\$CBOther	\$CBOther	\$CBOther	this amount   per70
15.1.9	output_var	bch_s	bch_s	bch_s	bch_s		
15.1.10	TAX_UNIT	tu_bu_uk	tu_bu_uk	tu_bu_uk	tu_bu_uk		
16	+  tin_uk	on	on	on	on	TAX: personal income tax	

The latest release of EUROMOD, G1.0+ includes a brand new stand-alone user interface (UI) for the model.

Until now the EUROMOD UI relied on Microsoft® Excel™. This had the advantage of being readily available but, as EUROMOD reached a mature stage in its development, the time came to create an independent and more specialised front-end. The new UI is a stand-alone application for Windows™ specifically developed for EUROMOD.

It provides numerous new benefits, including

- greater stability and compatibility with Windows™ computers;
- more control and guidance over user actions, increased functionality and improved user-friendliness;
- fully separating the UI from the 'content' files, e.g. country tax-benefit parameter files. This means that the UI needs to be installed once and can be then used to work with multiple sets of 'content' files. Furthermore, the UI can be updated without affecting 'content' files and vice versa; and

- standard installation procedures, guiding users through the set-up stage

The new UI uses XML-format to store information and there are new possibilities for future developments such as a version control mechanism, automated updates, more extensive on-time syntax checks etc.

The screenshot above shows part of the UK tax-benefit system as an example. The most important design element – the familiar tabular layout – is retained, which should make the transition for existing users relatively easy. While users have a greater choice of actions and operations, these are organised in a more efficient and intuitive way, e.g. by using context-sensitive menus and documentation, avoiding overcrowding the screen with too many elements and helping to keep the overall look minimalistic.

The release of the new UI is accompanied by a note for existing users summarising the main changes.

# EUROMOD release G1.0+ now available

The latest release of EUROMOD includes, for the 27 countries:

- tax-benefit policies up to 2012;
- input data from 2010 SILC for some countries and revisions to 2008 data for some of the remaining countries; and
- a brand-new UI.

This version of the model is accompanied by a short guide to using the new UI and a document explaining the main changes between EUROMOD versions F6.0+ and G1.0+. **PLEASE NOTE** We are no longer supporting the Microsoft® Excel™-based UI.

Country reports are available to download by [clicking here](#).



## Winter school

ISER will be holding a winter school on cross-national microsimulation using EUROMOD in February 2014. The winter school is supported by InGRID, a large multinational research infrastructure network of which ISER is a member. A full call for applications will be issued in early September on this website. ●

## New Eurostat procedures for accessing microdata

**With effect from 8 July 2013, there is a new process in place for researchers wishing to access Eurostat microdata, including the use of the EU-SILC with EUROMOD.**

Eurostat's main responsibilities are to provide statistical information to the institutions of the European Union (EU) and to promote the harmonisation of statistical methods across its member states and candidates for accession as well as EFTA countries. The organisations in the different countries which actively cooperate with Eurostat are summarised under the concept of the European Statistical System.

New users of EUROMOD first need their institution to be recognised by Eurostat as a research entity that is allowed access to microdata. Information about this process can be found in the document *How to apply for microdata?* which can be downloaded [here](#). ● Please also email the EUROMOD team at [euromod@essex.ac.uk](mailto:euromod@essex.ac.uk) to let us know about your interest in using the model.

Existing users of EUROMOD also need to apply to Eurostat for their institution to be recognised as a research entity if they wish to use EUROMOD after November 2014 when the current network contract for use of the EU-SILC expires.



## Projects using EUROMOD

**In each newsletter we highlight a research project that uses EUROMOD. This time, we look at the InGRID project.**

InGRID is funded by the European Commission's 7th Framework Programme under the 'Capacities' heading and involves 17 European partners.

The general objectives of InGRID – Inclusive Growth Research Infrastructure Diffusion – are to integrate and to innovate existing, but distributed European social sciences research infrastructures on 'Poverty and Living Conditions', 'Working Conditions and Vulnerability' and 'Policy Analysis' by providing transnational data access, organising mutual knowledge exchange activities and improving methods and tools for comparative research.

This integration will provide the European scientific community with new and better opportunities to fulfil its key role in the development of evidence-based European policies for inclusive growth.

Three types of activities will be organised:

- joint research to improve quality, accessibility and comparability of the existing infrastructures;
- the organisation of expert workshops and summer schools in order to promote knowledge transfer; and



- researchers from other institutes and countries are invited to visit the participating expert centres ('transnational access').

Training in the use of EUROMOD and transnational access to use it in a supported setting will be offered by three of the centres, including ISER. Calls will be opened for these and other activities four times a year.

For more information about events click [here](#) ● or to find out more about visiting grants click [here](#). ● For more information about InGRID click [here](#). ●

# Working papers

## What's best for women: gender based taxation, wage subsidies or basic income?

EUROMOD Working Paper Series: EM10/13

Authors ● Ugo Colombino

● Edlira Narazani

**Abstract** Gender based taxation (GBT) has been recently proposed as a promising policy in order to improve women's status in the labour market and within the family. We use a microeconometric model of household labour supply in order to evaluate, with Italian data, the behavioural and welfare effects of GBT as compared to other policies based on different optimal taxation principles. The comparison is interesting because GBT, although technically correct, might face implementation difficulties not shared by other policies that in turn might produce comparable benefits. The simulation procedure accounts for the constraints implied by fiscal neutrality and market equilibrium. Our results support to some extent the expectations of GBT's proponents. However it is not an unquestionable success. GBT induces a modest increase of women's employment, but similar effects can be attained by universal subsidies on low wages. When the policies are evaluated in terms of welfare, GBT ranks first among single women but for the whole population the best policies are subsidies on low wages, unconditional transfers or a combination of the two.

Publication date 1 May 2013

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## Nowcasting indicators of poverty risk in the European Union: a microsimulation approach.

EUROMOD Working Paper Series: EM11/13

Authors ● Jekaterina Navicke

● Olga Rastrigina

● Holly Sutherland

**Abstract** The at-risk-of-poverty rate is one of the three indicators used for monitoring progress towards the Europe 2020 poverty and social exclusion reduction target. Timeliness of this indicator is critical for monitoring the effectiveness of policies. However, due to complicated nature of the European Union Statistics on Income and Living Conditions (EU-SILC) poverty risk estimates are published with a 2 to 3 year delay. This paper presents a method that can be used to estimate ('nowcast') the current at-risk-of-poverty rate for the European Union (EU) countries based on EU-SILC microdata from a previous period. The EU tax-benefit microsimulation model EUROMOD is used for this purpose in combination with up to date macro-level statistics. We validate the method by using EU-SILC data for 2007

incomes to estimate at-risk-of-poverty rates for 2008-2012, and where possible compare our predictions with actual EU-SILC and other external statistics. The method is tested on eight EU countries which are among those experiencing the most volatile economic conditions within the period: Estonia, Greece, Spain, Italy, Latvia, Lithuania, Portugal and Romania.

Publication date 3 July 2013

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## Efficiency and equity aspects of energy taxation. EUROMOD Working Paper Series: EM12/13

Author ● Toon Vandyck

**Abstract** We analyse the distributional effects of increased oil excises in Belgium by combining a Computable General Equilibrium (CGE) model with the EUROMOD microsimulation framework that exploits the rich detail of household-level data. The link between the CGE model and the micro level is top-down, feeding changes in commodity prices, factor returns and employment by sector into a non-behavioural microsimulation. The results suggest that policymakers face an equity-efficiency trade-off driven by the choice of revenue recycling options. Distributional effects of the environmental tax reform appear to depend strongly on changes in factor prices and welfare payments.

Publication date 30 July 2013

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## Baseline results from the EU27 EUROMOD. EUROMOD Working Paper Series: EM13/13

Authors ● Holger Xavier Jara Tamayo

● Holly Sutherland

**Abstract** This paper presents baseline results from the latest version of EUROMOD (version F6.36+), the tax-benefit microsimulation model for the EU. First, we briefly report the process of updating EUROMOD. We then present indicators for income inequality and risk of poverty using EUROMOD and discuss the main reasons for differences between these and EU-SILC based indicators. We further compare EUROMOD indicators across countries and over time between 2009 and 2012. Finally, we provide estimates of marginal effective tax rates (METR) for all 27 EU countries in order to explore the effect of tax and benefit systems on work incentives at the intensive margin. Throughout we highlight both the potential of EUROMOD as a tool for policy analysis and the caveats that should be borne in mind when using it and interpreting results. This paper updates the work reported in EUROMOD Working Paper EM3/2013.

Publication date 1 August 2013

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## Distributional implications of the crisis in Greece in 2009-2012. EUROMOD Working Paper Series: EM14/13

Authors ● Manos Matsaganis

● Chrysa Leventi

**Abstract** The severe economic crisis affecting Greece since 2009 is having an unprecedented impact in terms of job and income losses, and is widely perceived to have a comparably significant effect in terms of greater inequality and increased poverty. We provide an assessment of whether (and to what extent) the latter is the case. More specifically, we use the European tax-benefit microsimulation model EUROMOD in order to quantify the impact of the austerity (i.e. fiscal consolidation policies) and the recession (i.e. negative developments in the wider economy) on the distribution of incomes in 2009-2012, and estimate how the burden of the crisis has been shared across income groups. We conclude by discussing the policy implications of our research.

Publication date 22 August 2013

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## The distributional effects of taxes and transfers under alternative income concepts: the importance of three 'T's. EUROMOD Working Paper Series: EM15/13

Authors ● Francesco Figari

● Alari Paulus

**Abstract** This paper investigates how the distribution of income changes when the standard definition of disposable income is replaced by an extended income concept which takes into account the three 'T's: indirect taxes, imputed rent, and in-kind benefits. Second, it assesses how sensitive the distributional effects of each tax-benefit instrument are to the choice of income concept. The analysis covers three European countries (Belgium, Greece and the UK) characterised by substantially different tax-benefit systems, giving a stronger base for generalising the results. The main findings are that the overall redistributive effect of the tax-benefit systems depends heavily on the income concept considered and the differences across countries are smaller when considering the extended income distribution. Moreover, the common use of a narrower income concept, such as the disposable income, can lead to the overestimation of the redistributive effect of the cash tax-benefit instruments (in relative terms), the extent of this varying across countries, due to the size and distribution of three 'T's and the adoption of the needs-adjusted equivalence scale.

Publication date 22 August 2013

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# EUROMOD: introducing the team

**In this edition of EUROMOD NEWS, Alberto Tumino, Senior Research Officer with the EUROMOD team based at ISER, describes his work.**

#### What is your background?

I was born in the city of Ragusa, in Italy, where I lived until I moved to Milan for my university studies. I obtained both my Bachelor and MSc degrees in Economics and Social Sciences at the "L. Bocconi" University. I entered in contact with the world of microsimulation, and EUROMOD in particular, thanks to Carlo Fiorio, one of my master thesis supervisors and member of the Italian national team of EUROMOD. I joined ISER in October 2009.

**What are your research interests?** I am particularly interested in the effects of tax-benefit systems on work incentives and in the study of Marginal Effective Tax rate in particular. I am also interested in labour economics, and in particular on the impact of local labour market on various outcomes such as educational choices.

#### Do you have any special responsibilities?

Yes, this year I have been in charge of preparing the EUROMOD releases.

#### Which countries do you work on?

I currently work on Cyprus, Denmark and Luxembourg.



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Alberto Tumino

**“...working with EUROMOD is mainly team work. The EUROMOD team is highly heterogeneous with respect to cultural and professional background and it is a pleasure for me to be part of such a great team...”**

**What are you working on at the moment**  
Besides the EUROMOD updating work, I am currently working on two projects looking at the relation between local labour market conditions and schooling decisions in the UK and in other EU countries. Part of this

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research will form my first PhD chapter. From September I will work on the implementation of the 2013 tax-benefit rules in EUROMOD for Denmark, Cyprus and Luxembourg. I will also start a new piece of research on consequences of unemployment during the crisis.

#### What do you enjoy most about working with EUROMOD?

Microsimulation is a powerful tool to examine the impact of tax-benefit systems on various outcomes. The possibility to make applied research in such areas is the aspect of my job that I like the most. Moreover, working with EUROMOD is mainly team work. The EUROMOD team is highly heterogeneous with respect to cultural and professional background and it is a pleasure for me to be part of such a great team.

#### Would you like to share any recent highlights?

The paper 'Tax-benefit Systems, Income Distribution and Work Incentives in the European Union', which I worked on with Xavier Jara, has been recently published in the *International Journal of Microsimulation*. Part of the analysis included in the article was presented at the EUROMODupdate2 steering group meeting (Brussels, September 2012) and the second microsimulation research workshop (Bucharest, October 2012).

I was also responsible for the practicum section of the EUROMOD training course that we gave at the Joint Research Centre in Sevilla (March 2013).

Finally, I presented the papers on the impact of local labour market conditions on schooling decisions, in the UK and from a cross country comparison perspective, in several international conferences and workshops.



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