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 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.euromod.ac.uk

EUROMOD for policy makers: Brussels Conference hosted by the European Commission

The Directorate General for Employment at the European Commission hosted a one-day conference in Brussels highlighting recent policy-relevant analysis using EUROMOD and discussing the potential for assisting governments and policy makers worldwide, in assessing the impact of policy reform through microsimulation

The Conference focussed on the unique potential of microsimulation models to understand the effects of policies and to assess the impact of a changing economic environment on budgetary costs and income distribution. Microsimulation has been used recently to examine and test the impact of policies related to income taxation, in work benefits, housing taxes, welfare reform and austerity measures on poverty, inequality and work incentives.

Opening the Conference, Professor Holly Sutherland, Director of EUROMOD, described the long process of developing this state-of-the-art microsimulation model which can be used for cross country analysis as well as analysis at a country-level. The model is sufficiently flexible that its general framework can be used to shortcut the process of building similar models for other countries beyond the EU. EUROMOD is now seen as a significant scientific tool which has great potential beyond the academic community in the design and development of evidence-based fiscal policies. Continued on next page
EUROMOD for policy makers

Continued from previous page Recent research presented to the audience of over 150 policy makers from government departments and ministries from across Europe, included:

- The distributional effects of recent policy changes in EU countries – presented by Alari Paulus
- Using EUROMOD to nowcast at-risk-of-poverty – presented by Olga Rastrigina
- Ex ante poverty and fiscal evaluation of a guaranteed minimum income programme in Greece – presented by Chrysa Leventi
- Were we all in together? The Distributional Effects of the UK Coalition Government’s tax benefit policy changes 2010-2014/5 - presented by John Hills
- Housing taxation: a potential avenue for tax shifting and reducing the homeownership bias – presented by Francesco Figari

The conference included a panel discussion chaired by Georg Fischer, Director for analysis, evaluation and external relations at DG Employment, with speakers including Laurent Caussat from Haut Conseil du Financement de la Protection Sociale, Enrico Giovannini from the University of Rome, Gallo Gueye from DG Eurostat, Gilles Moure from DG ECFIN and Frank Vandenbroucke from KU Leuven.
Spin-off models based on the EUROMOD platform

In recent years, an exciting experience of knowledge transfer was marked by the development of a number of spin-off models based on the EUROMOD platform.

South Africa, Namibia, Serbia, Macedonia, Russia and Australia are the first examples of non-European countries using the EUROMOD platform to develop their own tax-benefit microsimulation models. We do hope others will follow.

The first version of the Serbian microsimulation model SRMOD was released in 2010. Since then Jelena Zarkovic Rakic and Sasa Randjelovic from the University of Belgrade updated the model which is now running on the new user interface (UI).

The model is used quite widely to inform policy making process in Serbia and recently FREN, a research think tank at the University of Belgrade, has just received a grant from Partnership for Economic Policy for a project titled 'Reduction of child poverty in Serbia: balancing between improved cash-transfers and policies that promote parental employment'. Partnership for Economic Policy is funded by the International Development Research Centre, Canada, and the Department for International Development of the United Kingdom.

Michael Noble and Gemma Wright from the Southern African Social Policy Research Institute (SASPRI) are leading the team who developed the tax-benefit microsimulation models for South Africa (SAMOD) and Namibia (NAMOD). Both are derived from the EUROMOD platform and recently migrated to the new UI.

SAMOD is underpinned by the 2012 National Income Dynamics Study and has policies up to and including 2013. NAMOD is underpinned by the 2009/10 Namibia Household Income and Expenditure Survey and also has policies up to and including 2013. It is intended that both models will be updated to 2015 later this year.

Furthermore, in collaboration with UNU-WIDER (the United Nations University in Finland) and ISER, SASPRI has recently completed a scoping study to explore the feasibility of using EUROMOD as a platform for tax-benefit microsimulation models in countries across the Southern African Development Community and the East African Community. Following this, SASPRI is now working on in-depth feasibility reports for Mozambique, Tanzania and Zambia, with local partners.

Feasibility and added value of a European unemployment benefit scheme

The consortium led by CEPS (Centre for European Policy Studies) and including the Centre for European Economic Research (ZEW), Cambridge Econometrics (CamEcon), the University of Leuven (KUL) and Eftheia, has been awarded with the contract for the project ‘Feasibility and Added Value of a European Unemployment Benefit Scheme’.

The objective of the project is to evaluate the feasibility of an unemployment benefit scheme at the European level in terms of compatibility with national laws and practices, and to assess the value added of such scheme in terms of income stabilisation and social outcomes.

The empirical analysis will be largely based on microsimulation modelling using EUROMOD linked with macrosimulation modelling using the macro-econometric E3 (Energy-Environment-Economy) model E3ME. The study will, on the one hand, analyse the effects an EU unemployment benefit scheme would have had over the period 1995-2013. On the other hand, the performance of the scheme will be assessed against alternative stylised shocks, representing different macro environments from those observed in the past.

The EUROMOD website has had a makeover

We’ve redesigned the EUROMOD website in order to modernise its look and feel and to improve navigation.

Content has been updated and much more new material is planned, including support and training resources, additional user documentation, information on how EUROMOD is being used, and a set of FAQs for potential users. We’ve already seen a boost in traffic.

Come and take a look at the new site soon by visiting euromod.ac.uk

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JUNE 2015

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Secondary earners and fiscal policies in Europe: EUROMOD and OECD tax-benefit models are used in combination to inform research for DG Justice

The Directorate-General for Justice of the European Commission has published *Secondary earners and fiscal policies in Europe* – a report by Olga Rastrigina (ISER, University of Essex) and Alina Verashchagina (Sapienza University of Rome) that examines work disincentives for secondary earners in Europe created by formal tax-benefit policies and implicit taxes such as out-of-pocket childcare costs.

The analysis is based on two tax-benefit simulation models: EUROMOD and a modified version of the OECD tax-benefit model.

The study finds that secondary earners in Belgium, Germany, Slovenia, Portugal, and Luxembourg face substantial work disincentives at the intensive margin when compared to couples who share paid work equally. Moreover, fiscal disincentives are high in the United Kingdom, Ireland, Germany, Slovakia, Luxembourg, Slovenia, and the Czech Republic, for mothers envisaging entry into the labour market in a secondary earner position.

Overall the evidence suggests that either the design of the tax benefit system or out-of-pocket childcare costs, or both, affect the choice of working hours or the choice of entering employment among secondary earners.

However, neither of these factors alone suffices to account for country-specific employment outcomes.

Working papers

- **The design of fiscal consolidation measures in the European Union: distributional effects and implications for macroeconomic recovery**
  - Authors: Francesco Figari, Alari Paulus, Holly Sutherland
  - Publication date: 27 March 2015
  - Abstract: The financial and economic crisis which started in the late 2000s and the fiscal consolidation measures to counter the subsequent government budget deficits have an impact on household income distribution and macroeconomic recovery. We consider the austerity measures in relation to their distributional impact and the potential channels through which fiscal consolidation can affect economic growth. We find notable variation in the size, composition and effects of fiscal consolidation. Richer households tend to bear a greater burden in most countries but spending cuts are more likely to affect liquidity constrained households casting doubts over previous findings in the macro-economic literature about the effectiveness of such measures. This suggests the need to consider more disaggregated evidence to reach robust policy conclusions.

- **Two feasible ways to implement a revenue neutral Citizen’s Income scheme EUROMOD Working Paper Series: EM6/15**
  - Author: Malcolm Torry
  - Publication date: 23 April 2015
  - Abstract: A Citizen’s Income – an unconditional and nonwithdrawable income for every individual – would offer many advantages, but because the UK’s current benefits and tax systems are complex, transition to a benefits system based on a Citizen’s Income could be difficult to achieve. This paper builds on the results contained in a previous EUROMOD working paper by proposing two financially feasible ways of implementing a Citizen’s Income. The first method would be an ‘all at once’ method. That is, it would establish a small Citizen’s Income for every citizen of the UK, of whatever age. This paper shows that a strictly revenue neutral scheme is available that could be paid for by raising Income Tax rates by 3%, by abolishing Income Tax Personal Allowances, and by making adjustments to National Insurance Contributions. This scheme would impose almost no household disposable income losses on low income households at the point of implementation, and manageable losses on households in general. A second method – a ‘one step at a time’ method - would turn Child Benefit into a Child Citizen’s Income, then establish a Young adult Citizen’s Income, and then enable those in receipt of the Young Citizen’s Income to keep their Citizen’s Benefit into a Child Citizen’s Income, then establish a Young adult Citizen’s Income, and then enable those in receipt of the Young Citizen’s Income to keep their Citizen’s Income into a Young adult Citizen’s Income, then establish a Young adult Citizen’s Income, and then enable those in receipt of the Young Citizen’s Income to keep their Citizen’s Income into a Young adult Citizen’s Income, and then enable those in receipt of the Young Citizen’s Income to keep their Citizen’s Income into a Young adult Citizen’s Income, and then enable those in receipt of the Young Citizen’s Income to keep their Citizen’s Income into a Young adult Citizen’s Income, and then enable those in receipt of the Young Citizen’s Income to keep their Citizen’s Income.
EUROMOD-based analysis published by the Social Situation Monitor

The Social Situation Monitor (SSM) is an initiative directed by Applica on behalf of the European Commission. It carries out policy-relevant analysis and research on the current EU socio-economic situation on the basis of the most recent available data.

Each year it examines major issues which are features of the situation or affect it with the aim of providing evidence on which to base policy-making across the EU.

Two SSM Research Notes making use of EUROMOD have been recently published.

Nowcasting: estimating developments in the risk of poverty and income distribution in 2013 and 2014
Research Note 1/2014 by Olga Rastrigina, Chrysa Leventi and Holly Sutherland

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 crucial for monitoring of the social situation and of the effectiveness of tax and benefit policies.

However, partly due to the complexity of EU-SILC data collection, estimates of the number of people at risk of poverty are published with a significant delay.

This paper extends and updates previous work on estimating (‘nowcasting’) indicators of poverty risk using the tax-benefit microsimulation model EUROMOD. The model’s routines are enhanced with additional adjustments to the EU-SILC based input data in order to capture changes in the employment characteristics of the population since the data were collected. The nowcasting method is applied to seventeen EU Member States.

The performance of the method is assessed by comparing the predictions with actual EU-SILC indicators for the years for which the latter are available.

The effect of tax-benefit changes on the income distribution in 2008-2014
Research Note 2/2014 by Paola De Agostini, Alari Paulus and Iva Tasseva

More than half of the EU countries have become poorer and more unequal since the start of the crisis in 2008.

Despite lack of timely household micro data, using microsimulation techniques with up-to-date information on policy rules enables us to estimate the direct effect of tax-benefit policy changes in 2008-2014 on the income distribution, poverty and inequality levels in 10 EU countries, as well as track most recent trends by evaluating policy effects in 2013-2014.

The authors identify and quantify these effects using the EU tax-benefit model EUROMOD to construct relevant counterfactual scenarios.

The results of this research indicate that among these countries, most managed to pursue policies without adverse distributional effects, despite of challenging economic problems in this period.

However, this has been accompanied by reductions in household income in several countries. There have also been some cases of clearly regressive changes in particular policy instruments.

Overall, the results demonstrate the importance of comprehensive regular indexation to avoid the erosion of benefit amounts and tax thresholds over time, and specific population groups systematically gaining or losing relative to others.

EUROMOD-related research presented at conferences

The 4th European User Conference for EU-Microdata, 5-6 March 2015, Mannheim, Germany
Olga Rastrigina presented ‘Nowcasting risk of poverty in the European Union’.

The Scottish Parliament Information Centre, 24 March 2015, Edinburgh, UK
Silvia Avram presented ‘EUROMOD: Using it for Scottish Analysis’.

The Iceland Ministry of Welfare Workshop on Fiscal Distributional Analysis, 28 April 2015, Reykjavik, Iceland
Silvia Avram presented ‘Using EUROMOD for distributional analysis’.

The European Commission – DG EMPL Conference on European Microsimulation Modelling for Policymaking, 28 May 2015, Brussels, Belgium
Holly Sutherland presented ‘A short introduction to EUROMOD: how can it help?’; Alari Paulus presented ‘The distributional effects of recent policy changes in EU countries’; Chrysa Leventi presented the ‘Ex ante poverty and fiscal evaluation of a guaranteed minimum income programme in Greece’; John Hills presented ‘Were we really all in it together? The distributional effects of the UK Coalition government’s tax-benefit policy changes 2010-2014/15’; Francesco Figari presented ‘Housing taxation: a potential avenue for tax shifting and reducing the homeownership bias’; Salvador Barrios presented ‘The fiscal effects of work-related tax expenditures in Europe’; André Decoster presented ‘Using EUROMOD to design compensations for the distributional effects of a move to a uniform VAT’; and Olga Rastrigina presented ‘Nowcasting risk of poverty in the European Union’.

The Social Protection Committee Indicators Sub-group meeting, 29 May 2015, Brussels, Belgium
Olga Rastrigina and Chrysa Leventi presented ‘Nowcasting risk of poverty in the European Union’.

The Working Group on Income and Living Conditions, 10 June 2015, Luxembourg
Olga Rastrigina and Chrysa Leventi presented ‘Nowcasting risk of poverty in the European Union’.
Meet the EUROMOD national teams: the Greek team

In this edition of EUROMOD NEWS, we introduce you to the three members of the Greek EUROMOD team

The three members of the Greek EUROMOD team are Maria Flevotomou, Panos Tsakloglou and Manos Matsaganis, working closely with Chrysa Leventi (a former member of the team, now at the University of Essex). All of them are currently based (or were previously) at the Athens University of Economics and Business (AUEB).

Maria Flevotomou received BA and MPhil degrees in Economics from the University of Oxford, St. Catherine’s College (1995-2000). She then worked at the UK Department for Work and Pensions (2000-2004), where she helped develop a national dynamic microsimulation model for pension expenditure (PENSIM2). On her return to Greece she joined the Economic Analysis and Research Department, Bank of Greece. A research student at AUEB in 2005-2009, she successfully completed a PhD thesis on ‘Microsimulation for the Evaluation of Public Policy: A Tax-Benefit Model for the Greek Economy’. She has published journal papers in Social Policy and Administration, Basic Income Studies, and CESifo Forum, as well as a number of working papers. She joined the team in 2005.

Panos Tsakloglou is Professor at AUEB, having previously worked as Lecturer at Bristol University, UK. His research focuses on questions of inequality, poverty, social exclusion, returns to education and social policy (especially, the redistributive role of the state). He has published over eighty five articles in scholarly journals and contributions to collective volumes, has participated in a large number of conferences and workshops and has been a partner in over forty international and national research and consultancy projects. He is Research Fellow of the Institute for the Study of Labor (IZA, Bonn) and Senior Research Fellow of the Hellenic Observatory (LSE, London). In 2012-2014 he was Chairman of the Greek Government’s Council of Economic Advisors and member of the EU Economic and Financial Committee (EFC) and Eurogroup Working Group (EWG) and alternate member of Ecofin and Eurogroup. He has also been Social Policy advisor to Prime Ministers Papandreou (2010-2011) and Papademos (2011-2012), and a member of the EU Economic Policy Committee (EPC, 2010-2011). Panos is a EUROMOD veteran, having worked on the project since 1996.

Manos Matsaganis is Associate Professor at AUEB, and co-ordinator of the Policy Analysis Research Unit (PARU). In the past he worked at the London School of Economics (Welfare State Programme), the University of Crete, and the Prime Minister’s Office. He has been a consultant or advisor to the European Commission, the OECD, UNICEF, the World Bank, as well as the Berlin-based Friedrich Ebert Foundation. In 2012-2014 he was a member of the Expert Group on Social Investment for Growth and Cohesion on the invitation of European Commissioner László Andor. Since 2013 he sits at the Advisory Board of Solidarity Now, an Athens-based charity supported by Open Society Foundation. His research interests include labour taxation, youth unemployment, health care, pensions, income support, poverty, European social policy, and tax evasion. He has published papers in Quarterly Journal of Economics, Journal of Health Economics, Fiscal Studies, British Journal of Industrial Relations, Journal of Social Policy, Journal of European Social Policy, Social Policy and Administration and other journals. Manos was recruited in 1998.

Highlights of recent research
The main focus of the Greek EUROMOD team’s research has obviously been on the distributional implications of the Eurozone crisis, and the political economy of austerity in Greece.

A steady output of working papers, policy reports, newsletters, press articles, book chapters, and eventually journal papers have helped throw some light on the bitterly-contested question of how the social costs of the crisis are being distributed. Some findings (for instance that the elderly have done reasonably well, relatively speaking, in terms of monetary income, although certainly not in terms of access to health and other services) have made some impression, and a small contribution to making the public debate slightly less hysterical.

In addition, this year the Greek team hosts the annual EUROMOD Project Meeting in Athens (6-7 July 2015). The sessions of the meeting related to the policy uses of EUROMOD will be attended by policy makers, civil servants and members of the academic community.

How the team’s research with EUROMOD in Greece is used by policy makers and others
Public policy in Greece is not exactly evidence-based (to put it very mildly). Nevertheless, the EUROMOD team have been invited on various occasions to present their work at the Ministry of Labour and the Ministry of Finance.

On the other hand, international agencies such as the European Commission and the International Monetary Fund have highlighted, analysed, commented and sometimes reinterpreted the findings of microsimulation research in Greece, especially in the context of the country’s bailout and subsequent austerity. The press has also shown interest. The publication of PARU Newsletters (eight so far in the last three years), has helped a lot in this respect: written in jargon-free prose, and aimed for the general public rather than for the initiated, they have caught the interest of journalists, commentators, policy analysts, and even the rare policy maker.
EUROMOD: introducing the team

In this edition of EUROMOD NEWS, Jack Kneeshaw, EUROMOD Executive Director, describes his work

What is your background? I am originally from Leeds, UK but moved south to Colchester to study at Essex and have remained here since. I have a PhD in Government, which focused on the measurement of public opinion and its use by policy makers and earlier in my career I had an interest in the formation, stability and consistency of attitudes. Until this year, I worked at the UK Data Archive – neighbour to the Institute for Social and Economic Research where EUROMOD is based – where I was responsible for overseeing the development of a range of services and online tools for survey data users. I joined EUROMOD as Executive Director in March.

What made you apply for this post? EUROMOD has a strong reputation and has entered a period of growth in terms of people working on the project, the geographical coverage of the model and the model's capabilities and uses. The new Executive Director role looked to be one that could help sustain this growth and extend the reach of EUROMOD further in terms of new users and applications of the model - whilst at the same time ensuring that back-end systems allow growth to be manageable!

What are your main responsibilities? I work with Holly (the Director) on the operational aspects of EUROMOD: planning, budgeting, liaising with funders, partners and stakeholders. I am also responsible for EUROMOD’s project management systems and processes. I take a specific interest in the use of EUROMOD (how it is accessed, how we track usage, how we support and train users, etc.) and in the impact (academic and policy making) of the model.

What are you working on at the moment? As a recent starter, I still feel like I am spinning plates! I am currently reviewing how the EUROMOD project operates and beginning to formalise new policies and procedures based on this review. I am also beginning to consolidate the information that we hold on EUROMOD users – making tracking users and their usage easier so that we can better understand what users are doing with, and what they want from, EUROMOD. Finally, with other colleagues here at Essex, I am involved in building content for our new website with the primary aims of attracting more users and better demonstrating the growing importance of the model.

What do you enjoy most about working with EUROMOD? Two things in particular: the first is the huge untapped potential of the model. There are so many ideas and new applications that are currently being developed or in planning – ‘nowcasting’, the policy effects and hypothetical household tools, work on incorporating indirect taxes, non-EU spin-off models... and I could go on.

Would you like to share any recent highlights? The recent DG-EMPL conference on microsimulation modelling in policy making was an eye opener. This was my first outing and I was both surprised and delighted to see such large numbers (around 150) in attendance. Equally encouraging was the centrality of EUROMOD to almost every discussion and its pre-eminence as the multi-country tax-benefit microsimulation tool.

Published by the Institute for Social and Economic Research University of Essex Wivenhoe Park Colchester CO4 3SQ United Kingdom

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EUROMOD is financially supported by PROGRESS funding which is managed by the Directorate General for Employment, Social Affairs and Equal Opportunities of the European Commission. The information contained within this document does not necessarily reflect the position or opinion of the European Commission.

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