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 of years and involving a large team of people. For more information on the design and development of EUROMOD click here.

www.euromod.ac.uk

Latest flash estimates of poverty risk published by the European Commission

The European Commission has published new flash estimates of poverty and income inequality across the European Union

The flash estimates of poverty and income distribution in 2017 mainly use the tax-benefit microsimulation model EUROMOD and employ related tools and methods developed at the University of Essex.

Microsimulation routines using the EUROMOD model and running on adjusted EU Statistics on Income and Living Conditions (EU-SILC) data from earlier years form the basis of the flash estimates in most countries.

Providing timelier social statistics – especially indicators on income poverty and inequality – is a priority for the Commission and the European Statistical System.

In order to better monitor the effectiveness of social policies at EU level, it is important to have timelier indicators. Therefore, flash estimates, released much earlier than the final data, have been developed. These can be used in preliminary discussions and analyses until the final data become available.

Whilst the flash estimates are calculated and produced by Eurostat with the cooperation of National Statistical Institutes, the methodology behind the statistics draws heavily on pioneering work done at Essex to ‘nowcast’ income distributions and poverty rates using EUROMOD, including techniques to statistically adjust older EU-SILC data to reflect changes in the labour market and to the level of market incomes since the data were collected, combined with the simulation of the latest tax-benefit policies.
Testing the idea of a basic income using EUROMOD

The idea of a basic income is becoming increasingly popular both within and outside the UK. It is a policy with many variants which includes components that are relevant for both moderate and radical reforms.

An event on Monday 5 November 2018 at Broadway House in Westminster, part of the ESRC Festival of Social Science, aimed to illustrate ways to turn the basic income concept into a practical scheme, with emphasis on a revenue-neutral implementation.

Recent research, related to the estimated fiscal and distributional effects of the implementation of such schemes and the mechanisms that drive these results, was presented.

The presentations were followed by a roundtable discussion on the strengths and weaknesses of a revenue-neutral basic income introduction.

How would Basic Income work in the UK? What are the costs and what are the benefits? Iva Tasseva

Which countries would benefit most and which countries face the greatest fiscal challenges from implementing Basic Income? Luke Martinelli

Read ISER Senior Research Officer Iva Tasseva’s new blogBasic Income – testing of a fascinating policy.

Where they turned up

Since the last edition of EUROMOD NEWS, newly-published journal articles using EUROMOD include:


Let us know of your journal publications using EUROMOD, and don’t forget to submit your articles to the EUROMOD working paper series!

EUROMOD-related research presented at conferences

Think development – Think WIDER, WIDER Development Conference, 13 September 2018, Helsinki

x Xavier Jara presented ‘Learning from your neighbour: tax-benefit swaps in South America’ (co-authors Olivier Bargain and David Rodriguez)

EUROMOD Workshop, 17-18 September 2018, Vienna

A range of papers employing EUROMOD analysis were presented including by: Markus Tiefenbacher, Katarina Hollan, Sarah Kuypers, Alberto Tumino, Katrin Gasior, Xavier Jara, Carlo Fiorio, Martina Pezer, Chrysa Leventi and Daria Popova

Main Gaps in Research Infrastructures in the Balkan Countries Roundtable, 29 October 2018, Athens

x Chrysa Leventi presented ‘The EUROMOD Research Infrastructure’

Basic Income: Turning the Concept into Practice, ESRC Festival of Social Science, 5 November 2018, London

x Iva Tasseva presented ‘How would Basic Income work in the UK? What are the costs and what are the benefits?’ (co-authors Paola De Agostini, Chrysa Leventi and Holly Sutherland)

INET/OECD Centre for Opportunity and Equality’s Generating Inclusive Growth conference, 8-9 November 2018, Oxford

x Holly Sutherland presented ‘Reducing inequality with tax-benefit reform: the case for Child Benefit’ (co-authors Iva Tasseva and Chrysa Leventi)

Scottish Government Evidence into Policy: EUROMOD Seminar, 12 November 2018, Scottish Government, Edinburgh

x Paola De Agostini presented ‘EUROMOD: an overview’ and ‘Projecting child poverty in Scotland’ and Iva Tasseva presented ‘How could basic income work in the UK? What are its costs and benefits?’
Meet the EUROMOD national teams: the Polish team

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

The current Polish team working on EUROMOD is composed of Michał Myck, Kajetan Trzcinski and Adam Adamczyk. The development of the model over the years has been possible thanks to the contributions of, among others, Leszek Morawski, Michał Kundera and Wojciech Paukszteło. As with every country module it has been a team effort!


Kajetan Trzcinski joined CenEA as a Research Economist in September of 2018. He received his BA in Politics at the University of East Anglia (2016) and graduated from the London School of Economics and Political Science with an MSc in Political Economy (2017). He is interested in applying the theory of public policy design and in using microsimulation methods to evaluate public policy outcomes, especially from the international perspective which is facilitated by EUROMOD.

Adam Adamczyk is a professor at the University of Szczecin and a Research Associate at CenEA. His research interests include the design of fiscal policy, with a particular focus on company taxation and R&D subsidies. He has been recently involved in the update and development of the Polish module of EUROMOD and has been using the model in an international comparative evaluation of tax advantages for the self-employed.

Michał Myck tells us: "My involvement with microsimulation goes back to my first job at the Institute for Fiscal Studies in London, where I had the pleasure to work on and develop the IFS's Tax-Ben model. This proved to be the beginning of a long-lasting involvement with household data analysis in general and microsimulation work in particular, as well as a meeting point with many people involved in microsimulation research. On my return to Poland we created a team of researchers and – together with Olivier Bargain, Leszek Morawski and Mieczyslaw Socha – initiated the development of the Polish microsimulation model SIMPL alongside the development of the prototype of the Polish module in EUROMOD. Since then, and in particular after 2009 when I took over management of the Centre for Economic Analysis in Szczecin, EUROMOD and SIMPL have been developed in parallel, with clear advantages on both sides. While EUROMOD offers us a unique international perspective and the EUROMOD team is a source of continued methodological improvements, SIMPL allows us greater country-specific flexibility and facilitates modelling of direct and indirect taxation.

"The knowledge base built over the years has permitted us to provide detailed analysis of the Polish tax and benefit system in academic research, and to shed light on fiscal reforms and on policy design with intensive involvement in the public debate. We have used our microsimulation model to evaluate specific tax and benefit reforms, to highlight problematic elements of the existing system, and to assess the distributional implications of entire reform packages in the evaluation of policies of specific governments or party proposals during election campaigns. Our analysis was met with a lot of media interest and the results have featured prominently in the public debate, which is yet another proof that microsimulation is a very useful and powerful approach in evidence based policy making.

"We continue our involvement in the evaluation of tax and benefit reforms in Poland, and at the same time look for new research opportunities using SIMPL and EUROMOD. Recently Adam Adamczyk and Leszek Morawski have been using EUROMOD to examine the tax advantages of self-employment, while at the same time we continue our involvement in expanding the use of microsimulation methods both in Poland and in developing countries in cooperation with the World Bank."

EUROMOD used in Greek draft budgetary plan for 2019

The Greek Draft budgetary plan for 2019, submitted to the European Commission, makes use of EUROMOD in one of its sections. EUROMOD was used to assess the distributional impact of the main tax and benefit policy changes that are planned for 2019.

These policy changes, mostly related to pensions, were estimated to have a modest poverty-reducing effect while inequality remains relatively stable.
Focus on MOZMOD: the microsimulation model for Mozambique

Vanda Castelo, Finorio Castigo, Jose Cardoso and Gemma Wright talk us through the successful realisation of another microsimulation model implemented on the EUROMOD platform – and invite us to watch a mini-documentary

Tax-benefit microsimulation helps to understand how different policy options, comprising changes to tax and benefit arrangements, might affect household and government budgets.

The EUROMOD microsimulation model for Europe has been in existence for more than 20 years. Building on this expertise, in 2015 the United Nations University World Institute for Development Economics Research (UNU-WIDER), the EUROMOD team at the University of Essex, and Southern African Social Policy Research Insights (SASPRI), along with local partners, set up the SOUTHMOD programme to bring microsimulation to many countries of the global south, including Mozambique, Tanzania, Zambia, Ethiopia, Ghana, Vietnam, Ecuador and more recently Uganda.

The Mozambique strand of work in the SOUTHMOD programme started with a feasibility study to assess the viability of developing a tax-benefit microsimulation model. Microsimulation models require detailed information on individuals and on income and expenditure, so the working teams had to identify the optimal household survey dataset. The Mozambican team identified the Household Budget Survey (Inquérito aos Orçamentos Familiares - IOF) 2008-2009 as the preferred dataset. The IOF data are representative at national, provincial, rural and urban levels, and contain information on households’ income and expenditure patterns that provides sufficient detail to simulate the tax and benefit policies.

The first version of the Mozambican microsimulation model – MOZMOD – was built using the EUROMOD software and the IOF 2008-2009 data. This was updated in 2017 with a new underpinning dataset, the IOF 2014-2015. The language of government in Mozambique is Portuguese and so the user manual and training slides were produced in Portuguese as well as in English.

The policies in MOZMOD reflect the current national strategies on social protection, comprising the National Strategies of Social Security, legislation on Social Insurance and tax legislation for Personal Tax, Simplified Tax for small business, VAT, Excise Tax and Fuel Tax. A new version of MOZMOD is currently being produced, with the inclusion of a 2018 system, to ensure that the model remains up to date.

In these three years of MOZMOD’s development, local stakeholders have received two training sessions in Maputo on how to use the model. These events provided an opportunity to bring together people from different government departments to explore how they could use MOZMOD in their daily work. Indeed, after the second training, the MOZMOD team used the MOZMOD model to simulate the impact of a universal child grant on poverty reduction, and implications for the Government’s budget. Such simulations have contributed to the debate in the Ministry of Gender Child and Social Action on the upcoming pilot of a child grant in Mozambique.

Watch the mini-documentary on MOZMOD – Bridging the gap: policy and people.

The MOZMOD team used the MOZMOD model to simulate the impact of a universal child grant on poverty reduction, and implications for the Government’s budget'
EUROMOD working paper series

Quality Assessment of Microsimulation Models: The Case of EUROMOD
EUROMOD Working Paper Series EM19/18
Author Holly Sutherland
Publication date 30 October 2018
Abstract Assessing the quality of microsimulation models is an important contributing factor for motivating their use in both academic and policy environments. This is particularly relevant for EUROMOD, the tax-benefit microsimulation model for the European Union, because it is intended to be widely used. This paper explains how the quality of EUROMOD is assessed. It focusses on the validity and scope of results as particularly important dimensions of quality, and on the transparency with which this assessment is done. It also provides evidence on the extent and breadth of the use of EUROMOD. Some of the key trade-offs between different aspects of quality are identified and the paper concludes with a view on the appropriate division of responsibility for quality assessment, between model developers and users.

Income protection of atypical workers in the event of unemployment in Europe
EUROMOD Working Paper Series EM18/18
Authors Holguer Xavier Jara Tamayo and Alberto Tumino
Publication date 29 October 2018
Abstract This paper evaluates the degree of income protection the tax-benefit system provides to atypical workers in the event of unemployment, comparing them to standard employees. Our approach relies on EUROMOD, the EU tax-benefit microsimulation model, to simulate transitions from employment to unemployment for the entire workforce and to compare household financial circumstances before and after the transition. Our results show that coverage rates of unemployment insurance are low among atypical workers. These workers are also significantly more exposed to the risk of poverty than standard employees, both while in work and in the event of unemployment. Our analysis also shows that low-work intensity employees are characterised by higher net replacement rates than other groups. However, this is due to the major role played by the market incomes of other household members. Finally, we show that in countries where self-employed workers are not eligible for unemployment insurance benefits, extending the eligibility to this group of workers would increase their replacement rates significantly and make them less likely to fall into poverty in the event of unemployment.

Research note: The distributional impact of local social benefits in Croatia
EUROMOD Working Paper Series EM17/18
Authors Martina Pezer, Slavko Bezeredi and Chrysa Leventi
Publication date 28 October 2018
Abstract The aim of this research note is to analyse the distributional impact of five types of local social benefits (compensation for housing costs, old-age income supplement, grant for a newborn child, kindergarten subsidy and city transport subsidy) in the four major Croatian cities – Zagreb, Split, Rijeka and Osijek – which is a first analysis of this kind for Croatia. Using miCROMod – the Croatian tax-benefit microsimulation model, a comparative analysis of benefits and their generosity has been conducted; their income redistribution and poverty reduction effects have also been investigated. Results reveal that, in all local benefit systems considered, the most significant resources are devoted to the city transport subsidy and the kindergarten subsidy. If we compare the per capita values, the most generous benefits are found in Zagreb, followed by Rijeka, Osijek and Split. Also, social protection benefits of Zagreb and Rijeka are the most redistributive, achieving the highest poverty headcount reduction.

Europe Through the Crisis: Discretionary Policy Changes and Automatic Stabilisers
EUROMOD Working Paper Series EM16/18
Authors Alari Paulus and Iva Valentinova Tasseva
Publication date 27 October 2018
Abstract Tax-benefit policies affect household incomes through two main channels: discretionary policy changes and automatic stabilisers. Although a large body of literature has studied the impact of tax-benefit policy changes on incomes, little is known about the link between automatic stabilisers and the income distribution. We contribute to the literature by studying in detail the contribution of automatic stabilisers and discretionary policy changes to income changes in the EU countries between 2007 and 2014. Our results show that, discretionary policy changes and the automatic stabilisation response of policies more often worked to reduce inequality of net incomes, and so helped offset the inequality-increasing impact of a growing disparity in gross (pre-tax) market incomes. Inequality reduction was achieved mainly through policy changes to benefits and benefits acting as automatic stabilisers. On the other hand, policy changes to and the automatic stabilisation response of taxes and social insurance contributions raised inequality in some countries and lowered it in others.

Size and distributional pattern of pension-related tax expenditures in European countries
EUROMOD Working Paper Series EM15/18
Authors Salvador Barrios, Flavia Coda Moscarola, Francesco Figari and Luca Gandullia
Publication date 26 October 2018
Abstract Policy discussions on pension systems generally focus on their sustainability and design, including retirement age, income reference and contributory period, with relatively little attention devoted to the tax treatment of pension contributions and pension benefits. However, tax expenditures—defined as deviations from an agreed benchmark tax system—are widely used in EU Member States, and little is known about their fiscal and distributional impact. This paper quantifies the fiscal and distributional impact of tax expenditures related to public and private contributory pension schemes, affecting both contributions and pension benefits, in 28 European countries using EUROMOD, the EU-wide microsimulation model. We find that pension-related tax expenditures can have a sizeable impact on revenue and strong effects on inequality and poverty. Tax expenditures tend to be progressive on two levels: first, among pensioners, by favoring those with lower incomes, mainly as a result of the preferential treatment given to pension incomes; and, second, among people of working age, through a partial or no deduction of pension contributions, draining resources from those at the top of the income distribution. Moreover, embracing a lifetime perspective, tax expenditures tend to redistribute resources in favor of women and low educated individuals.

Piecemeal modelling of the effects of joint direct and indirect tax reforms
EUROMOD Working Paper Series EM14/18
Authors Bart Capéau, André Decoster, Sebastiaan Maes and Toon Vanheukelom
Publication date 14 September 2018
Abstract This paper offers a framework to establish a micro-based budget and welfare
Continued on next page
evaluation of a joint reform in personal income taxes, social security contributions and indirect taxes. One often lacks an encompassing model for both labour supply decisions in real world tax and benefit contexts and the allocation of disposable income to commodities. In this paper we therefore elicit the assumptions which allow us to combine different submodels, such that an assessment of a joint reform becomes possible in a consistent conceptual framework. In addition, we characterise households’ labour supply decisions by a random utility random opportunity (RURO) model of job choice. This allows us to incorporate effects from the demand side of the labour market into our analysis. We apply this framework to a recently enacted Belgian tax reform which shifts the burden away from labour taxes. We find substantial empirical evidence that, both from a distributional and from a budgetary perspective, it is important to account for indirect taxes, for labour demand-side effects and for unobserved job characteristics, when assessing this kind of joint tax reform. As for the budgetary effects, the cost recovery effects of the tax shift are modest. This is, among other things, explained by a more encompassing income effect in our job choice model, than is found in the more classic discrete choice model of labour supply.

To what extent do welfare states compensate for the cost of children? A hypothetical household approach to policy evaluations

EUROMOD Working Paper Series EM13/18
Authors Tess Penne, Tine Hufkens, Tim Goedemé and Bérénice Storms
Publication date 31 August 2018

Abstract In order to alleviate child poverty, contemporary European welfare states have shifted their focus increasingly towards child-centred investment strategies. However, studies assessing the generosity of welfare states to families with children focus mainly on the role of cash benefit packages, or on government expenditure, disregarding the actual costs families face when accessing essential goods and services. This paper takes a hypothetical household approach to family policy evaluations and aims at contributing to existing studies by: (1) empirically assessing the needs and costs of children across welfare states by making use of cross-nationally comparable reference budgets, while taking into account publicly-provided or subsidized services, (2) simulating the cash benefits that households with children receive through the tax-benefit system, by making use of the new Hypothetical Household Tool (HHoT) in EUROMOD, and, (3) combining both types of information in order to compare the essential out-of-pocket costs of children between 6 and 18 years old with the simulated cash benefit packages. The paper focuses on six European welfare states: Belgium, Finland, Greece, Hungary, Italy and Spain. We propose a new indicator that can be used to assess welfare state generosity to families with children: the child cost compensation indicator. By making use of this indicator, we show that, even though with important cross-national variation, the out-of-pocket cost of children is generally compensated to a small extent through cash policies. Although support for families is higher at the lower end of the income distribution, for households living on a low gross wage, the income of a family with children is less adequate compared to a similar childless family, and is in many cases insufficient to participate adequately in society.

Vienna workshop explored new directions for policy evaluation using EUROMOD


This was ahead of the EUROMOD annual project meeting which also took place in Vienna.

The workshop included panel discussions on the directions of future research in the field. For further information, including the presentations, visit https://www.euro.centre.org/events/detail/3204
EUROMOD: introducing the team

In this edition of EUROMOD NEWS, new EUROMOD Director Matteo Richiardi describes his work

What is your background?
I started working for an economic consultancy before graduating, in Torino, Italy, then went to do a MSc in Economics at UCL. Although I somehow managed to get a distinction, I didn’t really like the super-competitive academic environment there – at least as I perceived it as a student – so I went back to Torino and resumed my consultancy job. In the meantime however, I did a PhD part-time. It’s during my PhD that I learned agent-based modelling – basically microsimulation with a focus on interactions between the units of analysis (individuals, households, firms, etc.) – and I got fascinated with social science simulations. I also learned programming in Java, the language I used, many years later, to develop my platform for agent-based and dynamic microsimulation modelling, JASmine. Its logo, which hints to Java’s stylised cup of hot coffee, is a cup of hot Jasmine tea. My first attempt at dynamic microsimulation modelling was in 2004, with a model labour force participation of the ageing Italian population for the Italian Treasury Ministry. Almost 15 years later, our projections are still spot on!

After finishing my PhD, and having made peace with academic life, I started looking for a job as assistant professor in Italy. I wanted to go and live near the sea, and I was very fortunate to be hired at the University of Ancona, on the Italian east coast, where I spent four beautiful years, during which I lived on a small sailing boat moored in the city harbour. Most people thought I had a dreamy life there, but the truth was that it was pretty cold and humid, and a lot of hard work to keep everything in order. I loved it. In 2010, to stay closer to my growing family, I moved to the University of Torino. In 2014 I moved to the University of Oxford, first with a Marie Curie fellowship on the econometrics of simulation models, and then joining the team of Brian Nolan doing research on income inequality.

Finally, in June this year I arrived in Essex, again by the sea. You know where you’ll find me in my free time!

What are your research interests?
Methodology-wise, I’m split between simulation modelling and empirical labour economics. Topic-wise, I’m very interested in how economic insecurity develops, what are the barriers against it, how it is affected by individual life course events and how in turns it shapes our choices, our health and even our ideas! It is my understanding that economic insecurity is possibly even more important than economic inequality as a source of major social problems, including health outcomes and political attitudes. I’m also very interested in the capital-labour split (the labour share) – and how technology and market power in particular affect it. A common thread to all my work – from agent-based modelling to microsimulation, from labour force participation to the labour share, including some earlier work I did on diverse topics as traffic modelling and political economy – is the role of heterogeneity: how individual diversity affects not only individual but also aggregate outcomes.

What is your experience with tax-benefit microsimulation?
To be honest, I am quite new to taxation and static tax-benefit microsimulation; my background being more on dynamic and behavioural models. What I love about it is that it is, in principle, pretty straightforward yet provides crucial answers to topics which are relevant to everyone, from the man in the street to policy makers. I am now working on how to combine the two approaches, embedding tax-benefit microsimulations in dynamic models. This allows to move from a short-term perspective typical of static models to longer-term horizons.

Which countries do you work on?
I am not responsible for any country, as a developer. My research has mostly focused on Italy and the UK, but in a project on female labour supply participation we compared five low-participation EU countries (Ireland, Spain, Greece and Hungary, in addition to Italy) with a high-participation benchmark (Sweden). In another, ongoing project we are studying the differences between labour force participation in the UK and the US, through the lenses of a decomposition analysis involving population swaps. All very EUROMOD-ish I’d say…

Do you have any special responsibilities?
I have the great honour and responsibility to take the helm of EUROMOD from Holly, at a crucial turning point in the history of EUROMOD… this poses new challenges but at the same time creates new opportunities for the EUROMOD team at Essex.

Continued on next page
Would you like to learn how to use EUROMOD on our next training course?

The next training course providing a hands-on introduction to the use of EUROMOD will be held in ISER at the University of Essex on 20-22 March 2019.

The aim of the course is to provide academics, policy practitioners and other interested users with an introduction to the concepts, structure and functioning of EUROMOD. EUROMOD is a state-of-the-art tax-benefit microsimulation model linking micro-data from household surveys and policy legislation in a single user interface. It allows for complex policy impact analysis, such as evaluations of policy reforms in terms of poverty, inequality, work incentives and government budgets, assessments of EU-wide policies or estimation of the impact of changing population characteristics on the redistributive effect of existing policies. EUROMOD covers all 28 EU Member States.

The course will cover the basics of tax-benefit microsimulation, the logic and structure behind EUROMOD, working with EUROMOD’s user interface, input data, EUROMOD’s modelling ‘language’ and using documentation. The course combines lectures with live demonstrations of the model. Participants also have the opportunity to carry out a number of hands-on exercises to test and refine their understanding of the model.

If you are interested in attending or would like more information, please complete this application form. The closing date for applications is 13 January 2019. All candidates will be informed whether their applications have been accepted by 24 January 2019.

Continued from previous page

It is a very good mix of me coming from the outside with new ideas, and the team bringing in a solid understanding of what is feasible, and how.

What are you working on at the moment?
I’m mostly writing grants, which is exciting and frustrating at the same time: it is exciting because it is imaginative, and frustrating... well, everyone knows about it. Research-wise, I’m working on the determinants of the labour share in the UK, on skill-biased technological change, again with UK data, on the consequences of adverse shocks on the re-employment probability in Italy, on the effects of the parental socio-economic status -and how this is affected by the tax-benefit system- on children’s health outcomes, in a number of European countries.

What do you enjoy most about working with EUROMOD?
In ISER I have found an extremely supporting environment, and the opportunity to meet very stimulating colleagues. Everybody speaks about how good teamwork is at EUROMOD and I can only confirm this. Holly has left a strong imprinting with her light but firm touch and her incredible organisational skills. I am learning a lot, both from a managerial and from a personal perspective, and I love that.

Would you like to share any recent highlights?
We have just had our Annual Conference, which was a great success and an opportunity for me to meet the larger EUROMOD community. Looking ahead, I would point to the forthcoming special issue on SOUTHMOD in the International Journal of Microsimulation, and the next Annual Congress of the International Microsimulation Association, which will take place in June in Galway, Ireland. There will be a large EUROMOD delegation there and we will present a wide range of applications and new ideas. Stay tuned!