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EUROMOD HHOT UNEMPLOYMENT EXTENSIONS

Technical report

Katrin Gasior

2021



Abstract

Tax-benefit microsimulation models are typically used to quantify the effect of specific policy changes on the income distribution based on representative micro data. Such analysis evaluates policies by considering how different tax-benefit elements interact based on the personal, household and labour market characteristics of the underlying population. Hypothetical data takes the population structure out of the equation and focuses on model families with concrete specified personal, household and labour market characteristics. This helps to address broader questions of policy design and to compare systemic differences across countries. The focus of this work is the creation of hypothetical information that is usually not available in micro data. More concretely, I improved the simulation of unemployment policies when using hypothetical data by generating more detailed information on the prior work history in the hypothetical household tool HHoT. This information is taken into account through an extension in the EUROMOD tax-benefit microsimulation models.

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EUROMOD HHoT unemployment extensions Technical report

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December 2020

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Abstract

Tax-benefit microsimulation models are typically used to quantify the effect of specific policy changes on the income distribution based on representative micro data. Such analysis evaluates policies by considering how different tax-benefit elements interact based on the personal, household and labour market characteristics of the underlying population. Hypothetical data takes the population structure out of the equation and focuses on model families with concrete specified personal, household and labour market characteristics. This helps to address broader questions of policy design and to compare systemic differences across countries. The focus of this work is the creation of hypothetical information that is usually not available in micro data. More concretely, I improved the simulation of unemployment policies when using hypothetical data by generating more detailed information on the prior work history in the hypothetical household tool HHoT. This information is taken into account through an extension in the EUROMOD tax-benefit microsimulation models.

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1. Introduction

Tax-benefit microsimulation models are typically used to quantify the effect of specific policy changes on the income distribution based on representative micro data. Such analysis evaluates policies by considering how different tax-benefit elements interact based on the personal, household and labour market characteristics of the underlying population. The result of such analysis is a combination of the policy rules and the population structure.

Hypothetical data takes the population structure out of the equation and focuses on model families with concrete specified personal, household and labour market characteristics. This helps to address broader questions of policy design and to compare systemic differences across countries (Gasior and Recchia 2020). Results furthermore help to reach non-academic audiences by communicating the effects of the tax-benefit system based on concrete examples. As such, hypothetical data serves various applications and provides information for various user groups.

The focus of this report is the creation of information that is not available in EU-SILC (the underlying data source for distributional analysis using the tax-benefit model EUROMOD). More specifically, I focus on additional information to improve the simulation of unemployment insurance benefits. These policies require detailed information on the work history prior to unemployment which is not available in EU-SILC but can be taken into account when using hypothetical data. I make use of the tax-benefit microsimulation model EUROMOD and the Hypothetical Household Tool (HHoT) of the EUROMOD software and extend both to take additional information on the work history into account.

HHoT was developed at the University of Essex jointly with the University of Antwerp supported by the InGRID project funded by the European Commission's 7th Framework Programme (Hufkens et al. 2016). The predecessor project InGRID-2 allows us to further develop the hypothetical household tool inbuilt into the EUROMOD user interface. The HHoT specific work package in InGRID-2 aims at extending the scope of the application to include variables and simulations beyond the baseline models and specifications. This includes improved simulations of unemployment benefits - an endeavour that is documented in this report - as well as the simulation of additional housing-related allowances (documented in Siöland (2019)) and improved simulations of parental leave policies (documented in ??).

The remainder of the report briefly introduces EUROMOD and HHoT (chapter 2). Chapter 3 and 4 present the HHoT unemployment benefit extension and provide information on the implementation and how it diverges from the baseline EUROMOD models, as well as country specific information and results. The country profiles are complemented by additional graphs and information in the appendix.

EUROMOD and it's hypothetical household tool HHoT

EUROMOD is the tax-benefit microsimulation model for the European Union that enables researchers and policy analysts to calculate, in a comparable manner, the effects of taxes and benefits on household incomes for the population of each country and for the EU as a whole (Sutherland and Figari 2013). EUROMOD uses its own software, developed for its multi-country purpose, offering a high degree of flexibility. Standard EUROMOD distributional analysis makes use of the European Union Statistics on Income and Living Conditions (EU-SILC) micro data for most countries.

The <u>Hypothetical Household Tool</u> (HHoT) is a EUROMOD application (plug-in) for designing hypothetical households and generating data according to user-specified household characteristics (EUROMOD 2017). This hypothetical household data can then be used to estimate the effects of taxes and benefits on household disposable income in EUROMOD. With the HHoT application, users can create their own hypothetical data, which allows them to better understand how policies work for households with specific characteristics, while giving them full control over the characteristics of interest (Gasior and Recchia 2020). For example, three (or more) generation households can be included, as well as a variety of labour market statuses and income sources. HHoT allows users to compose, save, use and re-use their own database of hypothetical households.

Gasior and Recchia (2020) utilize HHoT to provide a comprehensive overview of European welfare systems focusing on the role of cash benefits, taxes and social insurance contributions for the unemployed, inactive and families with children. Hufkens et al. (2019) illustrate several ways in which HHoT can be used for policy analysis. Both papers apply the baseline EUROMOD models and default HHoT specifications. The baseline HHoT specifications are limited by the scope of variables in EUROMOD micro input data as the idea is to make the standard EUROMOD models run with hypothetical data instead of EU-SILC.

However, the advantage of using model families over micro data is that one is not bound to such restrictions. the flexibility of the hypothetical household tool allows users to specify new variables which are then included in the generated hypothetical input data file for EUROMOD. In addition, these newly specified variables need to be taken into account in the EUROMOD model itself to be taken into account in the simulations. Figure 1 describes the difference between the current EUROMOD model and the pre-specified variables in HHoT and the steps needed to extent the scope.

These steps have been carried out and are described in the current report for unemployment insurance benefits. Simulations in the baseline models are to some extend based on assumptions due to the lack of information in the data required to take all details of policy rules into account. These assumptions are replaced by making use of additional information (variables) in the hypothetical household data. In this specific case, this mostly

includes information on work history prior to unemployment.

FUROMOD baseline **HHoT extensions** Based on a pre-specified Add new country-specific Generates hypothetical ННоТ variables providing more details set of variables, inline with input data micro input data in HHoT Include this additional Uses hypothetical input Based on assumptions **EUROMOD** data to simulate benefits. information to improve used in the baseline taxes and social insurance simulations in the country country models country models contributions models

Figure 1: EUROMOD baseline vs. HHoT extensions

Source: Own representaion

These additions are implemented as so-called extensions. The EUROMOD user interface provides a special way to switch elements on and off in the models. An extension bundles these switches into one, meaning that all additions to the model are used automatically when the user switches the specific extension on. These extensions have the same name across countries but the elements of the extensions are country specific. At the same time it is still possible to run the original baseline scenario when the extension is off. This allows users:

- to use the same model for distributional analysis and analysis based on model families
- and to make a choice between
 - the same assumptions as for the distributional analysis
 - or to make use of the additional characteristics provided by the extension.

The two extensions can be applied at the same time or separately, depending on the research question and the choice of the user.

The user interface of EUROMOD and the hypothetical household tool are flexible and allow for further extensions by the user. The extension covered in this report, thus, also serves as a working example for potential future additions. I adhered to the following implementation strategy which is generic enough to be used as a guideline for such endeavours:

- Use available variables if possible
 - if not create new HHoT related variables ending with "h".
 - Document new variables.
 - Make sure that new variables are taken into account in HHoT and define default values appropriately to ensure the simulation of the benefit in EUROMOD.
- Make use of existing functions as much as possible by adding extension specific parameters to avoid duplication.
- Clearly highlight parameters/functions/policies that are for HHoT extensions only using the comment column.
- Extension specific policies/functions/parameter need to be added to the extension/global switch
- Never change the EUROMOD baseline.

3. The unemployment benefit extension

Unemployment benefits and more specifically unemployment insurance benefit are an important element of European tax-benefit systems. In most countries, such benefits are not means-tested and provide support to newly unemployed protecting them from mayor (short-term) income losses.

The design of the benefit differs widely across countries in terms of duration, level and access criteria. Only some countries pay a flat-rate benefit while most pay a certain fraction of the previous earning level. Duration and access criteria can differ by age and work history, providing easier access and longer-term payments to specific groups of the work force. Especially the work history seems to be an important element that not only defines eligibility (only those having contributed to the system long enough are eligible) but also the duration of the benefit. This does not only include the total number of months ever in employment but most importantly the number of months prior to getting unemployed. Also the duration of the benefit varies across countries - between 3 months and indefinite - highlighting not only the variation in support but also differences in purpose of the benefit. At the same time, countries may support unemployed after the unemployment insurance benefit expires providing unemployment assistance and/or social assistance benefits. Both benefits are less dependent on previous earnings levels and thus, often lead to a higher income shock. In addition, not everyone is funded under the unemployment insurance scheme in every country, leading to differences in protection across groups of workers.

These differences in design of unemployment benefits can be studied using hypothetical household data together with a tax-benefit model as:

- hypothetical data provides useful insights into policy design and systemic differences
 across countries while abstracting from differences in size and profile of unemployed
 in the different countries,
- the microsimulation model takes interaction effects with other benefits as well as taxes and social insurance contributions into account that change after becoming unemployed,
- and most importantly, the hypothetical data enables us to include information on the work history prior to unemployment and to take other factors such as contributions to voluntary unemployment insurance into account.

All EUROMOD baseline models already include simulations of unemployment benefits. The benefit rules as well as the treatment in EUROMOD are described in each of the EUROMOD country reports. This also includes assumptions that had to be made due to the lack of information in the micro input data.

The implementation of the HHoT unemployment extension (HHoT_ue) makes use of the already existing simulations but replaces assumptions with additional information provided in HHoT which is subsequently included in the hypothetical input data. More precisely:

- it switches functions that simulate elements based on assumptions off
- and replaces them with functions that make use of the additional variables that are added to the HHoT input data.
- It furthermore adds additional functions/parameters to use previous earnings information from the input data rather than based on imputed data.
- In some countries, unemployment benefits are switched off in the baseline as they cannot be simulated sufficiently. The HHoT unemployment extension switches it on as the additional information in the hypothetical data provides a better basis for the simulation.
- The HHoT_un extenion is available in all 27 EU countries plus the United Kingdom for the policy years 2014 to 2019.

4. Country profiles (in alphabetical order)

The country profiles describe the most important elements of the benefit, reference the country report for further information and highlight the country specific changes to the baseline models carried out by the HHoT unemployment extension apart from the ones mentioned above. It furthermore includes a graph that compares baseline HHoT results with HHoT unemployment extension results.

The profiles are based on the following household type:

- single women aged 40
- previously in full-time employment working 40 hours
- with a total work history of 10 years
- and average earnings (see Table A2 in the Appendix for 2014-2019 values in EUR and national currency).

The profiles show the disposable income of the women when in employment and various scenarios when she is unemployed based on the 2019 average wage and policy system. The appendix provides results for all years (2014-2019). I compare results using the standard baseline and HHoT application ("Extension off")¹ with results using the extended models and taking the additional variables in HHoT into account ("Extension on").

Each set of results shows five scenarios:

- **Default**: refers to the default values specified in the HHoT application. These values set the minimum standards to guarantee that the unemployment insurance benefits are simulated if the user does not change any of the default values. Thus, results are the same independent of the underlying model (baseline vs. extended model).
- 6m: assumes that the unemployed person has been in employment for 6 months prior to being unemployed.
- 12m: assumes that the unemployed person has been in employment for a year prior to being unemployed.
- 24m: assumes that the unemployed person has been in employment for 2 years prior to being unemployed.
- 36m: assumes that the unemployed person has been in employment for 3 years prior to being unemployed.

¹Baseline models are modified using an Add-on developed for this purpose in cases where unemployment insurance benefit and parental leave benefit simulations are switched off in the baseline. An overview of these changes is provided in the appendix.

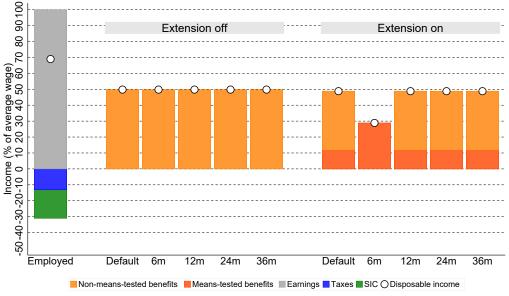
4.1 Austria

Key characteristics of the unemployment insurance benefit:

- Contribution period: 12 months out of 24 months (6 months out of 12 months if younger than 25)
- Basic amount: 55 percent of net earnings
- Benefit duration: 4 to 36 months depending on age and contribution years (9 months in this example)
- Average earnings: 3,448.0
- See Country Report for more detailed information (Fuchs and Premrov 2019)

EUROMOD note: Please note that basic amounts are based on previous net earnings, while the average earning level applied here is based on gross earnings. Additional information includes whether unemployment insurance benefit has been received in the past (bunpvyn_h) and the work history of the 12, 14 and 24 months prior to unemployment (liwwh?? h).

Figure 2: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A1 in the Appendix for 2014-2019 results.

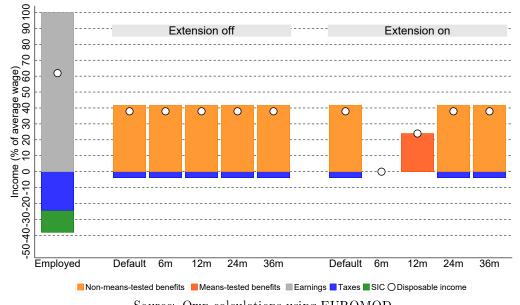
4.2 Belgium

Key characteristics of the unemployment insurance benefit:

- Contribution period: 12 out of 21 months if younger than 36, 18 out of 33 months if aged between 37 and 49 and 24 out of 42 months if aged 50+
- Basic amount: 40 to 65 percent of gross earnings
- Benefit duration: no limit
- Average earnings: 3,798.0
- See Country Report for more detailed information (Derboven et al. 2019)

EUROMOD note: The simulation of the unemployment benefit is switched off in the baseline and switched on through the extension. Additional information includes the work history of the 21, 33 and 42 months prior to unemployment (liwwh??_h).

Figure 3: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD Note: See Figure A2 in the Appendix for 2014-2019 results.

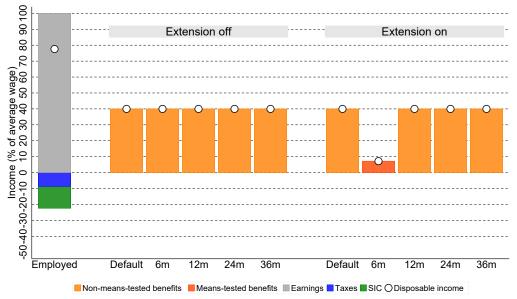
4.3 Bulgaria

Key characteristics of the unemployment insurance benefit:

- Contribution period: 9 out o 24 months
- Basic amount: 60 percent of gross earnings
- Benefit duration: 4 to 12 months depending on total contribution years (8 months in this example due to a contribution period of 10 years)
- Average earnings: 611.6
- See Country Report for more detailed information (Tosheva et al. 2019)

EUROMOD note: Additional information includes the work history of the 18 months prior to unemployment (liwwh18_h).

Figure 4: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A3 in the Appendix for 2014-2019 results.

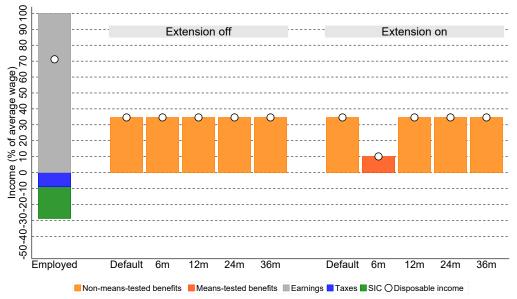
4.4 Croatia

Key characteristics of the unemployment insurance benefit:

- Contribution period: 9 out of 24 months
- Basic amount: 35 to 70 percent of gross earnings net SIC
- Benefit duration: 3 to 15 months depending on total work history (11 months in this example due to a contribution period of 10 years)
- Average earnings: 1,065.3
- See Country Report for more detailed information (Urban et al. 2019)

EUROMOD note: Additional information includes the work history of the 24 months prior to unemployment (liwwh24_h).

Figure 5: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A4 in the Appendix for 2014-2019 results.

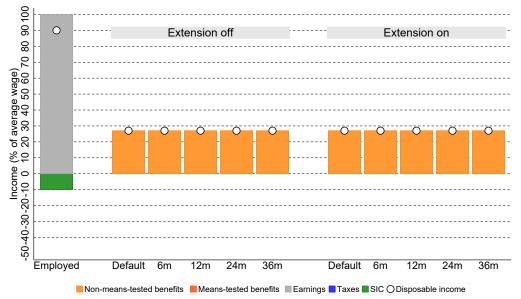
4.5 Cyprus

Key characteristics of the unemployment insurance benefit:

- Contribution period: 6 months previous to unemployment
- Basic amount: 60 percent of basic insurable earnings
- Benefit duration: 6 months
- Average earnings: 1,867.0
- See Country Report for more detailed information (Polycarpou and Savva 2019)

EUROMOD note: The simulation of the unemployment benefit is switched off in the baseline and switched on through the extension.

Figure 6: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A5 in the Appendix for 2014-2019 results.

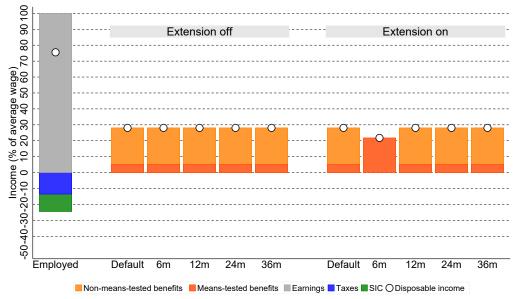
4.6 Czechia

Key characteristics of the unemployment insurance benefit:

- Contribution period: 12 out of 24 months
- Basic amount: 45 to 65 percent of net earnings
- Benefit duration: 5, 8 or 11 months depending on age and work history (5 months in this example)
- Average earnings: 1,226.5
- See Country Report for more detailed information (Kalíšková et al. 2019)

EUROMOD note: Additional information includes the work history of the 24 months prior to unemployment (liwwh24_h).

Figure 7: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A6 in the Appendix for 2014-2019 results.

4.7 Denmark

Key characteristics of the unemployment insurance benefit:

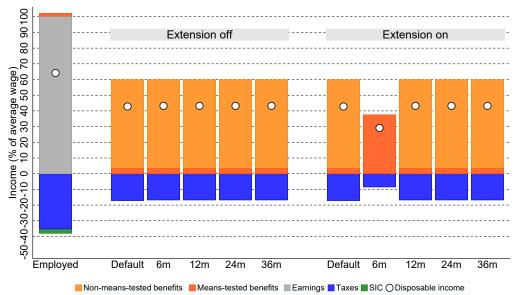
Contribution period: 12 out of 36 months
Basic amount: 90 percent of gross earnings

Benefit duration: 24 monthsAverage earnings: 4,456.7

• See Country Report for more detailed information (Greve and Hussain 2019)

EUROMOD note: Additional information includes the work history of the 36 months prior to unemployment (liwwh36 h).

Figure 8: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A7 in the Appendix for 2014-2019 results.

4.8 Estonia

Key characteristics of the unemployment insurance benefit:

• Contribution period: 12 out of 36 months

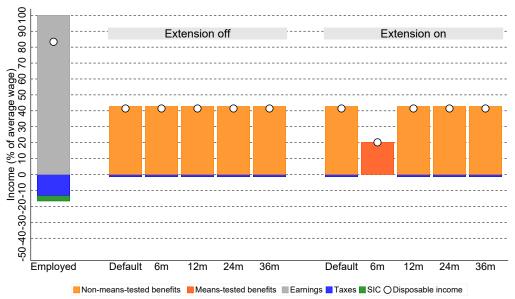
• Basic amount: 40 to 50 percent of gross earnings

Benefit duration: 12 monthsAverage earnings: 1,376.8

• See Country Report for more detailed information (Masso et al. 2019)

EUROMOD note: Additional information includes the work history of the 36 months prior to unemployment (liwwh36 h).

Figure 9: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



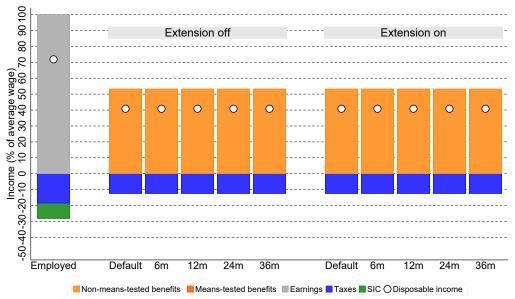
4.9 Finland

Key characteristics of the unemployment insurance benefit:

- Contribution period: 6 out of 28 months for employees
- Basic amount: earnings related if member of unemployment fund, flat rate plus supplement for depending children if not a member (earnings related benefit in this example)
- Benefit duration: 13 months
- Average earnings: 3,384.4
- See Country Report for more detailed information (Räsänen and Simanainen 2019)

EUROMOD note: Additional information includes the work history of the 28 months prior to unemployment (liwwh28_h) and whether the individual is a member of the insurance scheme (lim_h).

 $\textbf{Figure 10:} \ \, \textbf{HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019} \\$



Source: Own calculations using EUROMOD

Note: See Figure A9 in the Appendix for 2014-2019 results.

4.10 France

Key characteristics of the unemployment insurance benefit:

• Contribution period: 4 out of 28 months

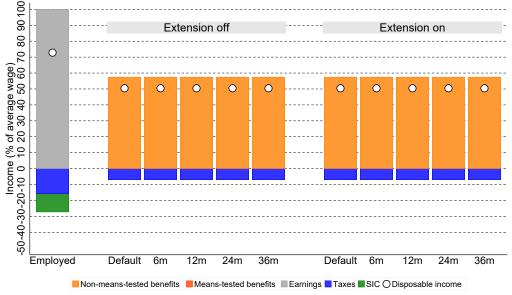
• Basic amount: 40.4 percent of gross earnings + lump-sum

Benefit duration: 24 monthsAverage earnings: 3,045.8

• See Country Report for more detailed information (Bouvard and Hufkens 2019)

EUROMOD note: Additional information includes the work history of the 28 months prior to unemployment (liwwh28_h) as well as the work history of the last 10 years (liwwhny10_h).

Figure 11: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A10 in the Appendix for 2014-2019 results.

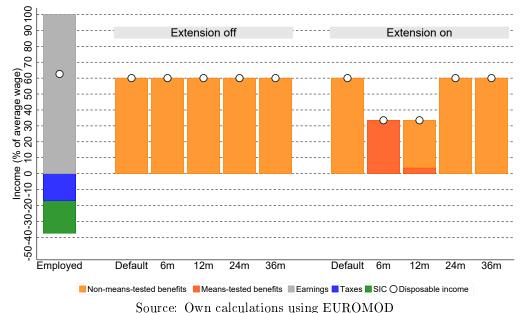
4.11 Germany

Key characteristics of the unemployment insurance benefit:

- Contribution period: 12 out of 24 months
- Basic amount: 60 to 67 percent of net earnings
- Benefit duration: 6 to 24 months depending on age and months employed prior to unemployment (varying months in this example)
- Average earnings: 3,667.0
- See Country Report for more detailed information (Granados and Olthaus 2019)

EUROMOD note: Please note that basic amounts are based on previous net earnings, while the average earning level applied here is based on gross earnings. Additional information includes the work history of the 24 months prior to unemployment (liwwh24 h).

Figure 12: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Note: See Figure A11 in the Appendix for 2014-2019 results.

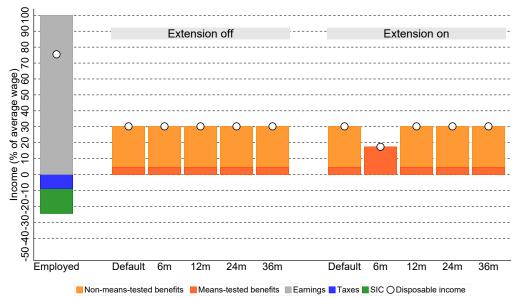
4.12 Greece

Key characteristics of the unemployment insurance benefit:

- Contribution period: 6 out of 14 months
- Basic amount: flat rate
- Benefit duration: 5 to 12 months depending on days employed prior to unemployment
- Average earnings: 1,550.8
- See Country Report for more detailed information (Leventi et al. 2019)

EUROMOD note: Additional information includes the work history of the 12, 14 and 24 months prior to unemployment (liwwh?? h).

Figure 13: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A12 in the Appendix for 2014-2019 results.

4.13 Hungary

Key characteristics of the unemployment insurance benefit:

• Contribution period: 12 out of 36 months

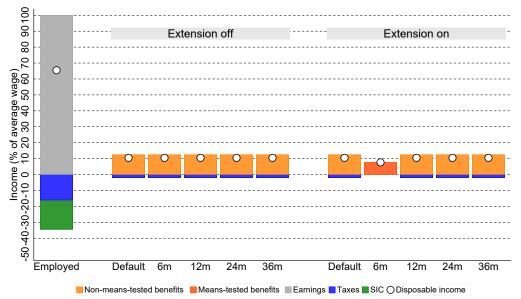
• Contribution base: 60 percent of gross earnings

Benefit duration: 3 monthsAverage earnings: 923.9

• See Country Report for more detailed information (Branyiczki et al. 2019)

EUROMOD note: Additional information includes the work history of the 36 months prior to unemployment (liwwh36_h).

Figure 14: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A13 in the Appendix for 2014-2019 results.

4.14 Ireland

Key characteristics of the unemployment insurance benefit:

• Contribution period: 9 out of 12 months

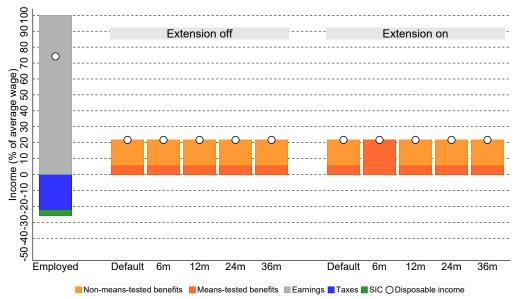
• Basic amount: fixed amount based on previous earnings

Benefit duration: 9 monthsAverage earnings: 4,055.0

• See Country Report for more detailed information (Bercholz and Keane 2019)

EUROMOD note: Additional information includes the work history of the 12 months prior to unemployment (liwwh12_h).

Figure 15: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A14 in the Appendix for 2014-2019 results.

4.15 Italy

Key characteristics of the unemployment insurance benefit:

• Contribution period: 12 out of 24 months

• Basic amount: 75 percent falling to 60 percent of gross earnings

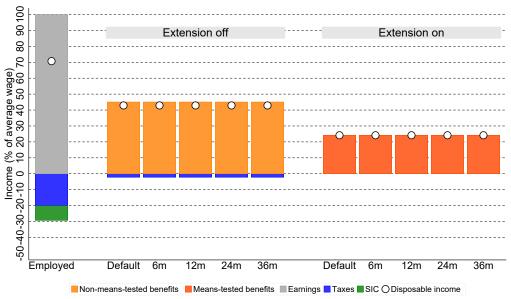
• Benefit duration: 10 to 12 months

• Average earnings: 2,420.7

• See Country Report for more detailed information (Ceriani et al. 2019)

EUROMOD note: The simulation of the unemployment benefit and the wage supplement scheme are switched off in the baseline and switched on through the extension. Additional information includes an identifier of employees under the wage supplement scheme (bunct01yn_h) and the work history of the 24 months prior to unemployment (liwwh24 h).

Figure 16: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A15 in the Appendix for 2014-2019 results.

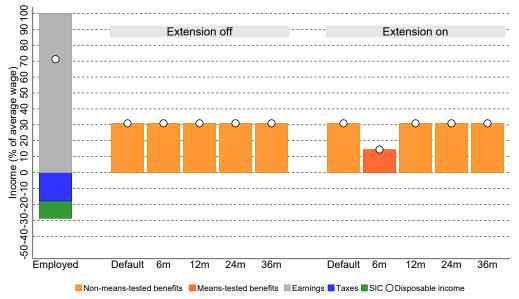
4.16 Latvia

Key characteristics of the unemployment insurance benefit:

- Contribution period: 12 out of 16 months
- Basic amount: 50 to 65 percent of gross earnings depending on work history and reduced after 3 months in unemployment
- Benefit duration: 9 months
- Average earnings: 1,108.7
- See Country Report for more detailed information (Pluta and Zasova 2019)

EUROMOD note: Additional information includes the work history of the 16 months prior to unemployment (liwwh16_h).

Figure 17: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A16 in the Appendix for 2014-2019 results.

4.17 Lithuania

Key characteristics of the unemployment insurance benefit:

• Contribution period: 12 out of 30 months

• Basic amount: 23.27 percent of gross earnings

• Benefit duration: 6 to 9 months depending on work history

• Average earnings: 963.9

• See Country Report for more detailed information (Navickė et al. 2019)

EUROMOD note: Additional information includes the work history of the 30 and 36 months prior to unemployment (liwwh?? h).

Figure 18: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A17 in the Appendix for 2014-2019 results.

4.18 Luxembourg

Key characteristics of the unemployment insurance benefit:

• Contribution period: 6 out of 12 months

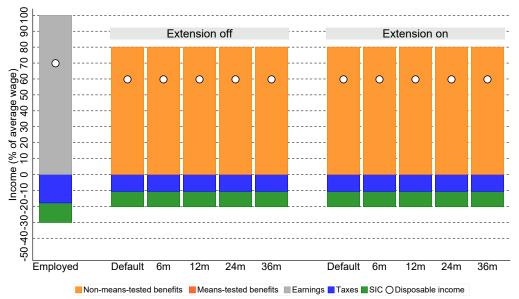
• Basic amount: 80 to 85 percent of gross earnings

Benefit duration: 12 monthsAverage earnings: 5,117.1

• See Country Report for more detailed information (Islam et al. 2019)

EUROMOD note: Additional information includes the work history of the 12 months prior to unemployment (liwwh12_h).

Figure 19: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A18 in the Appendix for 2014-2019 results.

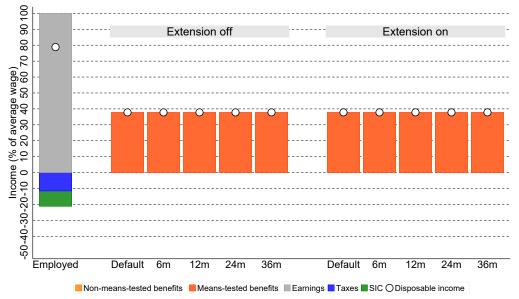
4.19 Malta

Key characteristics of the unemployment insurance benefit:

- Contribution period: 5 out of 24 months
- Basic amount: flat rate (special unemployment benefit amount simulated in this examples as unemployed pass the means test for the higher rate)
- Benefit duration: 6 months
- Average earnings: 2,091.0
- See Country Report for more detailed information (Vella et al. 2019)

EUROMOD note: Additional information includes the work history of the 24 months prior to unemployment (liwwh24_h).

Figure 20: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A19 in the Appendix for 2014-2019 results.

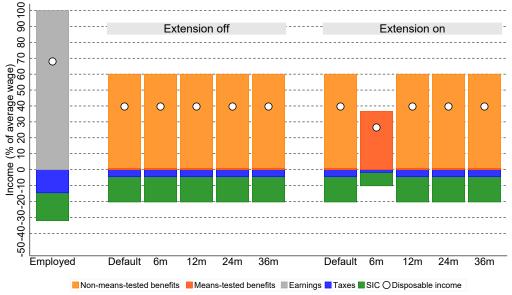
4.20 The Netherlands

Key characteristics of the unemployment insurance benefit:

- Contribution period: 6 out of 8 months
- Basic amount: 70 percent of gross earnings (plus 5 percent in the first 2 months)
- Benefit duration: 3 to 32 months depending on age and work history (12 months in this example)
- Average earnings: 3,797.9
- See Country Report for more detailed information (De Vos and De Agostini 2019)

EUROMOD note: Additional information includes the work history of the 9 months prior to unemployment (liwwh9_h) and the average number of working days per year in last 5 years (liwwhnd h).

Figure 21: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A20 in the Appendix for 2014-2019 results.

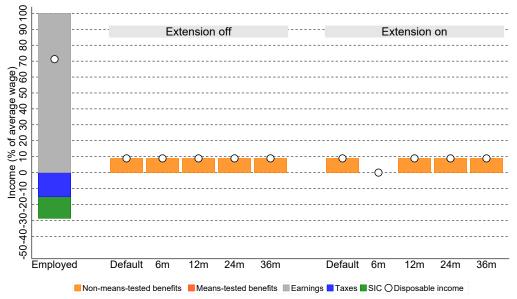
4.21 Poland

Key characteristics of the unemployment insurance benefit:

- Contribution period: 12 out of 18 months
- Basic amount: flat rate
- Benefit duration: 6 to 12 months depending on unemployment rate in the region (6 in this example)
- Average earnings: 996.1
- See Country Report for more detailed information (Myck and Trzcinski 2019)

EUROMOD note: Additional information includes the work history of the 18 months prior to unemployment (liwwh18_h).

Figure 22: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A21 in the Appendix for 2014-2019 results.

4.22 Portugal

Key characteristics of the unemployment insurance benefit:

- Contribution period: 12 out of 24 months
- Basic amount: 55 to 65 percent of gross earnings
- Benefit duration: 5 to 18 months depending on age and work history
- Average earnings: 1,439.2
- See Country Report for more detailed information (Rodrigues et al. 2019)

EUROMOD note: Additional information includes the work history of the 24 months prior to unemployment (liwwh24 h).

Figure 23: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A22 in the Appendix for 2014-2019 results.

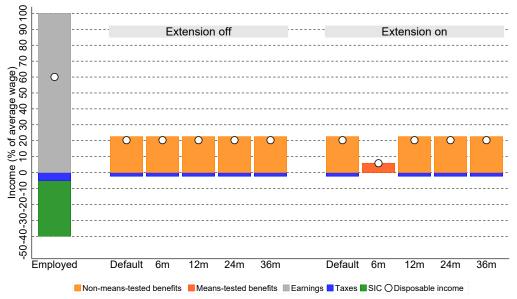
4.23 Romania

Key characteristics of the unemployment insurance benefit:

- Contribution period: 12 out of 24 months
- Basic amount: flat rate plus 3 to 10 percent of gross earnings depending on work history
- Benefit duration: 6 to 12 months depending on work history
- Average earnings: 507.0
- See Country Report for more detailed information (Militaru et al. 2019)

EUROMOD note: Additional information includes the work history of the 24 months prior to unemployment (liwwh24_h).

Figure 24: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A23 in the Appendix for 2014-2019 results.

4.24 Slovakia

Key characteristics of the unemployment insurance benefit:

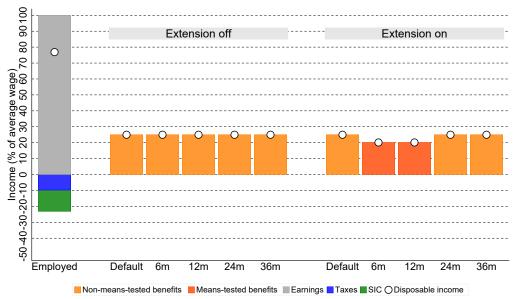
Contribution period: 24 out of 36 months
Basic amount: 50 percent of gross earnings

Benefit duration: 6 monthsAverage earnings: 926.4

• See Country Report for more detailed information (Miklo and Paur 2019)

EUROMOD note: Additional information includes the work history of the 36 months prior to unemployment (liwwh36_h).

Figure 25: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A24 in the Appendix for 2014-2019 results.

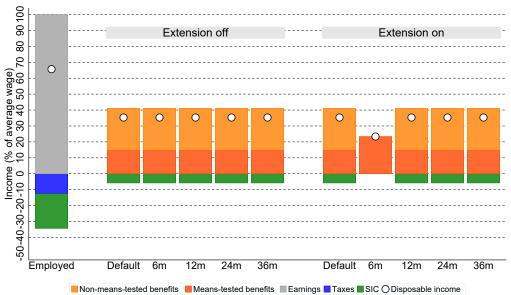
4.25 Slovenia

Key characteristics of the unemployment insurance benefit:

- \bullet Contribution period: 6 out of 24 months if younger than 30, 9 out of 24 months if aged 30+
- Basic amount: 50 to 80 percent of gross earnings
- Benefit duration: 2 to 25 months depending on age and work history (6 months in this example)
- Average earnings: 1,679.2
- See Country Report for more detailed information (Kump et al. 2019)

EUROMOD note: The simulation of the unemployment benefit is switched off in the baseline and switched on through the extension. Additional information includes the work history of the 24 months prior to unemployment (liwwh24 h).

Figure 26: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A25 in the Appendix for 2014-2019 results.

4.26 Spain

Key characteristics of the unemployment insurance benefit:

- Contribution period: 12 out of 72 months
- Basic amount: 50 to 70 percent of gross earnings
- Benefit duration: 4 to 24 months depending contribution months in last 6 years (months vary in this example)
- Average earnings: 1,920.1
- See Country Report for more detailed information (Navas et al. 2019)

EUROMOD note: The simulation of the regional social assistance scheme is switched off in the baseline and switched on through the extension. Additional information includes the work history of the 72 months prior to unemployment (liwwh72_h).

Figure 27: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A26 in the Appendix for 2014-2019 results.

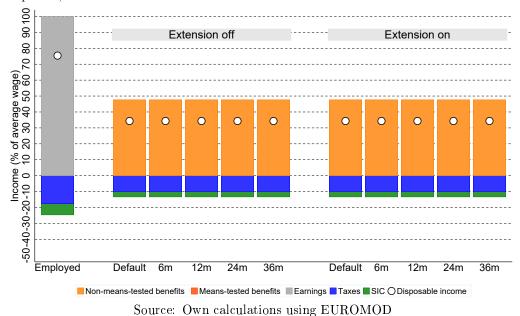
4.27 Sweden

Key characteristics of the unemployment insurance benefit:

- Contribution period: 6 out of 12 months
- Basic amount: 65 to 80 percent of gross earnings or flat rate
- Benefit duration: 12 months (15 months for parents with children)
- Average earnings: 3,496.6
- See Country Report for more detailed information (Wallera et al. 2019)

EUROMOD note: The simulation of the unemployment benefit is switched off in the baseline and switched on through the extension. Additional information includes the work history of the 12 months prior to unemployment (liwwh12_h) and information on member of insurance scheme (lim_h).

Figure 28: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Note: See Figure A27 in the Appendix for 2014-2019 results.

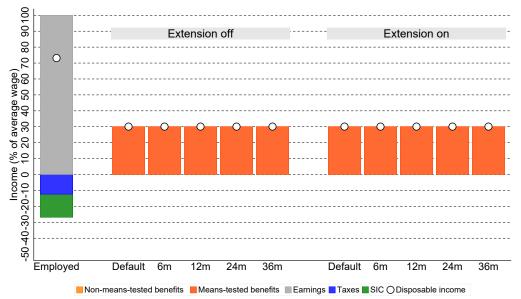
4.28 United Kingdom

Key characteristics of the unemployment insurance benefit:

- Contribution period: 24 out of 24 months
- Basic amount: flat rate depending on age
- Benefit duration: 6 months (not taken into account in baseline model)
- Average earnings: 3,507.0
- See Country Report for more detailed information (De Agostini and Chatsiou 2019)

EUROMOD note: Additional information includes the work history of the 24 months prior to unemployment (liwwh24_h).

Figure 29: HHoT comparison of baseline vs. unemployment benefit extension results by contribution period, 2019



Source: Own calculations using EUROMOD

Note: See Figure A28 in the Appendix for 2014-2019 results.

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Appendix

A.1 Additional information on EUROMOD and HHoT

Table A1: Country-specific adjustments of the baseline

·	Adjustment
AT	switched on PBE extension
BE	switched on PBE extension and unemployment benefit
$_{\mathrm{BG}}$	None
CY	switched on PBE extension and unemployment benefit
CZ	switched on PBE extension
DE	None
DK	switched on PBE extension
EE	switched on PBE extension
EL	switched on PBE extension
ES	switched on PBE extension and regional social assistance benefit
FI	switched on PBE extension
FR	switched on PBE extension
$_{ m HR}$	None
HU	switched on PBE extension
IE	None
IT	switched on PBE extension and unemployment benefit
LT	None
LU	switched on PBE extension
LV	None
MT	switched on PBE extension
NL	switched on PBE extension
PL	None
PT	switched on PBE extension
RO	switched on PBE extension
SE	switched on PBE extension and unemployment benefit
SI	switched on PBE extension and unemployment benefit
SK	switched on PBE extension
UK	switched on PBE extension

Table A2: EU-SILC average wage, 2014-2019

Country	EURO						National currency					
Ü	2014	2015	2016	2017	2018	2019	2014	2015	2016	2017	2018	2019
AT	3,109	3,160	3,261	3,322	3,389	3,448						
BE	3,516	3,526	3,656	3,724	3,798	3,798						
$_{\mathrm{BG}}$	409	419	477	518	563	612	800	819	932	1,013	1,101	$1,\!196$
CY	1,869	1,849	1,822	1,834	1,876	1,867						
CZ	891	931	989	1,057	1,143	1,226	24,448	$25,\!380$	26,823	27,698	29,731	$31,\!210$
DE	3,292	3,325	$3,\!363$	3,456	3,559	3,667						
DK	,	,	4,247	,	,	,	$30,\!806$	31,587	31,592	32,093	32,822	$33,\!263$
EE			$1,\!129$				16,966	18,142	17,658	18,814	20,186	21,541
EL			$1,\!495$									
ES	1,926	,	1,867	,	,	,						
$_{\mathrm{FI}}$	3,167	,	$3,\!228$,	,	,						
FR	2,633	2,716	2,780		2,953	3,046						
$_{ m HR}$	875	876	931	968		1,065	6,631	6,654	7,010	7,170	7,494	$7,\!880$
HU	578	609	644	738	831	924	178,762	$191,\!866$	204,321	227,871	273,936	298,765
IE	3,830	,	3,691	,	,	,						
IT	2,266	,	2,373	,	,	,						
LT	671	728	769	835	915	964	2,315	2,514	2,655	2,882	3,160	$3,\!328$
LU	4,587	4,362	4,751	4,938	4,938	5,117						
LV	815	847	891	960	1,041	$1,\!109$	573	596	626	675	732	779
MT	1,774	1,800	$1,\!874$	1,936	,	,						
NL	3,663	,	$3,\!622$,	3,710	3,798						
PL	825	856	840	855	945	996	3,427	3,587	3,727	3,612	4,133	$4,\!233$
PT	1,278	1,346	1,324	1,353	1,395	1,439						
RO	368	402	442	507	507	507	1,612	1,799	1,999	2,308	2,364	2,401
SE	3,242	3,207	3,244	3,334	3,408	3,497	29,751	$29,\!557$	30,570	32,139	35,629	36,936
SI	1,491	1,493	1,539	,	1,633	1,679	$357,\!290$	357,777	368,775	378,616	391,322	402,400
SK	793	771	784	812	871	926	$23,\!880$	23,226	23,611	24,466	$26,\!226$	27,909
UK	3,511	3,360	$3,\!237$	3,307	3,406	3,507	2,814	2,390	2,675	2,908	3,019	3,144

Source: Reference table in EUROMOD HHoT

Note: Average monthly gross wage. Exchange rate as of June 30 retrieved from EUROMOD.

A.2 Unemployment benefit extension: 2014-2019 country profiles

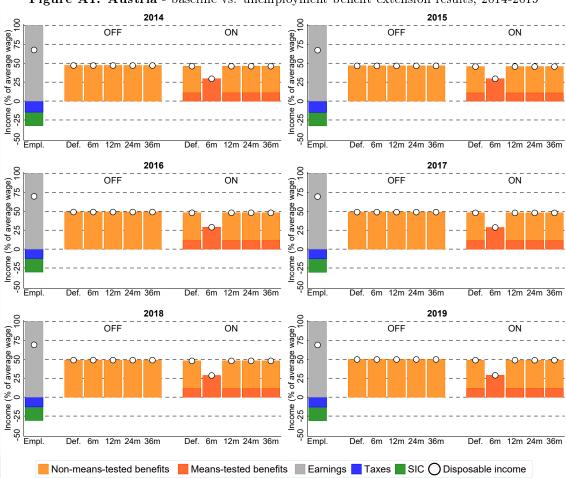


Figure A1: Austria - baseline vs. unemployment benefit extension results, 2014-2019

Source: Own calculations using EUROMOD

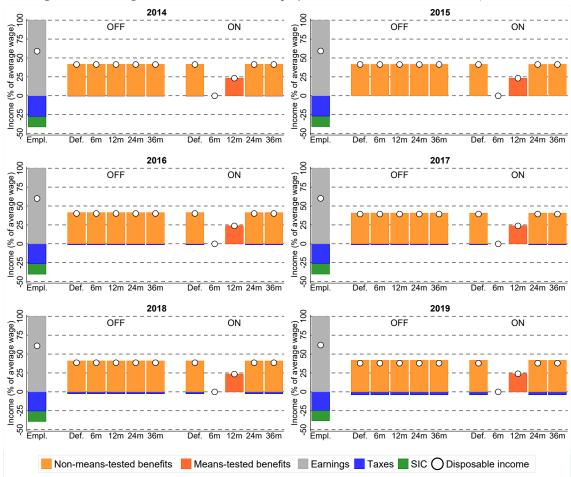


Figure A2: Belgium - baseline vs. unemployment benefit extension results, 2014-2019

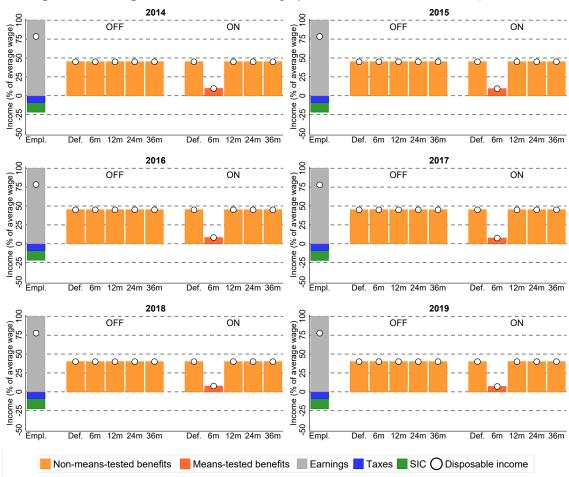


Figure A3: Bulgaria - baseline vs. unemployment benefit extension results, 2014-2019

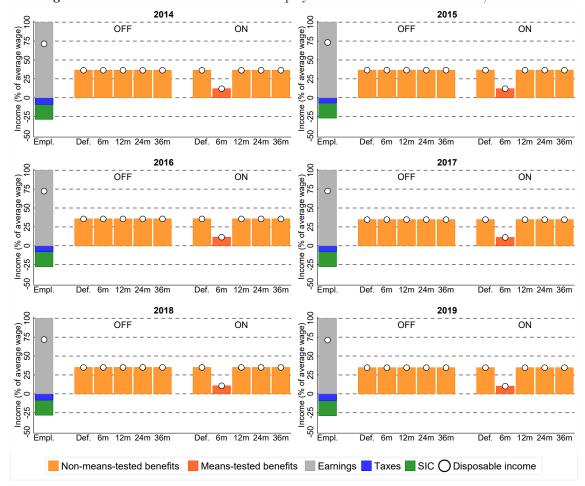


Figure A4: Croatia - baseline vs. unemployment benefit extension results, 2014-2019

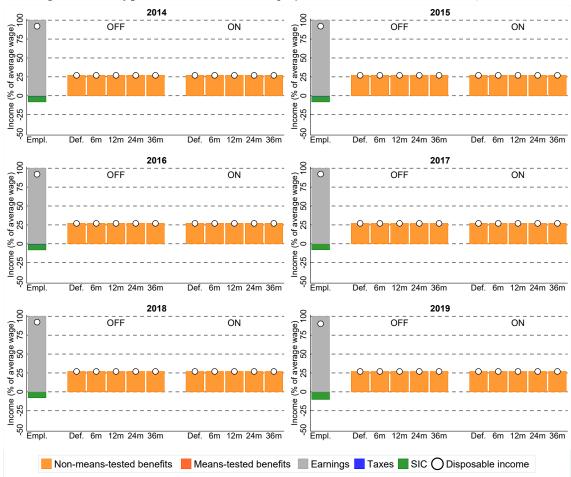


Figure A5: Cyprus - baseline vs. unemployment benefit extension results, 2014-2019

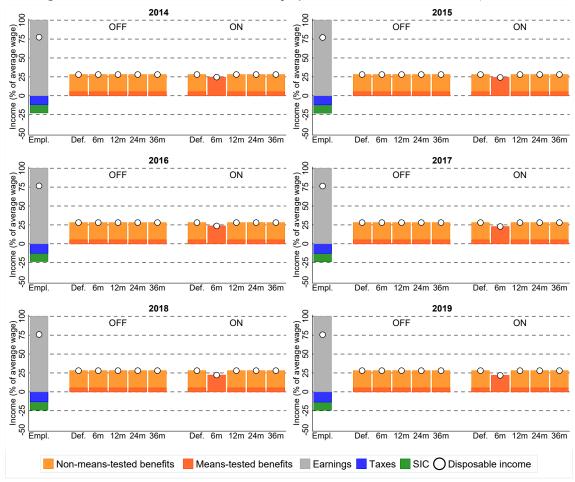


Figure A6: Czechia - baseline vs. unemployment benefit extension results, 2014-2019

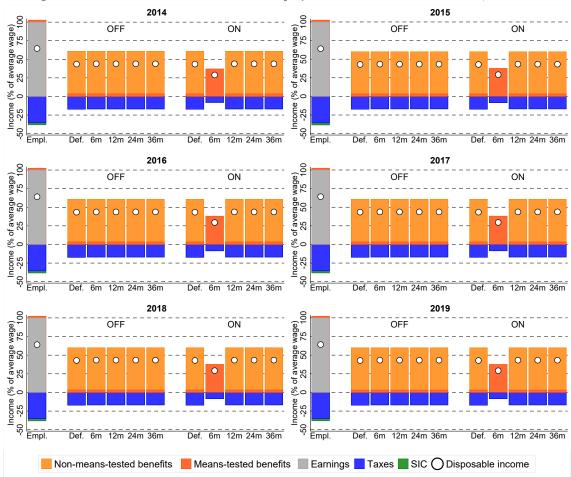


Figure A7: Denmark - baseline vs. unemployment benefit extension results, 2014-2019

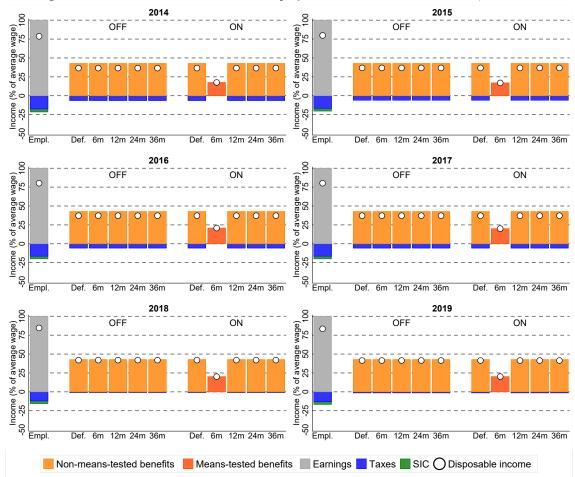


Figure A8: Estonia - baseline vs. unemployment benefit extension results, 2014-2019

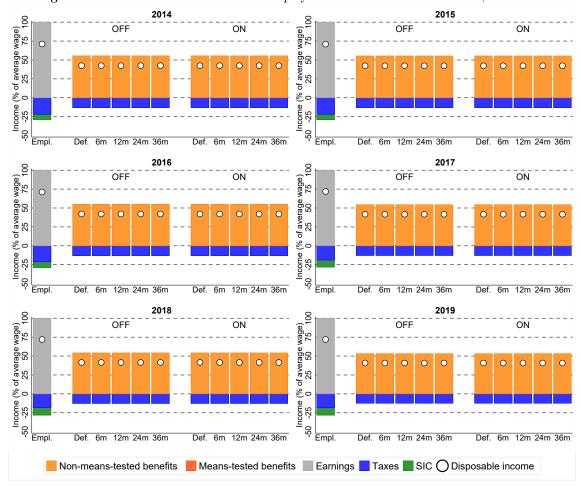


Figure A9: Finland - baseline vs. unemployment benefit extension results, 2014-2019

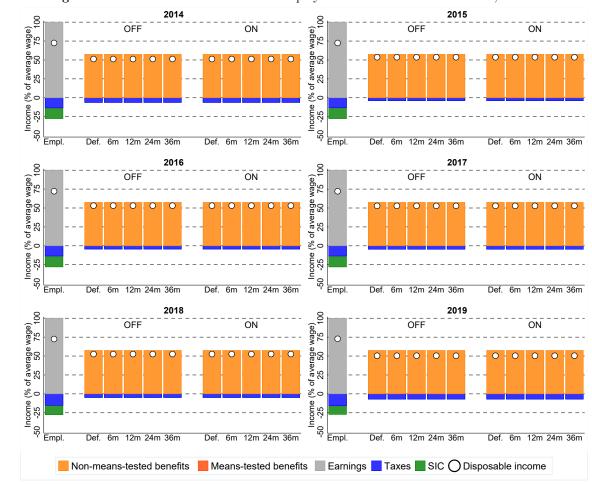


Figure A10: France - baseline vs. unemployment benefit extension results, 2014-2019

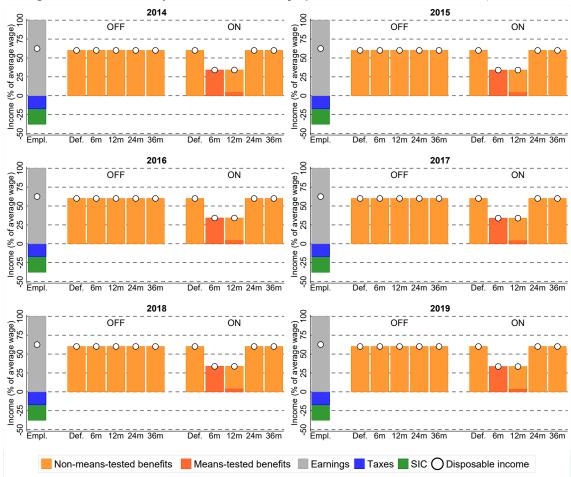


Figure A11: Germany - baseline vs. unemployment benefit extension results, 2014-2019

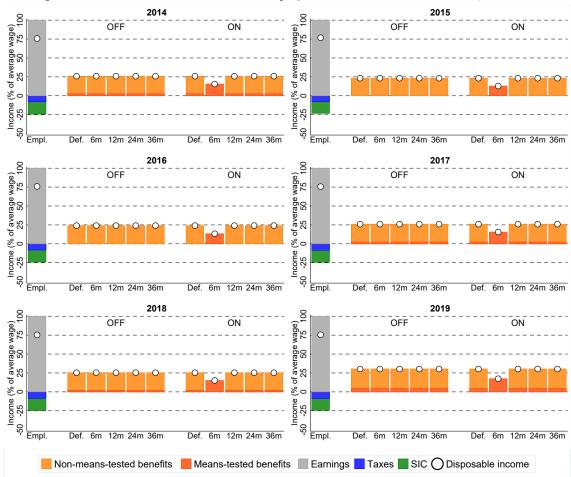


Figure A12: Greece - baseline vs. unemployment benefit extension results, 2014-2019

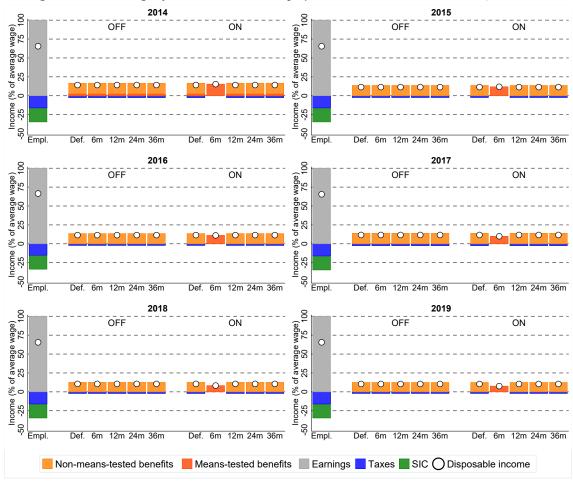


Figure A13: Hungary - baseline vs. unemployment benefit extension results, 2014-2019

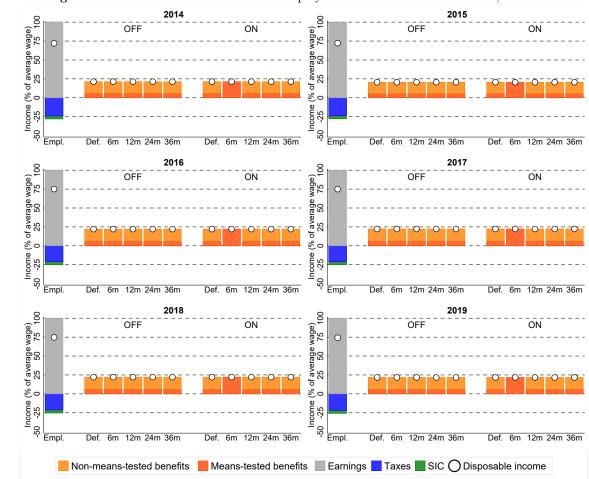


Figure A14: Ireland - baseline vs. unemployment benefit extension results, 2014-2019

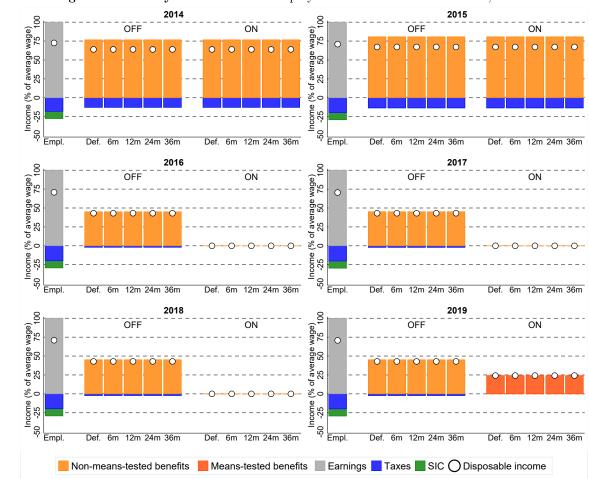


Figure A15: Italy - baseline vs. unemployment benefit extension results, 2014-2019

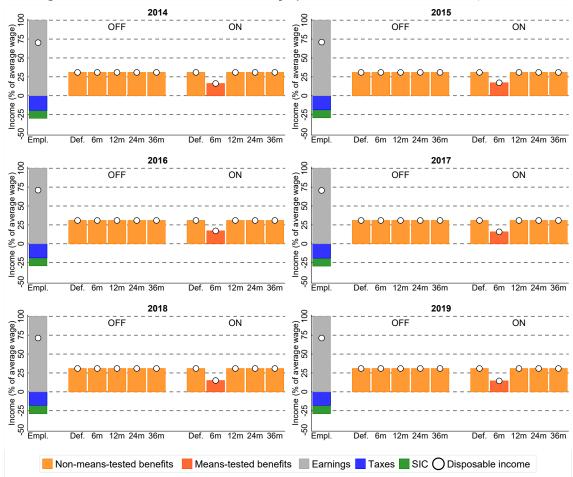


Figure A16: Latvia - baseline vs. unemployment benefit extension results, 2014-2019

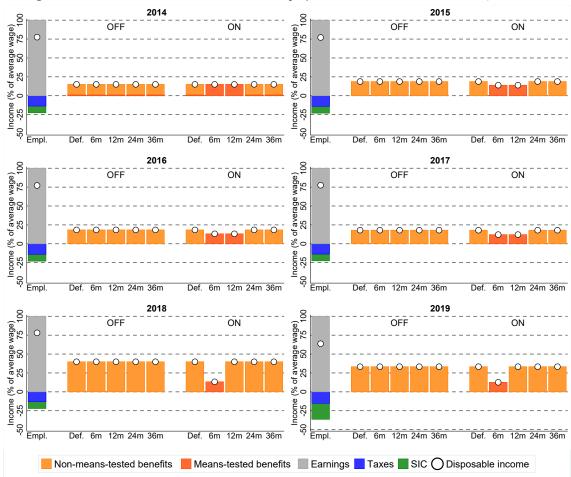


Figure A17: Lithuania - baseline vs. unemployment benefit extension results, 2014-2019

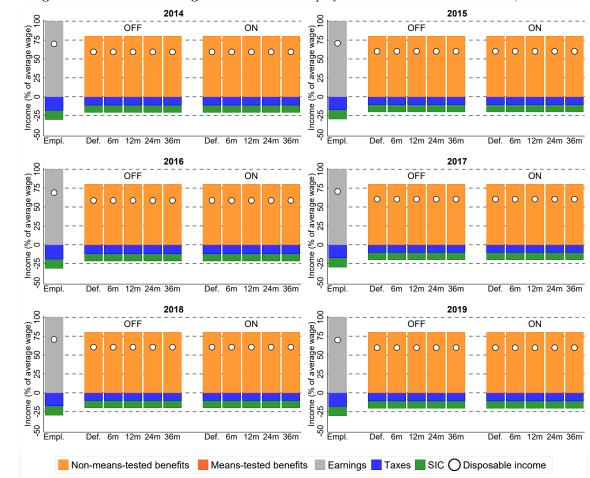


Figure A18: Luxembourg - baseline vs. unemployment benefit extension results, 2014-2019

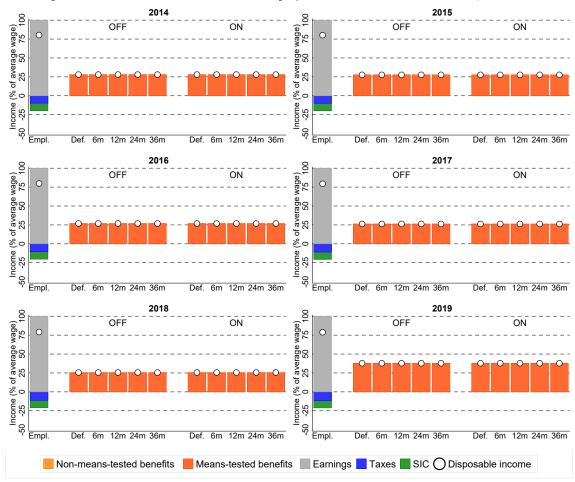


Figure A19: Malta - baseline vs. unemployment benefit extension results, 2014-2019

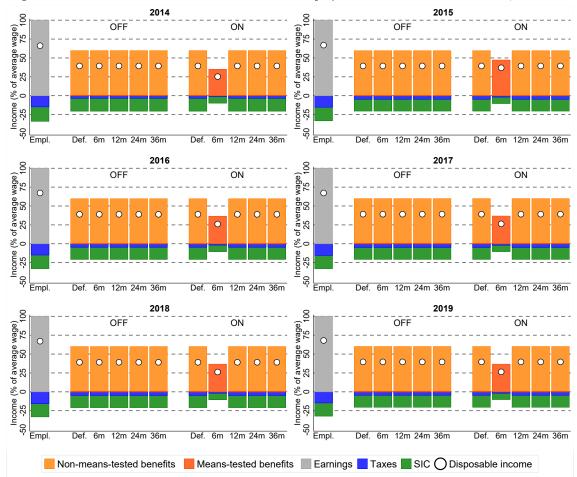


Figure A20: The Netherlands - baseline vs. unemployment benefit extension results, 2014-2019

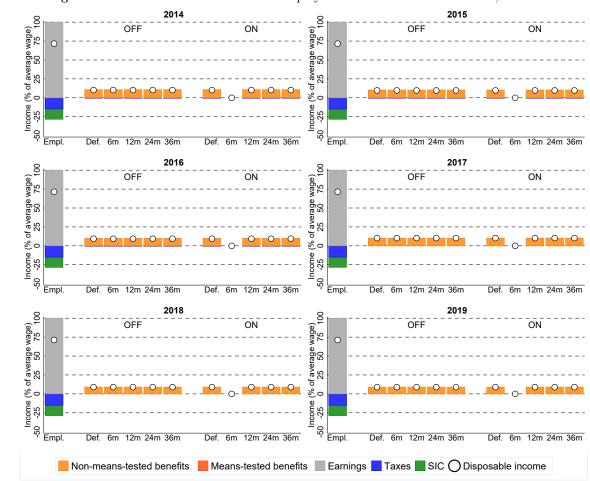


Figure A21: Poland - baseline vs. unemployment benefit extension results, 2014-2019

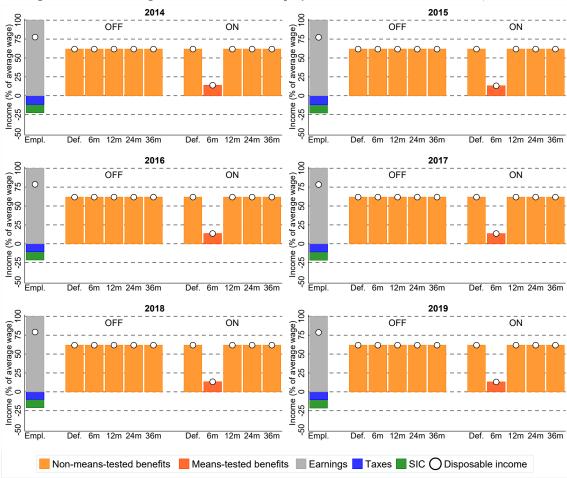


Figure A22: Portugal - baseline vs. unemployment benefit extension results, 2014-2019

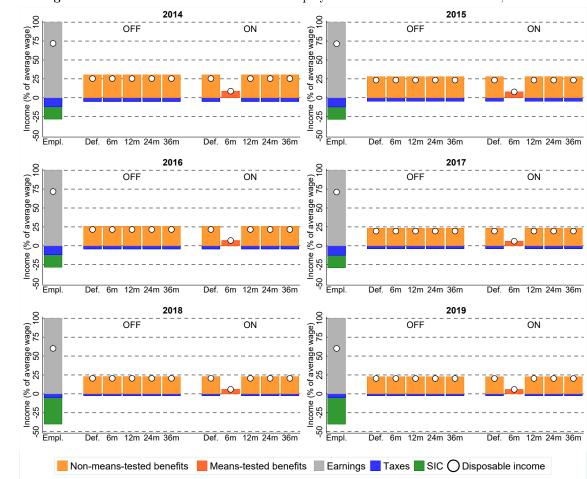


Figure A23: Romania - baseline vs. unemployment benefit extension results, 2014-2019

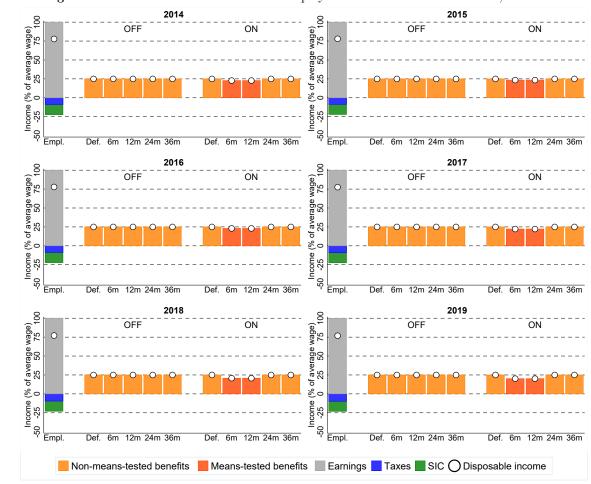


Figure A24: Slovakia - baseline vs. unemployment benefit extension results, 2014-2019

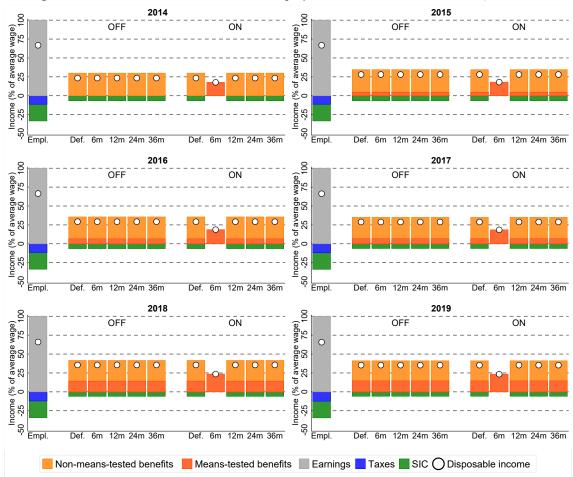


Figure A25: Slovenia - baseline vs. unemployment benefit extension results, 2014-2019

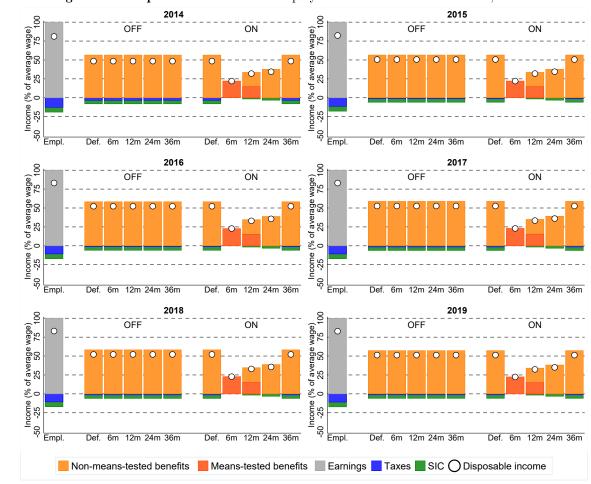


Figure A26: Spain - baseline vs. unemployment benefit extension results, 2014-2019

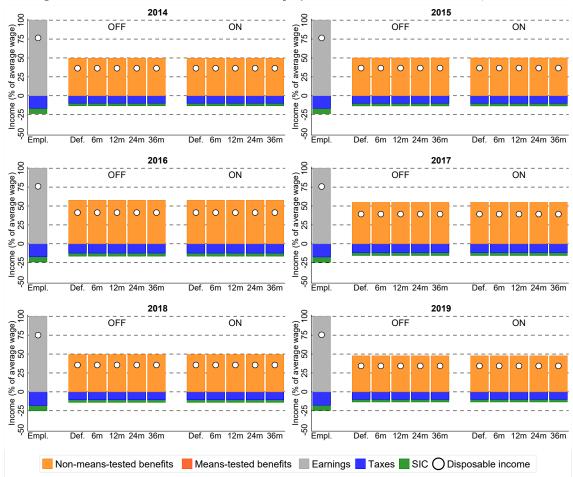


Figure A27: Sweden - baseline vs. unemployment benefit extension results, 2014-2019

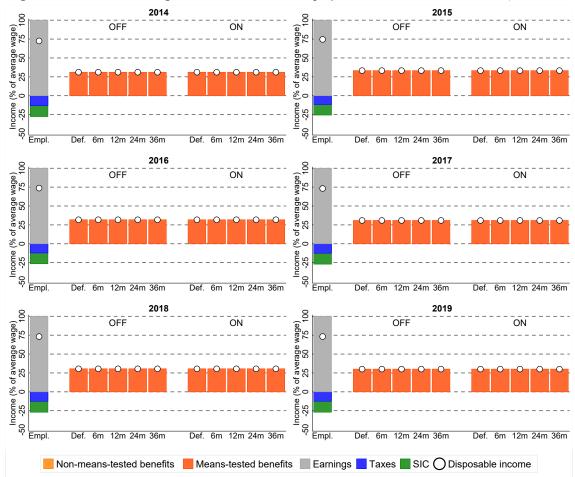


Figure A28: United Kingdom - baseline vs. unemployment benefit extension results, 2014-2019

InGRID-2 Integrating Research Infrastructure for European expertise on Inclusive Growth from data to policy

Referring to the increasingly challenging EU2020-ambitions of Inclusive Growth, the objectives of the InGRID-2 project are to advance the integration and innovation of distributed social sciences research infrastructures (RI) on 'poverty, living conditions and social policies' as well as on 'working conditions, vulnerability and labour policies'. InGRID-2 will extend transnational on-site and virtual access, organise mutual learning and discussions of innovations, and improve data services and facilities of comparative research. The focus areas are (a) integrated and harmonised data, (b) links between policy and practice, and (c) indicator-building tools.

Lead users are social scientist involved in comparative research to provide new evidence for European policy innovations. Key science actors and their stakeholders are coupled in the consortium to provide expert services to users of comparative research infrastructures by investing in collaborative efforts to better integrate microdata, identify new ways of collecting data, establish and improve harmonised classification tools, extend available policy databases, optimise statistical quality, and set-up microsimulation environments and indicator-building tools as important means of valorisation. Helping scientists to enhance their expertise from data to policy is the advanced mission of InGRID-2. A new research portal will be the gateway to this European science infrastructure.

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More detailed information is available on the website: www.inclusivegrowth.eu







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