SUMMARY NOTE FOR EUROMOD
LABOUR MARKET ADJUSTMENT
ADD-ON

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[1] This note is based on the note on the previous version of the Labour Market Adjustment Add-on by Katrin Gasior and Olga Rastrigina (2019).

This document provides an overview of the main features of the Labour Market Adjustment (LMA) Add-on.

The LMA Add-on is a EUROMOD (EM) tool that was initially developed as part of the Nowcasting tool kit. Nowcasting refers to the estimation of timely indicators for monitoring income inequality and poverty. It is a microsimulation-based methodology for estimating changes in the income distribution over a period of time if up-to-date income microdata are not yet available. It adjusts the labour market situation of observations in the most recent EUROMOD input dataset, based on the most recent information available from the European Labour Force Survey or other available sources. Together with the modelled policy changes in EUROMOD, this allows to simulate the current income distribution and poverty risk taking policy and labour market changes into account. See the following publications for more information on nowcasting: Gasior and Rastrigina (2017); Rastrigina, Leventi, and Sutherland (2015b); Rastrigina, Leventi, and Sutherland (2015a); Leventi et al. (2014); Navicke, Rastrigina, and Sutherland (2014).

Even though the tool was developed for the specific purpose of Nowcasting, it could potentially be useful also for other research questions, e.g. research including behavioural changes that also require the adjustment of labour market characteristics.

The methodology consists of the following steps:

1. Define labour market transition

New variables in EM input data
- Select individuals to transit to new labour market status

OR:

Create transition in EUROMOD directly
- In the EUROMOD spine, you can design transitions to new labour market status

2. Run EUROMOD

EUROMOD
Run LMA Add-On to
- Use default (or modify) labour market characteristics and incomes of transitioning individuals
- Simulate tax and benefit policies following the adjustments

3. Run your policy analysis

The LMA Add-on carries out the second step, i.e. it adjusts labour market characteristics and incomes of those prior identified to change their labour market status by step 1. Examples for such adjustments are:

- setting earnings to zero for individuals moving out of employment;
- setting earnings to the estimated earnings in step 1 for individuals moving from unemployment into employment;
- defining the necessary characteristics for those moving from employment to unemployment for EUROMOD to simulate unemployment benefits if the individual is eligible;
- or defining the necessary characteristics for those moving from employment to wage compensation systems (related to the COVID-19 crisis) for EUROMOD to simulate the wage compensation if the individual is eligible.

SPECIFIC ASPECTS AND ASSUMPTIONS APPLIED IN THE ADD-ON

Labour market characteristics and sources of income are adjusted only for observations that are subject to transitions.

For employees who transit to unemployment, employment income is adjusted proportionally to the number of months in employment left. The length of the unemployment spell can be set by users.

Self-employment income is set to zero for individuals moving out of employment. The length of the unemployment spell is fixed, set to the same value as in-work spell (*ysemy* months).
For individuals moving into employment, earnings are set equal to the value of *yemYY_a*.

In case transitions into work are modelled, all newly employed are assumed to be employees (rather than self-employed). The new number of months in employment is imputed through the user defined variable *yemmy_a*.

For individuals moving out of employment, eligibility for unemployment benefits is assessed according to the country rules. If the rules require assessment of earnings and number of months in work for several years preceding unemployment, we assume that these remain unchanged throughout the assessment period and equal the values observed in the income reference period. The value observed in the income reference period (i.e. yemmy) is multiplied by the number of years of the assessment period.

In case transitions into long-term unemployment are modelled, for those moving into long-term unemployment the eligibility is adjusted assuming that the duration of the unemployment spell is more than one year. In some countries long-term unemployed are not eligible to any unemployment benefits (e.g., Latvia); in other countries they are not eligible for unemployment insurance but still qualify for unemployment assistance (e.g., Greece); in countries with long duration of unemployment insurance (e.g., Finland) we assume that long-term unemployed continue to receive unemployment insurance.

For employees who transit to wage compensation schemes, employment income and the number of months in employment are adjusted proportionally, considering the number of months in compensation schemes (*bwkmcmy_a*).

For self-employed who transit to monetary compensation schemes, self-employment income and the number of months in self-employment are adjusted proportionally, considering the reduction in the number of months worked (*bwkmcmy_a*).

INPUT PREPARATIONS FOR THE LMA ADD-ON (AS PART OF STEP 1)

The LMA Add-on uses policy year specific transition variables that need to be added to the standard EUROMOD input file. These variables are called *lmaYY and lmcYY*, where YY refers to the policy year (e.g., *lma20* for 2020 transitions). The categorical variables identify the following transitions:

lmaYY	Original labour market status[2]	New labour market status
0	No transition	
1	Non-employed	Employed
2	Employed	Short-term unemployed
3	Employed	Long-term unemployed
4	Unemployed	Long-term Unemployed
lmcYY	**Original labour market status**	**New labour market status**
0	No transition	
1	Employment	Monetary Compensation
2	Self-Employment	Monetary Compensation (for SE)

In addition to these transition variables, the modified input dataset needs to include a variable with information on (imputed) employment income for individuals transiting to employment (*yemYY_a*) and a variable with information on weekly working hours (*lhwYY_a*) for these new employed. Additionally, the months in employment (*yemmyYY_a*) need to be defined both for employees transiting to unemployment and for new employed. Please note that the monetary value of *yemYY_a* refers to the income year of the input dataset and, thus, is uprated to the year of interest using adequate uprating factors.
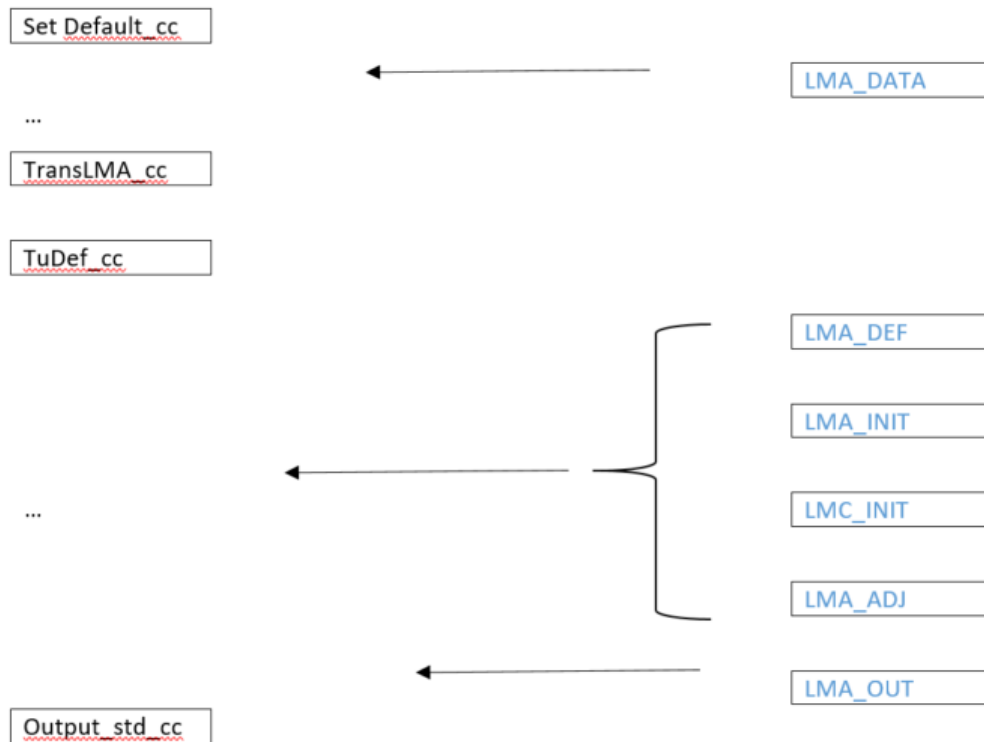
For the transition to monetary compensation (*lmcYY*=1 or 2) imputed months in monetary compensation (*bwkmcmy_a*), as well as the share of hours worked during monetary compensation (*lhwsr_a*) need to be defined.

There are two possibilities to prepare the input for the LMA Add-on: 1) define the transition variables in the EUROMOD country spine (in the TransLMA_cc policy) or 2) add transition variables to the input data. The policy TransLMA_cc already includes some statistics on transitions, aimed at reflecting the change in 2020 labour market conditions. For more information on this, please consult the 'Simulating labour market transitions in EUROMOD' document.

STRUCTURE OF THE LMA ADD-ON

EUROMOD add-ons are structured in a similar way as EUROMOD country models, i.e. they have a policy spine consisting of several policies. The policies in the add-ons do not describe the rules of taxes or benefits of the baseline but perform additional operations, i.e. changing labour market characteristics of observations transitioning from one labour market status to another.

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[2] The nowcasting toolkit currently only selects observations with incomes from employment, self-employment or unemployment for transition. This means that students, working-age individuals with permanent disability or in retirement and mothers with children aged below 2 are excluded from the estimation, unless they report employment income in the underlying data.

Set Default_cc

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TransLMA_cc

TuDef_cc

LMA_DATA

LMA_DEF

LMA_INIT

LMC_INIT

LMA_ADJ

...

LMA_OUT

Output_std_cc

This scheme shows how the LMA Add-on (in blue) interacts with the policies in the country-spines. The different *policies* of the spine of the LMA Add-on are listed in the table and described below.

ao_control_LMA	Defines policies, policy years and countries for the Add-on
LMA_DATA	Defines data for transitions
LMA_DEF	Defines variables for labour market transitions and defines income lists
LMA_INIT	Defines preparations for labour market adjustments
LMC_INIT	Defines preparations for labour market adjustments for monetary compensation schemes
LMA_ADJ	Define labour market adjustments
LMC_ADJ_YEM	Define labour market adjustments for monetary compensation - employees
LMC_ADJ_YEMMY	Define additional labour market adjustments for monetary compensation - number of months employees
LMC_ADJ_YSE	Define labour market adjustments for monetary compensation - self-employed
LMA_BUN	Switch on unemployment benefits (specific countries)
LMA_OUT	Rename output file

1. AO_CONTROL_LMA

This LMA Add-on policy defines for which policy years and countries the add-on is applicable. It also shows how the remaining policies of the add-on should be combined with the specific country models, i.e. where in the spine of the country models each LMA add-on policy needs to be inserted by the software.

Currently the LMA Add-on runs for all countries[3] and for the policy year 2020. It runs with all input datasets; however, only the 2018 Euromod input data has been tested.[4]

2. LMA_DATA

This policy allows users to decide whether to use the transition variables defined in the EUROMOD country spine (in the TransLMA_cc policy) or directly from the input data. In particular:

- When the policy LMA_DATA is set to on (default option), the policy TransLMA_cc will be switched on and the LMC_INIT policy will be switched off. This means that the user will use the transition variables defined in the TransLMA_cc policy.
- When the policy LMA_DATA is switched off, users will use transition variables defined in the input data. In this case, users will need to add the transition variables to the original EUROMOD input data (as explained in the input preparation for the LMA add-on).
- The policy is insert after the set default policy (Set Default_cc).

3. LMA_DEF

LMA_DEF defines generic transition variables *(lma* and *lmc)* which are no longer system specific but based on the year specific transition variables added to the EUROMOD input file (e.g. *lma=lma20* and *lmc=lmc20* for system 2020).

The variable *lma* is additionally used to create a country-specific identifier for the new unemployed (*lnu*). Basically, everyone with a transition from employment to short-term or long-term unemployment is defined as new unemployed, with two exceptions:

- Cyprus: Eligibility for long-term unemployed is not included in Cyprus because the relevant rules are not simulated in the model.
- Portugal: Eligibility for long-term unemployed is disregarded in Portugal as it leads to a significant over-simulation of unemployment benefits.

4. LMA_INIT

This policy uses information on the original labour market status to calculate the contribution base for unemployment benefits of newly unemployed. Relevant variables are:

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[3] An exception is UK, where the LMA add-on works only with transitions to employment or unemployment. Transitions to monetary compensation can be simulated in the Country model (see "Simulating labour market transitions in EUROMOD: EUROMOD LMA Add-on and COVID-related policies")

[4] Since 2018, the Add-on is used by EUROSTAT for selected countries to produce "Flash estimates of income inequalities and poverty indicators" (see https://ec.europa.eu/eurostat/web/experimental-statistics/income-inequality-and-poverty-indicators). Thus, the Add-on is updated by the EUROMOD developers but tested by EUROSTAT. In 2020 the LMA add-on was restructured and expanded, from the 2020 public release the new version of the LMA was included in the model. For now previous policy years have not yet been tested, hence the limited availability of policy years.

Previous employment income (*yempv_a*)

- In some countries, *yempv_a* is calculated using the employment income and the months in employment as recorded in SILC. It is defined as the previous monthly gross wage. However, EUROMOD uses average monthly wages. Thus, the current average wage *yem* needs to be multiplied by 12 and divided by the number of months receiving the wage in order to calculate the actual monthly wage. Other countries use average employment meaning that the number of months do not need to be taken into account.
- *yempv_a* also takes into account if self-employed are eligible for unemployment benefit. Self-employment income is included where applicable.
- Some countries adjust the variables *yem* and *yse*, thus other variables need to be used: *yemtx* (adjusted for tax evasion) in Bulgaria; *ils_tsctbeese* (only income up to the employee contribution base) in Spain; *yem* minus *yemcs* (company profits) in Romania; *bunctpc* (approximation of the benefit entitlement base) in Portugal; *yxy* (approximation of the benefit entitlement base) in Germany; *yemtx* (taxable income) and *yse00* (excl. negative self-employment income) in Slovenia; *yemwg* (Gross wage in main job) in Slovakia; and *yemtx* (taxable income) in Lithuania.
- The unemployment benefit is paid out as a flat rate in Malta, Poland, Portugal and Greece, thus previous employment income is not relevant.
- The contribution base in Austria and the Czech Republic is defined as net earnings. However, social insurance contribution and income tax are only simulated at a later stage and cannot be taken into account. Thus, a proxy of 80% of gross wage is used to be closer to the net earnings.

Previous hours of work (*lhwpv_a*)

This information is used for the calculation of the unemployment benefit in Spain where the current hours in employment are used to define the previous hours of work of the new unemployed. The minimum and maximum amount of the unemployment benefit is different for part-time and full-time employees.

Number of months worked in qualifying period (*liwmy_a*)

- In most countries, the number of months for those moving from employment to short-term unemployment in the qualifying period is assumed to be the number of months in work in the data year (*liwmy*) multiplied by the number of years of the legal qualifying period but no more than the total work history reported in the data (*liwwh*). The following exceptions apply:
  - In some countries (Malta, Latvia, Spain, Romania and Greece), the number of months in employment (*yemmy*) is used instead of the number of months in work. This is the case when self-employed are not eligible for unemployment benefit and it is more correct to use *yemmy* instead of *liwmy*.
  - In the Netherlands, the information refers to weeks at work instead of months.
  - The number of months in the current year is not available in the United Kingdom. Thus, the total work history (*liwwh*) is used as a proxy for the months worked in the qualifying period.

- In Belgium and Austria, the qualifying period differs by age. This is taken into account in the policy.
- For the majority of countries, the number of months worked in the qualifying period is set to zero for those transitioning from non-employment to employment, from employment to long-term unemployment, from unemployment to (long-term) unemployment and for those without a transition. It is assumed that the working history is zero if a person is not eligible for the unemployment benefit. The following exceptions apply:
  - The above described assumptions for people transitioning from employed to short-term unemployment also apply to people transitioning from employment to long-term unemployment in Belgium, Finland, France, Croatia, and Slovenia (the countries with relatively long duration of contributory unemployment benefits for at least some population groups).
  - The above-described assumptions for people transitioning from employment to short-term unemployment also apply to people transitioning from unemployment to long-term unemployment in Finland and Slovenia. This is also the case for Germany, however, only for observations with unemployment benefit receipt in the baseline.
- In the case of Spain, Portugal and Estonia, the number of months worked in the qualifying period needs to be defined for the unemployment insurance and the unemployment assistance separately.
- The number of months worked in the qualifying period is not relevant in Cyprus and Denmark.
- Upper limit: in most countries, the number of months worked should not exceed the number of months of the legal qualifying period. In some countries the duration or level of the unemployment benefit depends on the contribution history. This is to make sure that there are no problems with it. This is not the case in Belgium, Poland, Austria, Germany and France.

5. LMC_INIT

This policy uses information generated in the modified input data when transition variables are defined in the EUROMOD input data, and creates additional variables related to the wage compensation schemes. In case transition variables are defined in the EUROMOD country spine, this policy is instead skipped (it is turned off by LMA_DATA).

Number of months in monetary compensation for employees (*bwkmceemy_s*)

- For the majority of countries, the number of months in monetary compensation is set to the minimum between the variable defined in the input data (*bwkmcmy_a*) and the months in employment (*yemmy*).

Number of months in monetary compensation for the self-employed (*bwkmcsemy_s*)

- For the majority of countries, the number of months in monetary compensation is set to the minimum between the variable defined in the input data (*bwkmcmy_a*) and the months in self-employment (*ysemy*).

Months out of compensation scheme for employees (*yemmwmy_s*)

- For the majority of countries, the number of months out of monetary compensation is set to the difference between the new number of months in employment (*yemmy_a*) and the months in compensation scheme (*bwkmceemy_s*).
- If *yemmy_a* is 0, it is calculated as the difference between the number of months in employment (*yemmy*) and the months in compensation scheme (*bwkmceemy_s*)

Months out of compensation scheme for the self-employed (*ysemwmy_s*)

- For the majority of countries, the number of months out of monetary compensation is set to the difference between the number of months in self-employment (*ysemy*) and the months in compensation scheme (*bwkmcsemy_s*).

Share of hours worked in compensation for employees (*lhwsr_s*)

- For the countries where it is applicable, the share of hours worked in compensation is set equal to the corresponding variable in the modified input data (*lhwsr_a*)

Share of hours worked in compensation for the self-employed (*lhwsesr_s*)

- For the countries where it is applicable, the share of hours worked in compensation is set equal to the corresponding variable in the modified input data (*lhwsr_a*).

Eligible to monetary compensation scheme for employees (*lmcee_s*)

- For the countries where it is needed for the simulation, the eligibility monetary compensation scheme is set to 1 if the corresponding variable in the modified input data *lmcYY* is equal to 1.

Eligible to monetary compensation scheme for the self-employed (*lmcse_s*)

- For the countries where it is needed for the simulation, the eligibility monetary compensation scheme is set to 1 if the corresponding variable in the modified input data *lmcYY* is equal to 2.

Other country specific variables

- In Finland, the eligibility for a secondary monetary compensation scheme for self-employed (*lmc02_s*) is set to 1 if *lmcYY*=2 and *bwkmcsemy_s*>1. If instead *bwkmcsemy_s*=1, the self-employed are assumed to receive only a one-off compensatory benefit, whose eligibility is set above with variable *lmc01_s*.
- In Croatia variables *lmc01_s*, *lmc02_s* and *lmc03_s* are also created in order to define eligibility for MC receipt in March, May and April 2020 (as the MC amounts are different)
- In Czechia variable *i_lmcee00* is created to randomly allocate MC recipients to the various existing schemes.
- In Lithuania, *bwkmceemy1_s* and *bwkmceemy2_s* are created in order to simulate the different MC schemes for employees.

6. LMA_ADJ

This policy adjusts the labour market characteristics of persons transitioning to a different status. While no adjustments are necessary for those without a transition, several assumptions apply for

observations with adjusted labour market status and are based on the most likely characteristics of the group (see Appendix for more details).

7. LMC_ADJ_YEM

This policy adjusts the value of employment income for employees that transitioned to wage compensation, depending on the number of months spent in wage compensation and on the share of hours worked in compensation.

8. LMC_ADJ_YEMMY

This policy adjusts the value of number of months in employment for employees that transitioned to wage compensation, depending on the number of months spent in wage compensation and on the share of hours worked in compensation.

9. LMA_ADJ_YSE

This policy adjusts the value of self-employment income and the number of months in self-employment for individuals that transitioned to monetary compensation, depending on the number of months spent in wage compensation and on the share of hours worked in compensation.

10. LMA_BUN

This policy turns on the simulation of the unemployment benefit in countries where it is turned off in the baseline scenario. This is the case for Belgium, Sweden, Cyprus, Italy and Slovenia. In France, the eligibility criteria is turned on in order to take new unemployed into account. In Italy, this policy turns on also the simulation of the wage supplement, in order to take into account new persons entering in monetary compensation schemes.

11. LMA_OUT

This policy renames the output file, which allows to run the standard model and the adjusted model simultaneously and to compare the results of the two.

REFERENCES:

Gasior, Katrin, and Olga Rastrigina. 2017. "Nowcasting: Timely Indicators for Monitoring Risk of Poverty in 2014-2016." EM 7/17. EUROMOD Working Paper Series.

Leventi, Chrysa, Jekaterina Navicke, Olga Rastrigina, and Holly Sutherland. 2014. "Nowcasting Risk of Poverty and Income Distribution in the EU in 2013." EM 11/14. EUROMOD Working Paper Series.

Navicke, Jekaterina, Olga Rastrigina, and Holly Sutherland. 2014. "Nowcasting indicators of poverty risk in the European Union: a microsimulation approach." Social Indicators Research 119(1): 101-119.

Rastrigina, Olga, Chrysa Leventi, and Holly Sutherland. 2015a. "Nowcasting Risk of Poverty and Low Work Intensity in Europe." EM 9/15. EUROMOD Working Paper Series.

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APPENDIX

The tables in the appendix provide more detailed information on the adjustments of labour market characteristics carried out in the policy "LMA_adj". The first column shows the variable that is adjusted and the following columns show the assumptions used for each specific transition.

Table 1: Adjustments related to the employment status

Employment status	Non-employed → Employed	Employed → Short/Long-term unemployed	Unemployed → (long-term) unemployed
Employment status (*les*)	Employed	Unemployed (if *yemmy_a*<6) Employed (if *yemmy*>=6)	Original value
Self-employment (*lse*)[1], registered self-employed in Estonia (*lserg*) and self-employed liable to pay SIC in Slovenia (*lse00*)	Not self-employed	Not self-employed (if *yemmy_a*=0) Original value (if *yemmy_a*>0)	Original value, because values usually refer to current and latest status in EU-SILC.
Civil servant (*lcs, lcs10* in Cyprus)	No civil servant	No civil servant (if *yemmy_a*=0) Original value (if *yemmy_a*>0)	Original value, see above.
Collar (*lcl*) in Austria, Luxembourg and Italy	Blue collar worker	Original value	Original value, see above.
Sector (*lpmfc*), only applies to Greece where contributions to the social insurance fund differ by sector.	Private sector employee, thus new employed are assumed to contribute to the most typical social insurance fund for employed people	Not applicable (-1) (if *yemmy_a*=0) Original value (if *yemmy_a*>0)	Original value, see above.
Months in employment (*liwmy*)[1]	*yemmy_a*	*yemmy_a*	Original value, see above.
Months in unemployment (*lunmy*)[1]	0 months if *yemmy_a*>*lunmy* Equal to the difference between the original number of months in unemployment and yemmy_a (the new number of months in employment) if yemmy_a<=lunmy	Equal to the difference between the original number of months earning employment or self-employment income (the larger number of months applies) and *yemmy_a*	Original value, see above.
Work history (*liwwh*)	Those with no work history before transition are assumed to	If the work history equals the number of months in employment,	Original value, see above.

	accumulate a work history of *yemmy_a* months once the transition occurred (as they are assumed to be in employment for *yemmy_a* months). The original work history is applied for those who have been in employment prior to transition.	the work history is set to 0, otherwise the original work history is applied. UK is an exception because information on number of months in employment is not available. Thus, the original value is applied for all new unemployed.	
Actively seeking for a job (*lowas*)	Not actively seeking	Actively seeking (if *yemmy_a*<6) Original value (if *yemmy*>=6)	Original value, see above.

[1] Information not available in the UK.

Table 2: Adjustments related to Job characteristics

Job characteristics	Non-employed → Employed	Employed → Short/Long-term unemployed	Unemployed → (long-term) unemployed
Firm size (*lfs*)	5 employees, with the exception of Italy (15 employees)	Set to not applicable (-1) if *yemmy_a*=0 Original value if *yemmy_a*>0	Original value, see above.
Industry (*lindi, lin* in the UK)	Wholesale and retail with the exception of Italy (Mining, Manifacturing and Utilities) and UK (Industry, no further disaggregation in the dataset)	Set to not applicable (0, -1 in the UK) if yemmy_a=0 Original value if *yemmy_a*>0	Original value, see above.
Occupation (*loc*)	Original value if available, craft and trades workers if previous occupation is not known. Italy: service and sales worker	Original values	Original value, see above.
Working hours (*lhw*)	The working hours are based on the variable *lhw_a* predefined in the amended input dataset	The working hours (*lhw*) are 0 if *yemmy_a*=0 as it is assumed that new unemployed are not employed. Exceptions are the Netherlands,	Original value, see above.

| | | Austria and France where the information is used to simulate unemployment benefit. In these countries *lhw_a* is used to adjust working hours. |
| | | The working hours (*lhw*) are equal to the original value if *yemmy_a*>0 |

Table 3: Adjustments related to various income sources

Income sources	Non-employed → Employed	Employed → Short/Long-term unemployed	Unemployed → (long-term) unemployed
Employment income (*yem*, *yemwg* in Slovakia, *yemre* in Greece) and other variables related to the actual employment income[5]	Employment income is imputed using the variable *yem_a* from the adjusted input dataset and the variable *yemmy_a.*	Original monthly wage reweighted for the new number of months in employment.	Original value, except for Greece where it is set to 0. This exception is important for the modelling of potential unemployment benefits In Greece, employment income is included in an income list that is used in the eligibility condition of the unemployment benefit.
Other income closely linked to employment[6]	0, as assumptions about availability and amount for these income sources are very difficult to be made	0, as assumptions about availability and amount for these income sources are very difficult to be made, except for non-reported/taxable employment in Greece, Italy and Bulgaria and for extraordinary payments in Italy, where it is taken into account the original variable is calculated according to the new number of months in employment	0
Other income from employment[7]	0, as assumptions about availability and amount for these income sources are very difficult to be made	0, as assumptions about availability and amount for these income sources are very difficult to be made, except for extraordinary payments in	Original because it is assumed that these income sources are also available if a person is actually unemployed.

	France and employment income from company profits in Romania, where it is taken into account the original variable is calculated according to the new number of months in employment		
Months receiving income from employment (*yemmy*)[1]	*yemmy_a*	*yemmy_a*	Original value, except for Italy and Greece where it is set to 0, similar to the monetary variable.
Self-employment income (*yse*, *ysere* in Greece) and other incomes from self-employment[8]	0	0	Original value, except for Austria and Greece where it is set to 0. This exception is important for the modelling of potential unemployment benefits.
Months receiving income from self-employment (*ysemy*)[1]	0 months	0	Original data
Fringe benefits (*kfb*) and company car (*kfbcc*)[1]	Original value. However, it can be assumed that most newly employed individuals have not received these benefits before the transition, thus it is also zero after the transition.	0 because unemployed are no longer eligible for fringe benefits.\nIf *yemmy_a*>0, monthly amount reweighted by the new number of months in employment.	Original data
Number of months receiving fringe benefits (*kfbmy*)[1]	Original value. However, it can be assumed that most newly employed individuals have not received these benefits before the transition, thus it is also zero after the transition.	Difference between the original value and the new number of months in unemployment.	Original data
Health benefits (*bhl*, *bhlwk* in the UK, *bhl00* in Malta and Austria) and other health benefits (*bhl00*, *bhlot*, *bhlxp* in Finland and Austria)	Original value. However, it can be assumed that most newly employed individuals have not received these benefits before the transition, thus it is also zero after the transition.	0 if *yemmy_a*=0, as it is assumed that mainly employed people are eligible for sickness leave benefits.\nIf *yemmy_a*>0, monthly amount reweighted with the new number of months in employment.	Original because it is assumed that these income sources are also available if a person is actually unemployed.

Unemployment insurance benefit (*bunct*, *bun* in Belgium, Czech Republic, Sweden, Hungary, Poland and Romania, *bunss* in Luxembourg, *bunctnm* in Malta and *bun00* in Latvia, *bunct02* in Italy)	Original value reweighted with the new number of months in unemployment.	0, to guarantee that the benefit is simulated for new unemployed.	0, as long-term unemployed are no longer eligible for the benefit in most countries. Exceptions apply for Denmark, Finland, France and Croatia where the original amount is needed for the simulation of the benefit.
Months receiving unemployment benefit (*bunmy*, *bunctmy* in Croatia, Spain, Finland, Austria, Portugal, Greece and Estonia, *bunssmy* in Luxembourg, *bunctmy02* in Italy)[1,3]	Minimum between the original value and the new number of months in unemployment (*lunmy*).	In most countries, *bunmy* is not used for the simulation of the unemployment benefit but simulated in the model. In these countries we assume that *bunmy* is equal to the entire period in unemployment of people transitioning from employment to short-term unemployment. It is set to 0 in Austria and France to make sure that the months receiving the benefit are simulated rather than used from the data. The months receiving unemployment benefit is set to 0 for those transitioning from employment to long-term unemployment in countries where the maximum duration of receiving the benefit is one year or less and set to the number of months in employment in countries with longer durations.	0, except for countries with longer unemployment benefit eligibility (Spain, Finland, the Netherlands and Slovenia) where it is replaced with the number of months in unemployment.
Unemployment assistance (bunnc) in Ireland, Finland, Austria, Germany, Portugal, Romania, Greece and Estonia and means-tested unemployment benefit in Malta (*bunncmt*) France and Finland (*bunmt*)	Original value reweighted with the new number of months in unemployment.	0, to guarantee that the benefit is simulated for new unemployed.	Original value.

Months receiving unemployment assistance (*bunncmy*) in Ireland, Finland, Austria, Germany, Portugal, Romania, Greece and Estonia and months receiving means-tested unemployment benefit in Finland (*bunmtmy*)	Minimum between the original value and the new number of months in unemployment (*lunmy*).	0, to guarantee that the months are simulated for new unemployed.	Original value, except for Italy where *bunct01my* it is set to 0 as it is used to calculate the wage supplement which is not available for long-term unemployed.
Unemployed benefit for training in Ireland, the United Kingdom, Austria and Germany (*buntr*)	0	Original value	Original value
Other unemployment benefits (*bunot*) in Croatia, Cyprus, Denmark, Bulgaria, Slovakia, Latvia, Spain, Finland, Austria, Germany, Greece and Estonia	0, except for Greece and Spain, where the original value is reweighted with the new number of months receiving other unemployment benefit.	Short-term unemployed: original value in Croatia, Denmark, Bulgaria, Austria and Germany and 0 in the other countries. Long-term unemployed: original value in Croatia, Denmark, Austria and Germany and 0 in the other countries.	Original value in all countries except Estonia.
Other unemployment related benefits: wage supplement in Italy (*bunct01*), special unemployment insurance benefit in Malta (*bunctmt*), short-term unemployment benefit in the Netherlands and Italy (*bunst*), severance payment (*ysv* in Luxembourg, Slovakia, Spain, Germany, *yunsv* in Lithuania, *bunls* in Malta)	0, except for bunst in Italy, where the original value is reweighted with the new number of months receiving short-term unemployment benefit.	Short-term unemployed: original value Long-term unemployed: set to 0 as long-term unemployed are often no longer eligible for the benefit. The exceptions are Germany, where long-term unemployed may still be eligible for the severance payment and Italy, where long-term employed may still be eligible for the short-term unemployment benefit	0, as long-term unemployed are often no longer eligible for the benefit. The exception are Germany, where long-term unemployed may still be eligible for the severance payment and Italy, where long-term employed may still be eligible for the short-term unemployment benefit

[1] Information not available in the UK.

[2] Information in EUROMOD input data is only available since EU-SILC 2010.

[3] Not relevant in Belgium and Denmark.

[5] Regular hour employment income in France, Malta and Slovenia (*yem00*, *yemtx*), gross income in Bulgaria (*yem01*, *yemtx*), income from permanent jobs in Poland (*yempj*), special payments in Austria (*yemxp*)

[6] Non-reported/taxable employment (*yemnr* in Greece and Bulgaria, *yemnt* in Slovenia and Italy), income from agreements (*yemaj* in Slovakia and Slovenia), other employment incomes and incomes from students (*yemot* in Slovakia and Austria, *yemst* in Slovenia), temporary employment income and extraordinary payments in Italy (*yemtj*, *yemxp*)

[7] Other income from employment Net income in Bulgaria (*yem02*), Income from abroad in Slovakia (*yemab*), temporary employment income in Slovakia, Poland (*yemtj*), extraordinary payments (*yemls* in Malta and *yemxp* in France), employment income from company profits in Romania and Slovakia (*yemcs*)

[8] Self-employment income from agriculture in Poland (*yseag*), self-employment income from business in Poland (*ysebs*), reported self-employment income in Croatia, Bulgaria, Greece and Italy (*ysere00*, *ysere01*, *ysenr*, *ysenr00*, *ysenr01*), gross, regular self-employment income in Slovakia, Finland and Slovenia (*yse00*, *yse01*), taxable self-employment income in Bulgaria (*ysetx*) and Italy (*yseev*), additional self-employment income in Slovenia (*yseaj*, *ysest*), self-employment income from property rights in Romania (*yseil*), income from (un)registered self-employment activities in Estonia (*ysera*, *ysena*)