INAPP
ISTITUTO NAZIONALE PER L'ANALISI
DELLE POLITICHE PUBBLICHE

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MICROSIMULATION AND TERRITORIAL EFFECTS OF THE "ASSEGNO UNICO UNIVERSALE"

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Europe and the Mediterranean between transitions and conflicts. Opportunities and risks for regions and territories

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RESEARCH OBJECTIVES

PREVIOUS STUDIES

THE AUU

RESULTS

CONCLUSIONS

INTRODUCTION

This paper aims at analyzing the new “Assegno Unico Universale” (Single All-Purpose Allowance), the measure introduced in Italy since February 2022 has changed in 2023 because of the IRPEF reform and some adjustments on the thresholds. The demand of research concerns the ability of the AUU to reach the objectives that policymakers intend to achieve.

The allowance aims to beef up policies aimed at supporting households with children, in order to bring them to levels of wellbeing similar to other European countries. The new measure replaced previous policies and endeavors to benefit otherwise excluded people (i.e. those families whose income is so low that they did not pay any income tax or – oppositely – considerably wealthy households). What is more, an effort was made to even out treatment of employees and self-employed workers. In particular, the latter were virtually excluded by previous policy measures. Available data show that the take-up rate of this new measure has taken a while to reach 95% of the eligible households in late June 2022. This time lag has been probably determined by scanty information, insecurity and the predictable slowness of the “Red Tape” - all problems that now seem to have been overcome.

A REVIEW OF PREVIOUS STUDIES

-Many studies have used microsimulation models to indicate how the measure might impact families.

-The Indicator proposed is the ISEE which take into account the real estate assets and other characteristics but it could cause some distortions by not allowing the identification of situations of particular need..

Corsi et al. (2021)
Pacifico (2021)
Figari e Fiorio (2021)
Baldini et al. (2021)
Biagetti et al.(2021)
Curci Savegnago (2021)

THE PREVIOUS STUDY

Biagetti, Ferri, Figari, Marsiglia - CeMPA WP 08/22
Simulazione dell'Assegno Unico Universale: I benefici della misura e gli effetti redistributivi

Our first sudy underlines compare the reform with the previous instruments for children (bonus bebè, bonus mamma etc .), this study aims to analyze how the changes on the measure could affect the economical situation of the households.

There would be 6.6 million families benefiting from the new transfer, while those losing about 1.5 million.

Regarding to inequalities, the measure appears well designed because it still manages to increase social welfare without increasing inequality even as consequence of a slight reduction in the progressivity of taxes.

the use of the ISEE as a parameter for determining the amount of the contribution actually prevents an income redistribution in in favor of women by being paid exclusively to the highest family income earner who is usually a man. Therefore, it would be desirable that the income of the second recipient be suitably neutralized as suggested in the work of Corsi et al. (2021).

THE PREVIOUS STUDY

Biagetti, Ferri, Figari, Marsiglia - CeMPA WP 08/22
Simulazione dell'Assegno Unico Universale: I benefici della misura e gli effetti redistributivi

The Poverty risk on available income would decrease as lower is the available income compared to the median (by 1.6% to 40% and by 0.7% to 60% of the median). This risk would be consistently lower in the case of families with one adult and one or two children, while the risk would slightly increase as the number of minors increases.

the AUU represents an important support for the poorest people.

Finally, the strength of the support could have undesirable effects on the labor supply refers to second earner. A high level of support could be a deterrent to (female) participation in the labor market and could instead favor undeclared work.

EUROMOD

EUROMOD is a **static microsimulation model**. It applies **user-defined tax and benefit policy rules to harmonised microdata on individuals and households, calculates the effects of these rules on household income, and then outputs results, still at the micro level.**

There are three key components to EUROMOD: the coded policy rules, the input microdata and the software. The default policy rules are those set to 30 June for a given policy year and the microdata (mainly based on EU-SILC) are processed according to a standard set of protocols. The software - comprising a user interface and a calculation engine - may then be used to adjust the default policy parameters and run new tax-benefit routines, calculating the effects of these changes on incomes in the microdata.

The software includes EUROMOD statistics, in which the effects of different policy scenarios can be analysed and compared in terms of budgetary and distributional impact, including indicators on inequality and poverty. It contains too tools: Statistics Presenter, which offers a predefined sets of results, and In-depth Analysis, which allows the user to fully customise the indicators. Other statistical software may be used to analyse the output files.

https://euromod-web.jrc.ec.europa.eu/overview/what-is-euromod#:~:text=EUROMOD%20is%20a%20static%20microsimulation,still%20at%20the%20micro%20level.

EUROMOD

EUROMOD can be used in many different ways in different contexts.

Examples include
Estimation of the redistributive effects of actual, previous or future tax-benefit policies
Policy swapping analysis
Estimating budgetary effects of policy changes
Tax-benefit design
Estimation of work incentives and labour supply effects of policies
Stress tests of a tax-benefit system
Design of EU-wide policy reforms
'Nowcasting' and forecasting of the income distribution under policy/population change scenarios
Data imputation
A number of special purpose tools and extensions have been built for EUROMOD.

https://euromod-web.jrc.ec.europa.eu/overview/what-is-euromod#:~:text=EUROMOD%20is%20a%20static%20microsimulation,still%20at%20the%20micro%20level.

LABSIM

LabSim (CEMPA) is a rich dynamic microsimulation model for individuals and households over time. The model works on the basis of the outputs of EUROMOD, a static fiscal microsimulation model used to assess the immediate distributional impact of changes in economic policy measures useful for estimating the so-called 'next day' effect.

When the static EUROMOD model is combined with the dynamic model, policies are applied and evaluated to an evolving population. This makes it possible to understand their consequences and effects over the years on an evolving population, thus also estimating longer-term outcomes.

In our work, an initial simulation was carried out with EUROMOD, relating to the AUU. Subsequently, thanks to this first result, it was possible to run the simulation on LABSIM and estimate the behavioural effects due to the policy. The period chosen is 2021-2050, the simulations concern what could happen in the next 30 years if the measure were to remain as follows

LABSIM

In LABSim, individuals are structured **in benefit units (for fiscal purposes), and benefit units are structured in households.** The output produced by the model therefore consists of SQL database tables and / or CSV files at the individual, benefit unit, and household level, which can be linked through unique identifiers.

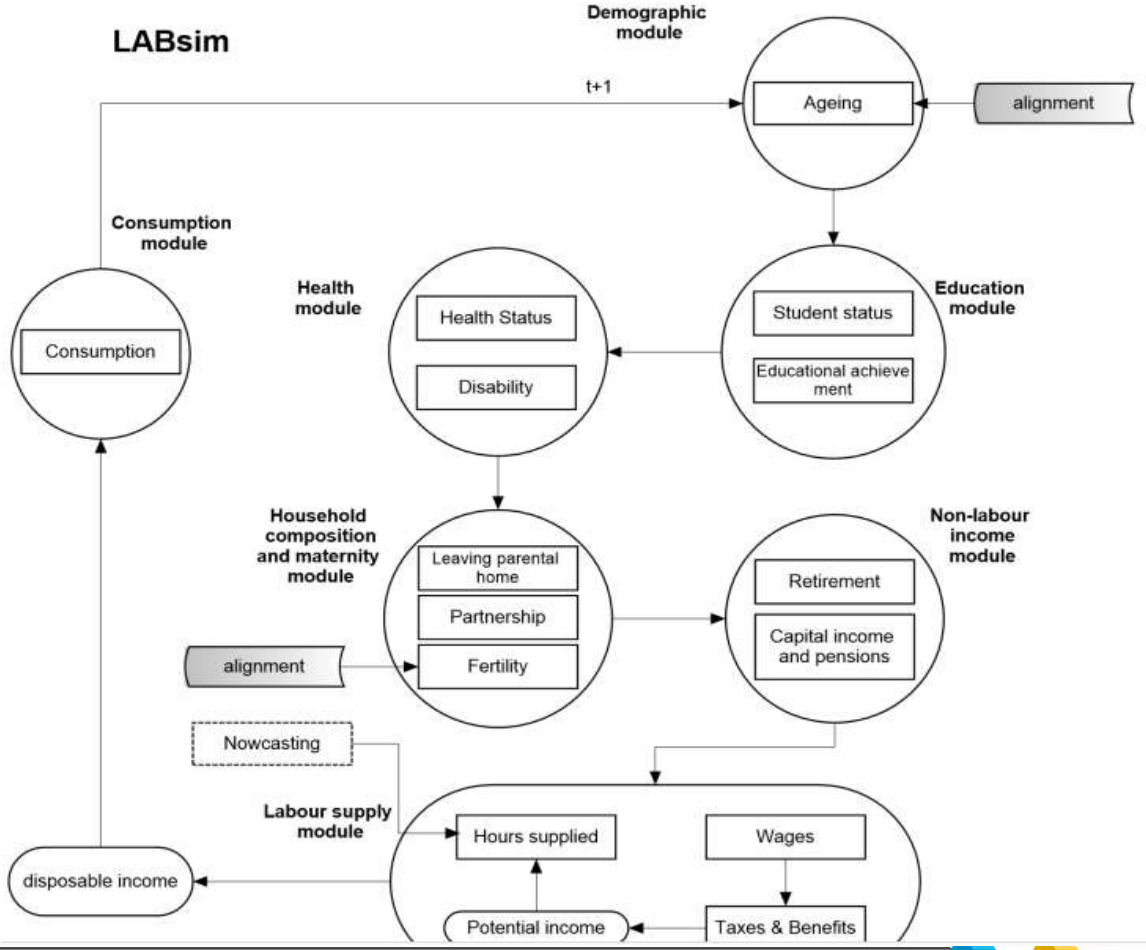
The output files contain the values of simulated variables for each individual unit in each year of the simulation, effectively producing a "synthetic" panel dataset. The model is based on a conditional independence assumption: all processes are modelled as independent; however,they are based on lagged variables determined by other processes. We use a partial equilibrium model of labour supply, which means that we model labour supply (worker side of the market) but not labour demand (firm side of the market).

The processes are ordered as in Figure 1; however, as the simulation and the estimated processes are sampled at yearly frequency, the sequence of events within each simulated arbitrary is arbitrary. **LABSim is composed of seven different modules: (i) Demography, (ii) Education, (iii) Health, (iv) Household composition, (v) Non-labour income, (vi) Labour supply, and (vii) Consumption. Each module is in turn composed of different processes or sub-modules, for example ageing process in the demographic module, or a wage setting process in the labour supply module.**

LABSIM MODULES

The modules of which LABSim is composed are seven: (i) Demography; (ii) Education; (iii) Health; (iv) Household Composition; (v) Non-labour Income; (vi) Labour Supply; (vii) Consumption. Each module is in turn composed of different processes or sub-modules: e.g. the process relating to ageing is found within the demography module or the process relating to the level of wages is found within the labour supply module.

The processes follow the pattern shown in Figure 1, but since the simulation and the estimated processes are sampled on an annual basis, the sequence of events within each simulated process is arbitrary.



Richiardi M., Bronka P., 2022, LABSim: A dynamic life course model of individual life course trajectories for Italy

THE AUU

Tab 1- Scheme relating to the *Assegno Unico Universale*

ISEE (Amounts in Euros)	Families with children aged 0-17 (Amounts in Euros)	Families with children aged 18-21 (Amounts in Euros)	Increase for each child after the 2nd (Amounts in Euros)
0 – 15.000	175	85	85
da 15.000 a 40.000	Descending from 175 to 50 (1)	Descending from 85 to 25 (2)	Descending from 85 to 15 (3)
> 40.000	50	25	15

Tab. 2- Scheme relating to the increases expected with the *"Assegno Unico Universale"*

Increase for non self-sufficient children	+ 100 €
Increase for children with severe disabilities	+ 95 €
Increase for children with medium disability	+ 90 €
Increase for disabled children aged 18-20	+ 50 €
Allowance for dependent disabled children >21 years	For incomes between €15,000 and €40,000 It decreases by about 25 cents for every hundred euros of ISEE income.
Child supplement for mother aged < 21 years	20€
Bonus for the second income earner	For incomes between €15.000 e €40.000 It decreases by about 10 cents for every hundred euros of ISEE income.

(1) It decreases by around 50 cents for every one hundred euros of additional ISEE income.
(2) It decreases by around 25 cents for every one hundred euros of additional ISEE income.
(3) It decreases by around 25 cents for every one hundred euros of additional ISEE income.

ISEE (Amounts in Euros)	Families with children aged 0-18 (Amounts in Euros)	Families with children aged 18-21 (Amounts in Euros)	Increase for each child after the 2nd (Amounts in Euros)
0 – 16.215	189,2	91,9	91,9
from 16.215 to 43.240	Descending da 189,2 a 54,1 (1)	Descending da 91,9 a 27 (2)	Descending da 91,9 a 16,2 (3)
> 43.240	54,1	27	16,2

Increase for non self-sufficient children < 21	+ 113.5€
Increase for children with severe disabilities < 21	+ 102.7 €
Increase for children with medium disability < 21	+ 91.9 €
Increase for disabled children aged 18-20	+ 21.6 €
Families with 4 child and more	+ 108.1 €
Allowance for dependent disabled children >21 years	For incomes < 16.215 euro, + 91,9 For incomes between €16.215 e €43.240, +27 euro
Child supplement for mother aged < 21 years	21.6 €
Bonus for the second income earner	For incomes between €16.215 e €43.240 It decreases Decresce da +32,4 € to 0 .

RESULTS - EUROMOD

	IT_2021*	IT_2023no_ind.**	IT_2023***
Total market incomes	**728,219.37**	**743,021.22**	**743,021.22**
... income from (self) employment	619,159.52	629,445.00	629,445.00
... other sources	109,059.85	113,576.22	113,576.22
Government revenue through taxes and social insurance contributions	**428,303.49**	**431,912.55**	**431,912.55**
... direct taxes	196,864.64	201,387.19	201,387.19
... employee social insurance contributions	54,310.43	50,571.84	50,571.84
... self-employed social insurance contributions	19,437.92	20,722.54	20,722.54
... other social insurance contributions	0.00	0.00	0.00
... employer social insurance contributions (not part of disposable income)	157,690.48	159,230.96	159,230.96
Credited social insurance contributions (not part of disposable income)	0.00	0.00	0.00
Government expenditure on social transfers	**358,300.88**	**382,383.88**	**384,516.10**
by target group			
... unemployment benefits	43,395.27	52,712.36	52,712.36
... family and education benefits	12,998.35	21,852.31	23,984.54
... social assistance and housing benefits	10,958.32	11,090.70	11,090.70
... pensions, health and disability benefits	290,948.93	296,728.99	296,728.99
... firms	0.00	0.00	0.00
by benefit design			
... means-tested non-pension benefits	28,935.97	46,962.22	49,094.44
... non-means-tested non-pension benefits	43,942.94	44,242.98	44,242.98
... pensions	285,421.97	291,179.22	291,179.22
... firms subsidies	0.00	0.00	0.00

In the second and third scenarios, income is higher due in particular to self-employers. **This increase generates higher revenue from taxes and also translates into a higher public spending**

RESULTS - EUROMOD

In the most recent scenario a robust and generalized decrease in poverty risk is estimated, in particular for children, as expected from this measure aimed towards families with dependent children

	Poverty Risk for IT_2021 without AUU	Poverty Risk for IT_2021 (assegno ponte) mixed policies	Poverty Risk for IT_2022 (AUU first version)	Poverty Risk for IT_2023 (AUU last version)	Difference to base
Population	20.12%	19.92%	17.27%	16.81%	-3.31pp
Children	24.48%	23.78%	21.09%	19.66%	-4.84pp
Working Age	20.08%	19.93%	17.64%	17.26%	-2.82pp
Working Age Economically Active	12.11%	11.97%	10.06%	9.77%	-2.34pp
Elderly	17.16%	17.18%	13.61%	13.59%	-3.57pp
Fixed Poverty Line	859.03	860.11			

Description
The table shows the poverty risk of the total population and different sub-population groups .
The poverty line (but not the poverty status) is based on the base scenario for the baseline and reform results.

RESULTS - EUROMOD

Household income would increase along the entire distribution and by almost 130€ (+4.9%) on average. The first decile would experience an percentage improvement of more than 15 percentage points

	IT_2021senzaauune (base)	Poverty Risk for IT_2021 (assegno ponte) mixed policies	IT_2022_(AUU first version)	IT_2023_(AUU last version)	Difference to base	Difference to base 2023 vs. 2021 (%)
Decile 1	688.02	709.98	784.67	791.17	103.15	14.99%
Decile 2	1,199.02	1204.45	1,278.08	1282.08	83.06	6.93%
Decile 3	1,562.43	1567.47	1,648.67	1662.25	99.82	6.39%
Decile 4	1,853.23	1860.05	1,962.66	1976.77	123.54	6.67%
Decile 5	2,143.81	2143.75	2,260.70	2268.02	124.21	5.79%
Decile 6	2,460.74	2472.82	2,580.23	2600.22	139.48	5.67%
Decile 7	2,739.83	2737.89	2,858.59	2863.68	123.85	4.52%
Decile 8	3,210.22	3208.64	3,343.09	3346.79	136.57	4.25%
Decile 9	3,872.24	3878.41	4,015.58	4025.98	153.74	3.97%
Decile 10	6,155.83	6156.43	6,363.91	6365.78	209.95	3.41%
All	2,606.32	2610.81	2,727.78	2735.43	129.11	4.95%
Poor	950.6	959.63	968.82	962.4	11.8	1.24%

The effect on poors is not very sgnificant probably because the absolutely poor have a small number of children

Description

The table shows the mean household income of decile groups . The last two rows show the mean income of the total population (All) and the population at-risk-of-poverty (Poor).

While the calculation of the decile groups is based on equivalized income, the reported mean incomes refer to non-equivalized household results. The decile group and poverty status are based on the base scenario. The reform results show how income changes within each group (people are not moving from one group to the other).

RESULTS - EUROMOD

Household equivalized income would also increase along the entire distribution and by 84 € (+5.1%) on average. The first decile would experience a percentage improvement of 19.7 percentage points. The positive effect for the poor is slightly higher than the in the case of non equivalized income.

	IT_2021_senza AUU	IT_2021_assegno ponte) mixed policies	IT_2022(AUU first version)	IT_2023(AUU last version)	Difference to base	Difference to base 2023 vs. 2021 (%)
Decile 1	437.93	454.05	506.58	511.11	73.18	16.71%
Decile 2	762.29	768.27	815.41	820.41	58.12	7.62%
Decile 3	958.73	962.82	1,010.77	1021.48	62.75	6.55%
Decile 4	1,152.56	1155.49	1,221.67	1230.04	77.48	6.72%
Decile 5	1,338.34	1339.49	1,412.99	1419.79	81.45	6.09%
Decile 6	1,533.78	1535.7	1,610.07	1617.53	83.75	5.46%
Decile 7	1,754.11	1755.54	1,831.34	1838.5	84.39	4.81%
Decile 8	2,027.19	2028.03	2,112.51	2117.49	90.3	4.45%
Decile 9	2,420.68	2421.78	2,510.85	2515.07	94.39	3.90%
Decile 10	3,849.72	3851.07	3,980.06	3982.42	132.7	3.45%
All	1,623.41	1626.92	1,701.10	1707.07	83.66	5.15%
Poor	601.52	609.75	621.25	621.17	19.65	3.27%

Description

The table shows the mean equivalized income of decile groups . The last two rows show the mean income of the total population (All) and the population at-risk-of-poverty (Poor).

The calculation of the decile groups and the reported mean incomes is based on equivalized incomes. The decile groups and the poverty status are based on the base scenario. The reform results show how income changes within each group (people are not moving from one group to the other).

RESULTS - EUROMOD

Mean disposable income for household with children by Italian macroarea

The increase in the disposable income for households in the South and Islands would be higher than that in the North and Center probably due to the fact that there are more needy families with children. Thus, the measure seems to have a slightly positive effect on Italian territorial inequalities

Macro-area	2021 no auu	2021 mixed policies	2023 no indic	2023	Percentage change 2021 vs. 2023
North-West	2274	2280	2381	2391	5.1%
North-East	2206	2211	2318	2331	5.6%
Center	2050	2056	2152	2162	5.4%
South	1713	1725	1822	1834	7.0%
Islands	1725	1736	1843	1855	7.5%

RESULTS - EUROMOD

Mean disposable income by Region

The highest increase is found for Sardinia, Molise and Apulia while the lowest are found in Lombardy, Marche, Friuli, Liguria

Regions	**2021 senza**	€ 2021	€ 2023 no indiciz	€ 2023	Difference between 2023 and 2021 (%)
Piemonte	2171	2180	2285	2297	5.80%
Valle D'Aosta	2192	2196	2305	2318	5.75%
Lombardia	2345	2349	2448	2459	4.86%
Bolzano	2480	2491	2625	2641	6.49%
Trento	2234	2240	2373	2389	6.94%
Veneto	2205	2209	2313	2324	5.40%
Friuli Venezia Giulia	2265	2271	2367	2381	5.12%
Liguria	2232	2238	2336	2346	5.11%
Emilia-Romagna	2094	2099	2200	2211	5.59%
Toscana	2051	2058	2159	2169	5.75%
Umbria	1922.5	1928	2027	2038	6.01%
Marche	2137	2142	2234	2245	5.05%
Lazio	2058	2063	2156	2168	5.34%
Abruzzo	1763	1768	1858	1867	5.90%
Molise	1619	1631	1733	1743	7.66%
Campania	1661	1675	1766	1779	7.10%
Puglia	1705	1717	1821	1833	7.51%
Basilicata	1872	1884	1989	2001	6.89%
Calabria	1770	1783	1881	1893	6.95%
Sicilia	1705	1717	1816	1828	7.21%
Sardegna	1752	1763	1879	1892	7.99%

RESULTS - EUROMOD

1.1. Aggregate earnings, government revenue and expenditure (annual)				
	Total Italy 2021 (mixed policies)	*Total Italy 2023*	*Italy 2023 Diff. w.r.t. Baseline*	*Italy 2023 Diff. % of Baseline*
+ Family Allowance for 1 parent and children (Assegni al nucleo famigliare) (bfalp_s)	1,936,442,036	0	-1,936,442,036	-100.0%
+ Family Allowance for couple and 0 child (Assegni al nucleo famigliare) (bfacpxc_s)	731,187,834	724,362,618	-6,825,216	-0.9%
+ Family Allowance for 2 parents and children (Assegni al nucleo famigliare) (bfacpwc_s)	5,011,137,017	0	-5,011,137,017	-100.0%
+ Social pension (Pensione / Assegno sociale) (poamt_s)	5,526,968,774	5,549,759,057	22,790,284	0.4%
+ Child benefit (Assegno per famiglia con almeno 3 figli minori) (bchot)	527,695,397	0	-527,695,397	-100.0%
+ Social assistance (bsa00)	260,257,147	260,257,147	0	0.0%
+ Scholarships and grants (bed)	2,385,435,815	2,385,435,815	0	0.0%
+ Housing benefits (bho)	305,338,843	305,338,843	0	0.0%
+ New born bonus (bfaba_s)	458,197,032	0	-458,197,032	-100.0%
+ REI (bsamm_s)	10,102,848,647	10,525,101,066	422,252,419	4.2%
+ Municipalities Maternity Benefit (bmamt_s)	0	0	0	0.0%
+ REM (bsamt01_s)	289,870,258	0	-289,870,258	-100.0%
+ Children Allowance (Assegno Unico) (bfach00_s)	1,400,596,457	20,523,709,996	19,123,113,539	1,365.4%
+ Energy related lump sum bonus (bls01_s)		8,820,611,541		
Total means tested benefits (ils_benmt)	28,935,969,092	49,094,440,181	20,158,471,089	69.7%

In 2023 the AUU outlays would increase by 14.7 times (+1365%)

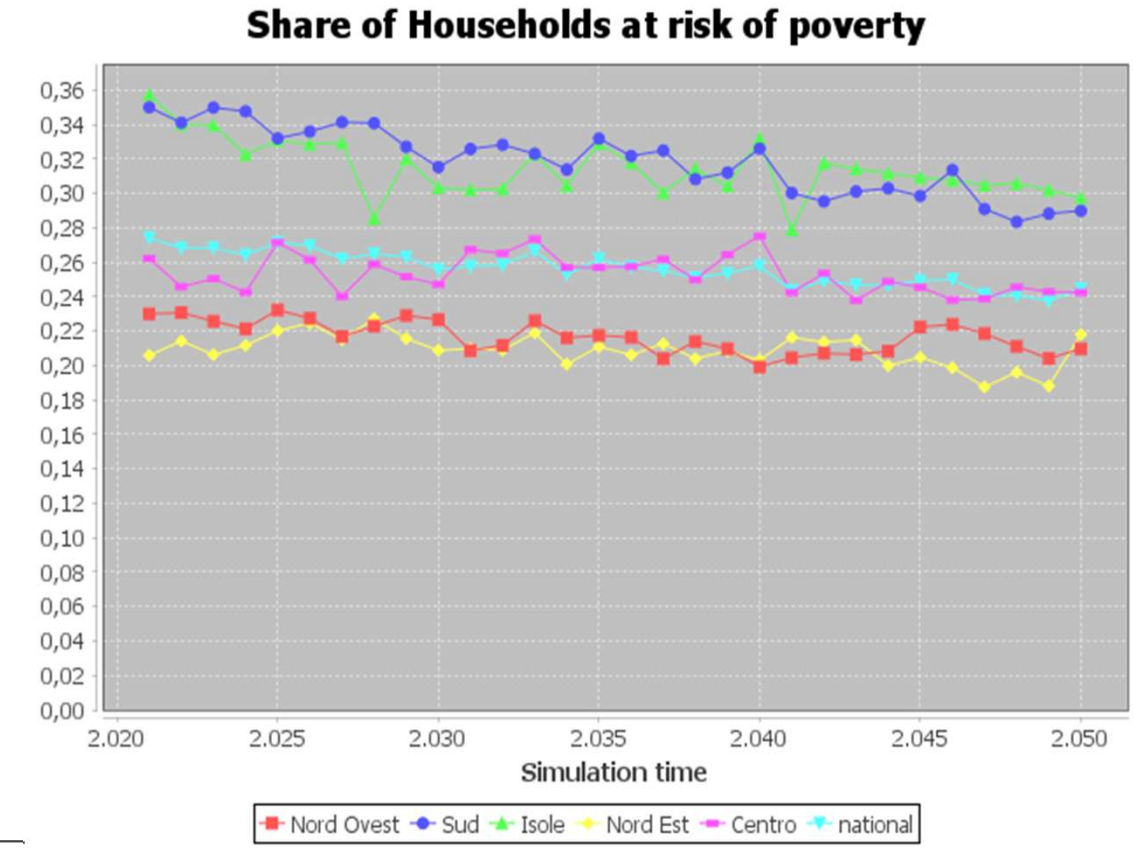
The «Assegno al nucleo familiare» the Child benefit, the newborn bonus and the REM (emergency Income for household for the Covid pandemic) have been all eliminated.

Of course, total means tested benefits skyrocket by almost 70 percentage points.

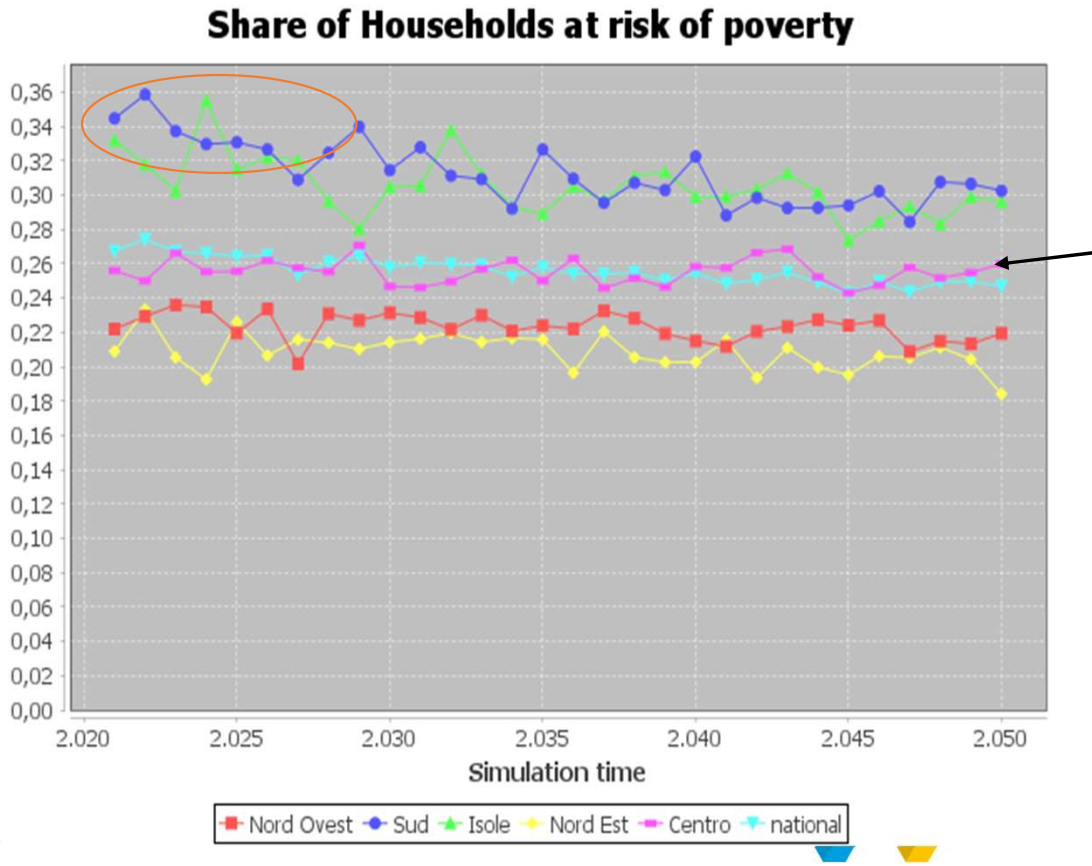
LABSIM APPLICATION

HOUSEHOLD AT RISK OF POVERTY

2021 (no AUU)

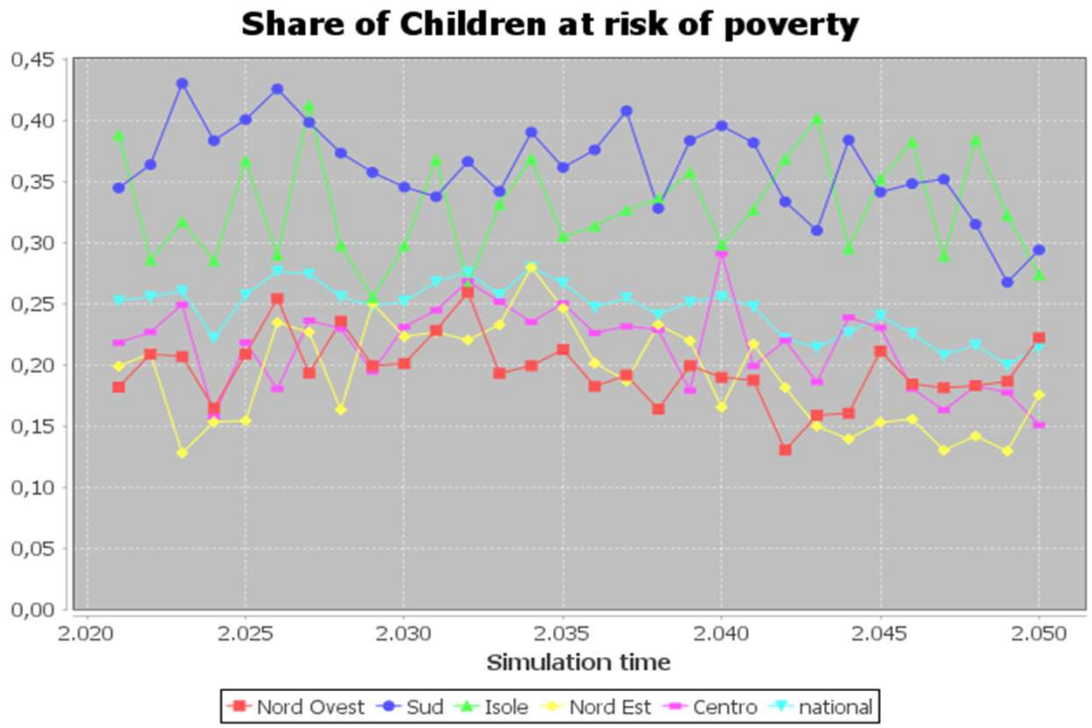


2023 (AUU last version)

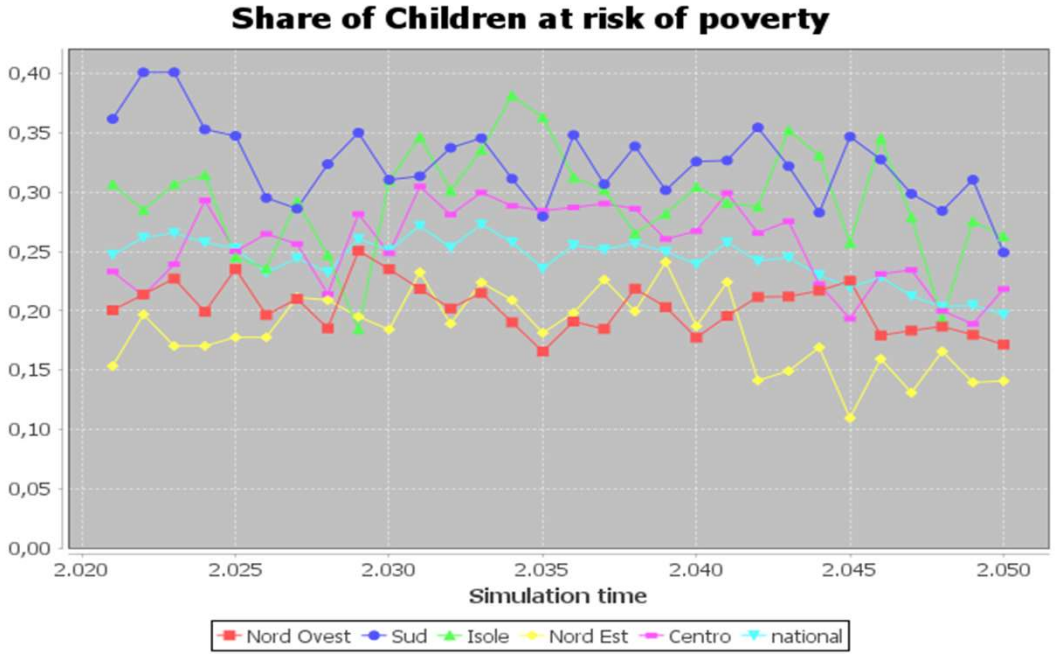


CHILDREN AT RISK OF POVERTY

2021 (no auu)



2023 (last version)



LABSIM ANALYSIS

Using the LABSIM microsimulation model, it was possible to estimate what will happen in the next 30 years (until 2050) as a result of the introduction of the AUU.

It would appear that the measure works only slightly on the share of households at risk of poverty but works better on the share of children at risk of poverty.

In particular, the latter rates are reduced for the most deprived areas and thus we can say that the policy achieves one of its main objectives.

We also tried the same analyses on the labour market and the behavioural effects do not seem to suggest anything new due to the AUU. In fact, the policy did not have that objective, but that of supporting all families with children.

CONCLUSIONS

the AUU represents an important support for the poorest people.

the latest version of the au improves the economic well-being of the poorest families

since the policy is aimed at everyone, the auu also improves the situation of families with at least one child and a high income

the use of the ISEE as a parameter for determining the amount of the contribution actually prevents an income redistribution in in favor of women by being paid exclusively to the highest family income earner who is usually a man. Therefore, it would be desirable that the income of the second recipient be suitably neutralized as suggested in the work of Corsi et al. (2021).

THANK YOU FOR YOUR ATTENTION!

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