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**The New “Minimum Vital Income” in  
Spain: Distributional and Poverty Effects  
in the Presence and Absence of Regional  
Minimum Income Schemes**

Nuria Badenes Plá and Borja Gambau-Suelves

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# The new “Minimum Vital Income” in Spain: distributional and poverty effects in the presence and absence of regional minimum income schemes\*

Nuria Badenes Plá<sup>a</sup>

Borja Gambau-Suelves<sup>b</sup>

<sup>a</sup> Instituto de Estudios Fiscales

<sup>b</sup> Universidad Complutense de Madrid and Universidad Rey Juan Carlos

## Abstract

The “Minimum Vital Income” (IMV) constitutes a novelty in the panorama for fighting poverty by guaranteeing minimum incomes after the COVID-19 crisis. This work simulates the distributional and poverty effects of the IMV introduction across Spanish regions using EUROMOD. Our results show that the IMV reduces inequality and poverty – general and extreme - for all regions. The regional minimum income schemes (RMI) have been a fundamental measure to fight poverty in Spain from the regional level, although this power has not been as effective as it was expected in reducing inequality. This work also simulates the effects on inequality and poverty that the elimination of current RMI and the introduction of the new IMV would generate. Considering the simultaneous introduction of IMV and RMI elimination, the negative effects of RMI would be offset by positive effects of IMV, leading also to a big additional saving for the Spanish Public Accounts.

**JEL:** C81, D63, D31, I32, H24

**Keywords:** microsimulation, inequality, income distribution, poverty, minimum vital income, EUROMOD

## Corresponding author:

Nuria Badenes Plá

[nuria.badenes@ief.hacienda.gob.es](mailto:nuria.badenes@ief.hacienda.gob.es)

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\* The results presented here are based on EUROMOD version I2.0 +. EUROMOD is maintained, developed and managed jointly by the Institute for Social and Economic Research (ISER) at the University of Essex and the Joint Research Centre of the European Commission, in collaboration with national teams from the EU member states. We are indebted to the many people who have contributed to the development of EUROMOD. The process of extending and updating EUROMOD is financially supported by the European Union Programme for Employment and Social Innovation 'Easi' (2014-2020). We make use of microdata from the EU Statistics on Incomes and Living Conditions (EU-SILC) made available by Eurostat (259/2018-EU-SILC-LFS). The results and their interpretation are the authors' responsibility.

## 1. Introduction

The new “Minimum Vital Income” (IMV) scheme was introduced in Spain in June 2020 to smooth the negative effects that the COVID-19 crisis has generated on the Spanish income distribution. Until then, there was only one tool within the non-contributory benefits program aimed at guaranteeing a minimum income for those households that were not able to achieve such coverage by the market or other social programs: the “Minimum Insertion Income” (RMI) articulated from the regional level – Regional Minimum Income schemes -. Being decentralized at this level, their amounts, coverage and eligible conditions are different in each Autonomous Community (CCAA), also generating different results in terms of poverty reduction, which are the final purpose for which are designed.

The novelty of the IMV in Spain makes the analysis of its effects quite interesting from different points of view such as the distributive one, on labour supply, or budgetary among others. An *ex-ante* evaluation has already been carried out by the Spanish Independent Fiscal Responsibility Authority, AIREF (2019), to contribute to the most appropriate design of this benefit. In this work we will focus on the analysis of the distributional effects and on poverty, simulating the IMV introduction on the 2016 data from the Survey on Income and Living Conditions (EU-SILC), and programming some scenarios of interest through EUROMOD. The new IMV is included maintaining or eliminating the RMI policy and the results are compared with those obtained with the current benefit system.

The analysis is carried out on EU-SILC data and assuming that everyone who are eligible actually receives it, but it is necessary to specify that the IMV introduction has already been approved so this is a real policy simulation. The RMI elimination, however, supposes a simulated scenario that is not real, since RMI are currently in force. There are different circumstances that could make the substitution of the RMI by the new IMV a feasible strategy for the Government, such as the fact that the IMV national instrument would unify the regional differences generated by the RMI, the similar budgetary cost that the elimination of a policy by another, or that the design of the IMV has been made trying to alleviate the defects of the RMI.

It is also important to clarify that the programmed policies, both regarding the collection of IMV and RMI are supposed to be applied in accordance with the criteria established by the legal regulation, which means that non take-up<sup>1</sup> is not considered. The cost results of the policies therefore refer to maximum values since the evidence indicates that the percentage of potential beneficiaries is higher than that of effective ones.

To understand the effects generated by the policies analysed, market income will be taken as the starting income, before the intervention of the public sector, that is, without including the receipt of any benefit or discounting the payment of taxes or contributions. As a first exercise, we will exclusively analyse the effect of payments received for all current benefits, (which we will call “policy 1”), in order to have a comparison scenario, and check how the starting situation changes when considering two alternative measures. The incorporation of the new IMV (which we will call “policy 2”) entails the change in the benefit for dependent

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<sup>1</sup>The non take-up phenomenon is of a very important magnitude throughout the EU countries, estimating no coverage of between 40 and 80%. In particular, the most recent calculations for RMI in Spain, in comparison with the EUROMOD data, can be verified at [https://editorialexpress.com/cgi-bin/conference/download.cgi?db\\_name=EPPOVIEDO&paper\\_id=91](https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=EPPOVIEDO&paper_id=91), pages 19 and 20.

children, given the incompatibility of this benefit for cases without disabilities with the RMI, being able to opt for the most favourable benefit. Finally, we consider what the effects would be if, once the IMV had been introduced, the RMI program was also eliminated, which we call “policy 3”. The transition from original income to income with current benefits (policy 1) generates an increase in income in any case, and a significant decrease in inequality and poverty, since the main distributive tool of the public sector is being considered together, via monetary spending. The introduction of the new IMV (policy 2), will surely generate increases in income for the neediest groups, but so far, no study has evaluated the magnitude of the distributional and poverty effects at both the national and regional levels. The last scenario, in which the RMI elimination while maintaining the IMV is considered, does not refer to a real scenario (like the previous two before and after the introduction of the IMV). As mentioned above, Spanish legislation as of June 2020 has not established the substitution of a regional program (RMI) for a national one (IMV), but they remain as coexisting programs. It is only a simulation to compare which IMV or RMI program has more redistributive and poverty reduction capacity in the different territories. For this, policies 1 and 3 can be compared, since in policy 1 RMI is paid but IMV is not considered, and in policy 3 only IMV is considered, eliminating RMI. For the record, the scenario currently in force would be that referred to in policy 2, in which both benefits are received.

## **2. Description of the new “Minimum Vital Income” (IMV)**

The IMV constitutes a monetary aid for the population with lower incomes and is designed as a cash transfer to households based on the deficit they have until achieving a minimum income that is considered to be guaranteed according to their circumstances, what makes it quite different from other policy options such as the Universal Basic Income (UBI).

The reason why a policy of this nature is implemented despite there is already a system for fighting poverty articulated and designed by the Autonomous Communities through the RMI, is precisely the result in terms of poverty that such a system gives rise to. Studies show that in Spain the rates of poverty and inequality are higher than those of neighbouring countries, and in particular those referring to child poverty and extreme poverty (UNICEF, 2016), Llano (2019)). As AIReF (2019) points out, the minimum income system in Spain presents many regional disparities, the amounts granted are generally low and with poor coverage, and it can also discourage entry to the labour market if being unemployed is required as a condition of eligibility. Ayala (2016) presents a comparative context of the programs to combat poverty in the OECD, in which Spain does not seem to have a vertebrate system of welfare benefits that defines a last homogeneous social protection network. Rather, it is “*a mosaic of figures, with high levels of horizontal inequity, and with important gaps in the protection of certain groups*”. This same idea of heterogeneity, as well as proposals for improving the system, is studied in detail in Noguera (2019). The report prepared by the UN (2020) strongly criticizes the Spanish social assistance system, stating that “*... it is broken, it is not adequately financed, it is impossible not to lose it and it does not reach the people who need it most*”.

The IMV is therefore designed trying to avoid the errors of the existing system:

- Firstly, the amounts are established based on the minimum income to be guaranteed in each household, so the transfer received does not vary only with the characteristics of the household, but is also greater the greater the deficit.
- On the other hand, it does not consider the minimum insertion income paid by the regional system to calculate said deficit, and therefore it does not hide the regional differences existing in the programs to fight poverty. In other words, if there are regional differences after receiving the IMV, they will not be due to this new transfer, but to the pre-existing differences in both gross and net income before computing the IMV.
- Another important feature is that it is designed taking into account the circumstances of the household, or the unit of coexistence, not those of the individual person, since household is the consumption and decision unit.
- An important element is that it does not require being unemployed, so the IMV can be added to the earned income obtained. Although each additional euro earned is subtracted from the IMV obtained, it is possible to work and be a recipient simultaneously. The guaranteed income is the same, but obtained from different sources.

For the determination of the minimum income to be guaranteed (hereinafter, RMG as its Spanish acronym), the condition of the family is taken into account through two characteristics that incorporate circumstances that make it more difficult to live with the same monetary amount. On the one hand the number of people that make up the fiscal unit, so each additional person requires a higher minimum amount. Given that there are economies of scale for living with a family, two people do not need twice as much as one to live, and therefore the factor of increase per additional person is not one, but less than one. For the IMV design, a weight of 0.3 has been stipulated for each additional person. On the other hand, the second condition that is incorporated to consider greater needs in households is single parenthood, taking into account that in families with only one parent, the possibilities of obtaining income are less than in two-parent families. This circumstance adds an additional 22% increase to the RMG that would correspond to a single person household, that is, the coefficient considered is 0.22.

IMV beneficiaries must meet a series of requirements specified in Royal Decree-Law 20/2020, of May 29. Basically, they can be summarized in that it is required to be a resident, not to constitute a home in which all the members are over 65 or under 23 years of age, to suffer economic vulnerability -measured as a lack of income with respect to the RMG-, not being recipient of child benefit and not having an excessive patrimony. Maximum amounts of the patrimony of the coexistence unit are established that determine the eligibility, starting from the triple of the RMG for a single person and weighing for factors of increase between 1.4 and 2.6 depending on alternative family compositions.

The amount of IMV is determined from the information contained in table 1. The weighting factor is the result of adding 0.22 to the unit in case the unit is single-parent and 0.3 extra for each additional person to the first.

**Table 1.** Weighting factor, and annual and monthly minimum guaranteed income (RMG) depending on the cohabitation unit

Minimum income guaranteed (RMG)= 5.538	weighting factor	Sing le parent 0.22	Additionalpe rson: 0.3	RMG yearly	RMG monthly
<b>Adult alone</b>	1	0	0	5,538	462
<b>Adult + 1 child</b>	1.52	1	1	8,418	701
<b>Adult + 2 children</b>	1.82	1	2	10,079	840
<b>Adult + 3 or more children</b>	2.12	1	3	11,741	978
<b>2 Adults</b>	1.3	0	1	7,199	600
<b>2 Adults + 1 child</b>	1.6	0	2	8,861	738
<b>2 Adults + 2 children</b>	1.9	0	3	10,522	877
<b>2 Adults + 3 or more children</b>	2.2	0	4	12,184	1,015
<b>3 Adults</b>	1.6	0	2	8,861	738
<b>3 Adults + 1 child</b>	1.9	0	3	10,522	877
<b>3 Adults + 2 more children</b>	2.2	0	4	12,184	1,015
<b>4 Adults</b>	1.9	0	3	10,522	877
<b>4 Adults+1 child</b>	2.2	0	4	12,184	1,015
<b>Other (idem previous)</b>	2.2	0	4	12,184	1,015

By this way of determining the RMG weighting factor, different coexistence units are weighted by the same factor, for example, all units with five or more members are weighted with 2.2, regardless of whether the components are adult or minor. Units with four members are weighted with 1.9 if there is no single parent, but if it is three minors and an adult, the weight is an additional 0.22 (2.12). Once the RMG weighting factor has been determined, which is set at € 5,538 per year in 2020, the annual RMG that should be guaranteed for each type of unit is calculated, which is presented in the penultimate column in annual terms, and monthly (in 12 payments) in the last one. In short, this would mean monthly IMVs - at most - between € 462 and € 1,015 for the households of one individual and 5 or more people respectively. And there are maximum values because the IMV pays just the difference between the effective income and the RMG.

In addition to the condition of vulnerability for income explained in the previous lines, it is required to have patrimonial vulnerability, and therefore it will be taken into account that the coexistence unit does not exceed the values of the computable wealth that are established from triple the RMG weighted according to household composition:

Among the conditions related to the limitation to the right to receive IMV, the value of the heritage is considered, as just described, so the simulation would require its quantification. This information is not available in the EU-SILC data, so the condition of being a taxpayer in the Wealth Tax will be used as a proxy variable for the possession of high assets.

**Table 2.** Weighting factor and maximum annual equity allowed to be considered eligible as a beneficiary of the IMV based on the type of living unit

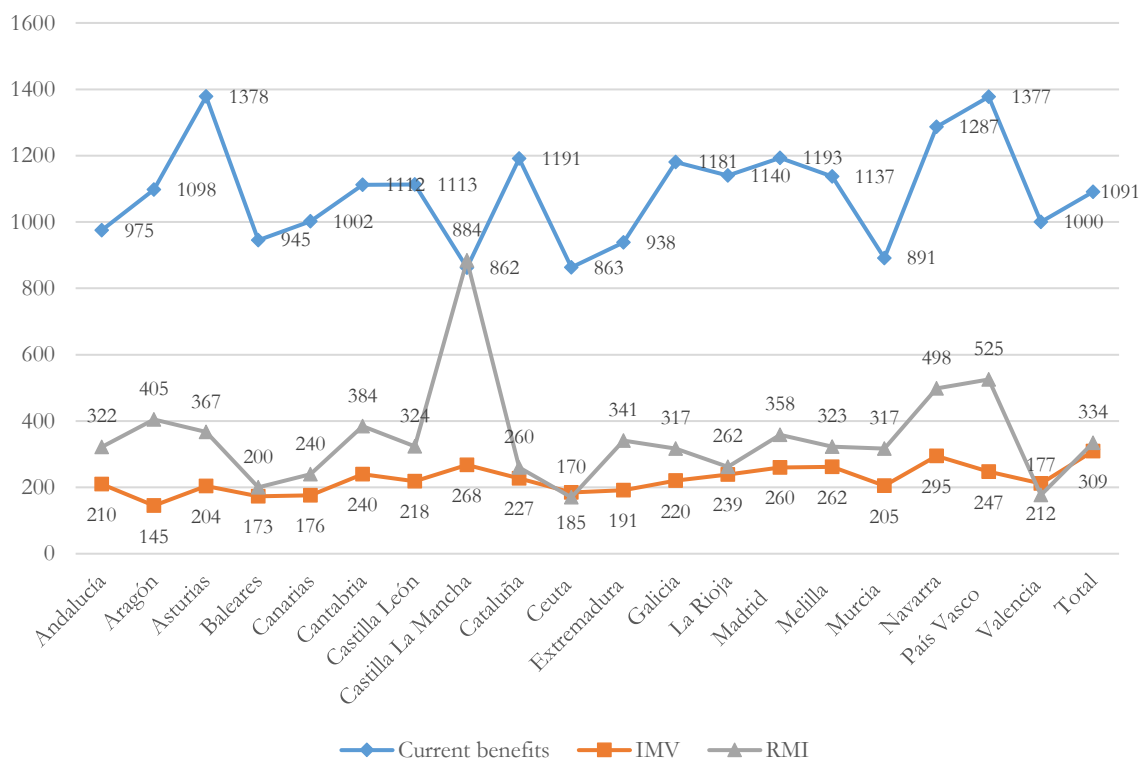
<b>Baselinevalue: 3·RMG=16,614</b>	<b>Factor</b>	<b>Maximum wealth</b>
<b>Adult alone</b>	1	16,614
<b>Adult + 1 child</b>	1.4	23,260
<b>Adult + 2 children</b>	1.8	29,905
<b>Adult + 3 or more children</b>	2.2	36,551
<b>2 Adults</b>	1.4	23,260
<b>2 Adults + 1 child</b>	1.8	29,905
<b>2 Adults + 2 children</b>	2.2	36,551
<b>2 Adults + 3 or more children</b>	2.6	43,196
<b>3 Adults</b>	1.8	29,905
<b>3 Adults + 1 child</b>	2.2	36,551
<b>3 Adults + 2 more children</b>	2.6	43,196
<b>4 Adults</b>	2.2	36,551
<b>4 Adults+1 child</b>	2.6	43,196
<b>Other (idemprevious)</b>	2.6	43,196

On the other hand, article 16 of Royal Decree-Law 20/2020, establishes incompatibility between the perception of IMV and the benefit for a dependent child or minor in foster care, without disability or with a disability of less than 33 percent, when there is an identity of the cause or beneficiaries thereof, without prejudice to the possibility of exercising the right of option for one of them. Since the perception of the IMV is incompatible with the latter, the simulations have been performed comparing both values and opting for the most favourable one. The changes that would occur due to said incompatibility would generate a reduction of 35% of households that receive child benefit without disability or less than 33% (from 1,275,401 to 822,743), a decrease in the average payment of said benefit from 61 to € 53 per month, and a savings of 33.8 million euros per month or 406 million per year.

Regional RMI present such differences in coverage, amount and requirements in the different Autonomous Communities that make it impossible to present their characteristics here. For these differences, AIReF (2019), pages 79 to 95 can be consulted, where an exhaustive description is presented. The results of the programming of the payment of the current benefits, the new IMV and the RMI allow verifying that the average values paid by households in the different territories are as follows:

In graph 1, we show the average values for eligible households, which are 70.3% of the 18.4 million total households, if we refer to current benefits. The values are 6.7% for IMV and 4.6% for RMI. There are differences between regions in the average amounts received for any of the three policies considered, so the effects of the policies will be calculated both at the country and at the region level.

**Graph 1.** Average values (€ /month) of current benefits, IMV and RMI by Autonomous Community for each recipient group



### 3. Distributional and poverty effects of IMV incorporation and RMI elimination

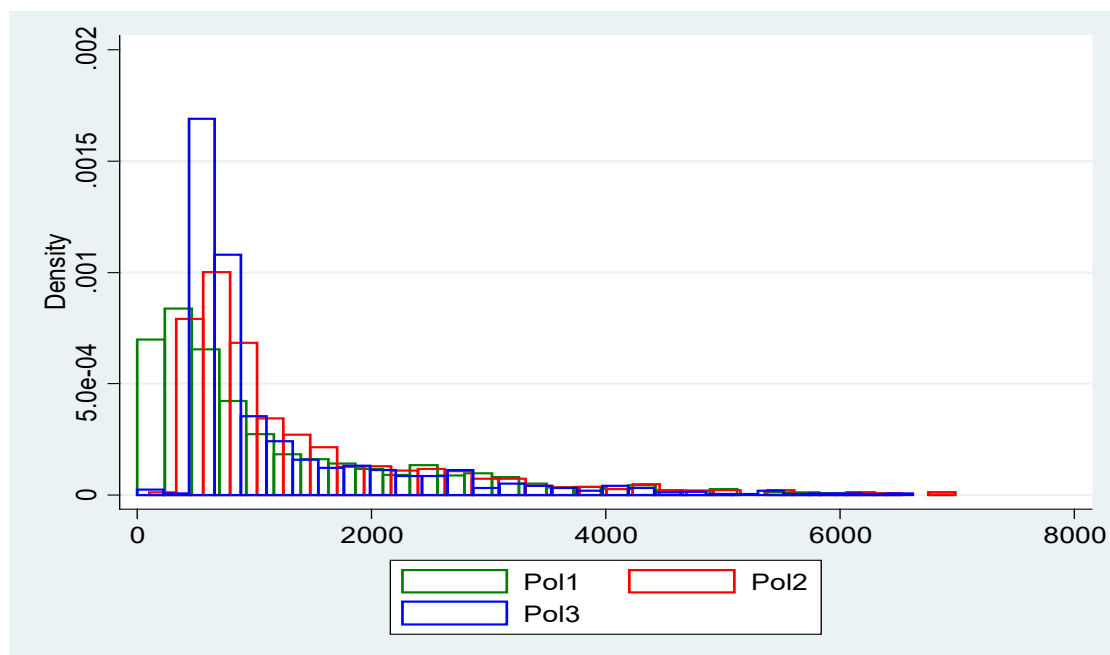
Before calculating the effects generated by the payment of benefits in different scenarios on inequality and poverty, it is convenient to describe what are the amounts that are distributed in each policy by levels of original income, which will be the one taken as a reference. It is also convenient to check the distribution for the regions, since as will be seen, the differences by territory are notable, both in the initial distribution and in the payments made by the public system.

In addition to analysing the payments of the IMV (policy 2) and the elimination of the RMI once the IMV has been incorporated (policy 3), the results referring to the current situation will be presented, in which IMV is not charged but the RMI are maintained (policy 1), in order to have a reference of the change generated by the new IMV and the RMI elimination.

A first evidence of the change that the policies suppose in the income distribution is verified by analysing the change in the histogram of the net income of the IMV or RMI recipients in the three scenarios. The incomes for the group that receives neither RMI nor IMV remain constant.



**Graph 2.** Histogram of net income (€ / month) of policies 1, 2 and 3 for the group of IMV or RMI recipients



The frequencies when considering the IMV (change from green to red) shift to the right, since the concentration of households at the minimum income levels practically disappears. When considering the RMI elimination (change from red to blue), the frequency at levels close to zero income is still minimal because the IMV is charged, but households are more concentrated in a net income environment of one thousand euros per month in detriment to frequencies at higher income levels.

Another way to check how the IMV and RMI are distributed is obtaining the average values of the benefits by deciles of original income. For this, deciles of households are built for the total population, and then it is broken down into groups of recipients and non-recipients.

**Table 3.** Original average income, current benefits, IMV and RMI (€ /month) by deciles of original income and for eligible households

Decile	Number of households	Original income	Current benefits	IMV	RMI
1	398,955	-13	635	293	157
2	238,841	9	597	333	171
3	487,580	162	475	276	99
4	377,531	478	344	130	89
5	83,354	1006	892	3	304
6	50,187	1503	955	0	342
7	75,431	2155	1001	0	335
8	31,184	2707	670	0	278
9	36,390	4102	654	0	295
10	33,982	8267	997	0	294
<b>Total</b>	<b>1,813,435</b>	<b>601</b>	<b>572</b>	<b>210</b>	<b>156</b>

In the previous table it is verified how the original income grows continuously in the deciles, since the amount of income is the variable used for its construction. The number of households is not 10% of each decile, since these are built for the total population, and the table only represents households that receive IMV or RMI. Being the eligible households the group most in need, the frequency in the poorest deciles is higher than in the highest income deciles. Initial benefits include all the monetary amounts paid by the system, including those for retirement and unemployment, so a decreasing pattern cannot be expected as deciles increase. In the case of the IMV, there are no recipients from the fifth decile, since the collection is established based on the minimum guaranteed income (RMG). Family circumstances are also considered in addition to income (size and single parenthood), therefore, for the first five deciles the pattern is not strictly decreasing with income either. The RMI are established with differentiated criteria in the different Autonomous Communities, and therefore there is also no decreasing pattern with the decile, since the amount received depends on the distribution of income in each territory, on how the need is considered based on income in each region, in addition to other circumstances unrelated to income.

It should be noted that the application of policy 2 (payment of the new IMV) increases the income of all income deciles compared to the current benefit system (policy 1). The RMI elimination (policy 3) in comparison with the current situation (policy 1) would worsen in average terms all the highest income deciles, from the fifth to the tenth. This is because they lose the RMI but would not receive the IMV, while in policy 3 scenario, the deciles one to the fourth would not be harmed with respect to the current situation, since what they charge for IMV exceeds the value of the RMI.

If we build an analogous table referring to the Autonomous Communities, we can see the differences due to the initial distribution in each region, on the one hand, and to the effects generated by the benefits system on the other. Note that the information presented is different from that of Graph 1, where the average values by groups of each benefit were shown, while in this case we focus exclusively on the group of people in need (who charge IMV and / or RMI).

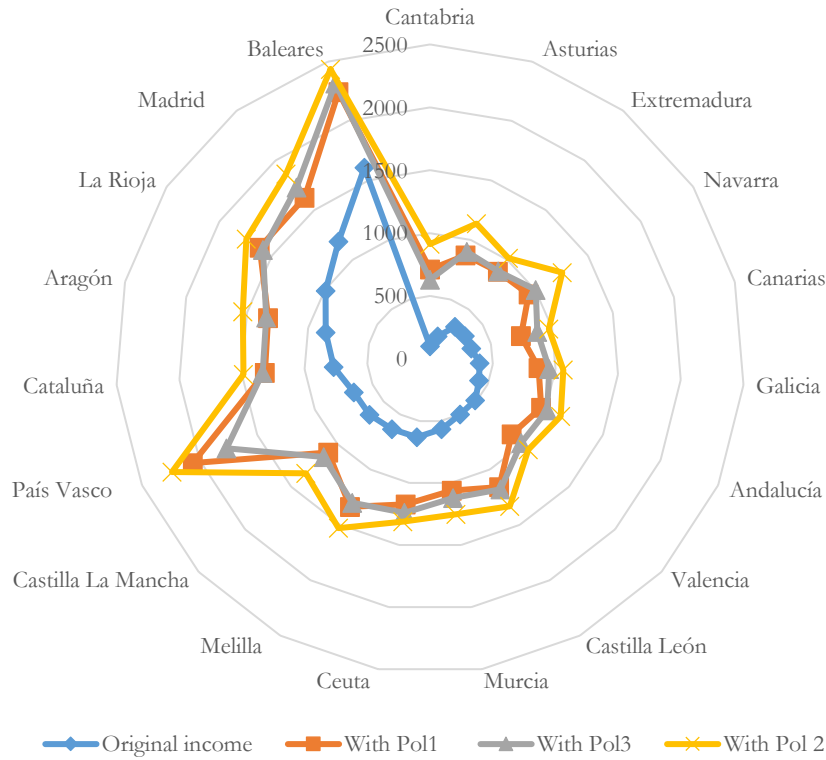
**Table 4.** Original average income, current benefits, IMV and RMI (€ / month) by Autonomous Community for eligible households

CCAA	Original income	Current benefits	IMV	RMI
Andalucía	425	540	188	117
Aragón	855	473	212	192
Asturias	191	681	275	236
Baleares	1609	634	198	119
Canarias	338	409	241	95
Cantabria	101	610	212	283
Castilla León	501	656	186	155
Castilla La Mancha	654	444	275	193
Cataluña	769	548	191	155
Ceuta	630	542	140	72
Extremadura	325	554	154	134
Galicia	395	471	208	112
La Rioja	992	626	143	159
Madrid	1183	442	271	137
Melilla	633	703	234	229
Murcia	565	496	207	132
Navarra	333	605	371	253
País Vasco	660	1399	190	474
Valencia	487	395	198	77
<b>Total</b>	<b>601</b>	<b>572</b>	<b>210</b>	<b>156</b>

Taking into account that the number of households receiving IMV is 1,234 million and that on average they receive € 309 per month, the total cost of this benefit amounts to 4,570 million per year, a figure that can also be obtained by calculating from the data in the table. 4, computing a total of 1,813 million households of the group of IMV and / or RMI recipients, who on average receive € 210 per month.

Graphically it is verified how the payment of the current benefits (policy 1) makes the income rise in any case to a great extent, and to a lesser extent by adding the IMV (policy 2), but all the CCAA improve. By eliminating the RMI (policy 3), there are Autonomous Communities that do not compensate in average terms what is received by IMV with what is withdrawn by RMI, so that the net income is below that resulting with the current benefit system. This is the case of Cantabria, Melilla, the Basque Country and La Rioja.

**Graph 3.** Original income and income with current benefits (policy 1), with IMV (policy 2) and eliminating RMI (policy 3) (€/ month) by Autonomous Community.



### 3.1. Distributional effects

The results regarding inequality calculated for all households, whether or not they are needed, are presented in Table 5. The value of inequality is also disaggregated for the households that we classify as “poor” (those that the system considers them deserving RMI and / or IMV) and “non-poor”, those who do not receive any of these benefits.

**Table 5.** Gini indexes of original income, and net income after applying policies 1, 2 and 3. Values for the total population and by subgroups according to whether or not they are considered poor by the benefits system.

Gini index	Original Income	Net income Pol1 Current benefits	Net income Pol2 Current+IMV	Net income Pol3 Current+IMV-RMI
<b>Non-poor</b>	0.562203	0.381131	0.381131	0.381131
<b>Poor</b>	0.772442	0.578506	0.442067	0.44083
<b>Total</b>	0.588066	0.407813	0.398218	0.401628

The payment of current benefits supposes the transition from original income to net income of policy 1, and generates a great decrease in inequality, whether it is seen in the population as a whole or for each of the groups. The payment of the IMV lowers the inequality from 0.407813 to 0.398218. The value of the effect seems to be reduced if the global population

is analysed. The non-poor group, by not receiving this benefit, does not change its distribution, however, the inequality of the poor group falls from 0.578506 to 0.442067. If what we are analysing is the RMI elimination we must compare the inequality of net income with policy 2 and 3 respectively. In this case, there is also no change in the income distribution of non-recipients, so the Gini index for this subgroup remains constant at a value of 0.381131. For the poor group, the elimination of the RMI lowers the inequality from 0.442067 to 0.44083, however, the global inequality increases from 0.398218 to 0.401628.

This result is explained by the fact that the global Gini index is obtained from the sum of one component of unequal intra-groups (which is constant for the non-poor and falls for the poor) but another between-groups. In this case, between-groups inequality between the poor and non-poor increases by the RMI elimination, and global inequality increases. It is interesting to see how the maintenance of the RMI increases inequality in the group of perceivers, and this is consistent with the findings described in table 3, where there is no decrease in the value of the RMI as the deciles of original income.

The differences of the Gini indexes, which offer the impact of the redistributive effect using the Reynolds-Smolensky index (RS) are presented in table 6.

**Table 6.** Reynolds-Smolensky indexes generated by current benefits, the inclusion of IMV and the RMI elimination for the total population and by subgroups according to whether or not they are considered poor by the benefits system

<b>Reynolds-Smolesky (RS)</b>	<b>Current</b>	<b>IMV inclusion</b>	<b>RMI elimination</b>
<b>Non-poor</b>	0.181072	0	0
<b>Poor</b>	0.193936	0.136439	0.001237
<b>Total</b>	0.180253	0.009595	-0.00341

The contribution to the distributive effect is very important when analyzing the current system as a whole, for whatever group is considered: 0.181072 for the non-recipient group, and somewhat higher for the recipients, 0.193936.

The inclusion of IMV or the exclusion of RMI does not generate any redistributive effect among non-recipients, so RS is null. Redistribution on the IMV recipients (0.136439) is much greater than the redistribution achieved when RMI is removed (0.001237).

Note that although the removal of RMI would generate a negative redistributive effect on the global population, the effect on the RS index is positive when we analyzed only the group that are eligible to receive RMI and/or IMV (poor people).

The value of inequality in the total distribution is highly conditioned by the greater weight of the population and the income that the non-poor group represents over the poor. Furthermore, the between-groups component can act in the opposite direction to the within-groups in total inequality changes. For this reason, it has been considered more interesting to analyze only the effect within the group of poor; what it means potential recipients- eligible people- of either IMV or RMI.

Table 7 presents the values of the Gini indexes for the group of IMV and / or RMI preceptors, and disaggregated for each Autonomous Community or city.

**Table 7.** Gini indexes by Autonomous Community of original income, and net income after applying policies 1, 2 and 3. Collective of IMV and / or RMI recipients.

<b>Gini</b>	<b>Original income</b>	<b>Net Income Pol1 (Current System)</b>	<b>Net Income Pol2 (Current + IMV)</b>	<b>Net Income Pol3 (Current + IMV-RMI)</b>
<b>Galicia</b>	0.678845	0.555812	0.395561	0.385738
<b>Asturias</b>	0.864651	0.574898	0.385794	0.40646
<b>Cantabria</b>	0.911186	0.313017	0.232514	0.236697
<b>Basque Country</b>	0.822176	0.472515	0.3938	0.485458
<b>Navarra</b>	0.722604	0.382637	0.252092	0.237685
<b>La Rioja</b>	0.524692	0.484711	0.411242	0.405467
<b>Aragón</b>	0.765013	0.643305	0.494383	0.485777
<b>Madrid</b>	0.828557	0.696102	0.571949	0.574395
<b>Castilla Leon</b>	0.792587	0.581369	0.450325	0.447213
<b>Castilla Mancha</b>	0.773854	0.612281	0.459748	0.4082
<b>Extremadura</b>	0.771452	0.454939	0.33081	0.308426
<b>Cataluña</b>	0.723462	0.54392	0.422639	0.438116
<b>Valencia</b>	0.731091	0.546676	0.38029	0.367066
<b>Islas Baleares</b>	0.579761	0.537729	0.442169	0.446916
<b>Andalucía</b>	0.649989	0.492649	0.356743	0.332569
<b>Murcia</b>	0.678269	0.519147	0.381216	0.355277
<b>Ceuta</b>	0.719976	0.577823	0.448634	0.439014
<b>Melilla</b>	0.678187	0.394822	0.319264	0.347111
<b>Islas Canarias</b>	0.790569	0.5856	0.367568	0.348105
<b>Total</b>	0.772442	0.578506	0.442067	0.44083

The changes of inequality generated by the different policies focused exclusively on the group of IMV or RMI recipients –eligible people- reveals regional differences. The payment of current benefits and the extra money given by IMV reduces inequality in all territories, but the exclusion of RMI improves distribution in some regions and worsens it in others. To check the magnitude of the redistributive effects, analogously to the information presented in table 6, table 8 shows the values of the distributional effect generated separately by the payment of current benefits (Pol1), by the IMV (Pol2), and by RMI (Pol3).

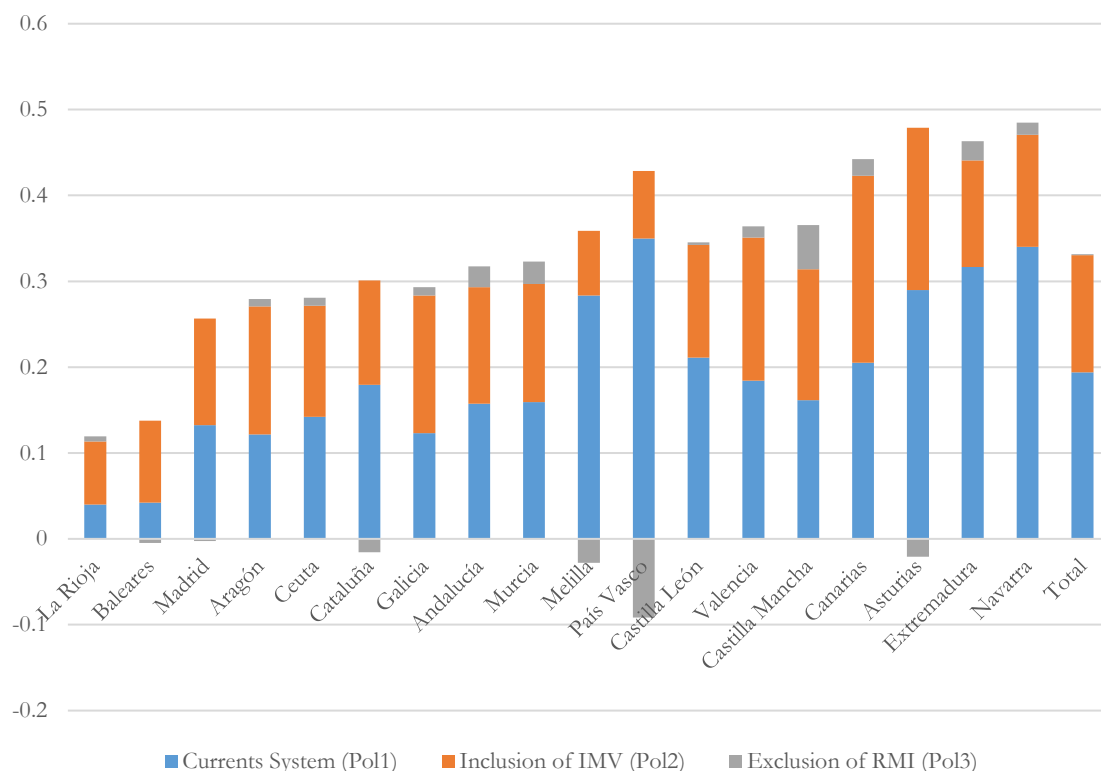
**Table 8.** Reynolds- Smolensky indexes generated by current benefits, the inclusion of IMV and the RMI elimination for the total population and by subgroups according to whether or not they are considered poor by the benefits system

<b>RS</b>	<b>Current System (Pol1)</b>	<b>IMV inclusion (Pol2)</b>	<b>RMI exclusion (Pol3)</b>
<b>Galicia</b>	0.123033	0.160251	0.009823
<b>Asturias</b>	0.289753	0.189104	-0,020666
<b>Cantabria</b>	0.598169	0.080503	-0.004183
<b>Basque Country</b>	0.349661	0.078715	-0.091658
<b>Navarre</b>	0.339967	0.130545	0.014407
<b>The Rioja</b>	0.039981	0.073469	0.005775
<b>Aragon</b>	0.121708	0.148922	0.008606
<b>Madrid</b>	0.132455	0.124153	-0.002446
<b>Castilla Leon</b>	0.211218	0.131044	0.003112
<b>Castilla Mancha</b>	0.161573	0.152533	0.051548
<b>Extremadura</b>	0.316513	0.124129	0.022384
<b>Catalonia</b>	0.179542	0.121281	-0.015477
<b>Valencia</b>	0.184415	0.166386	0.013224
<b>Balearics</b>	0.042032	0.09556	-0.004747
<b>Andalusia</b>	0.15734	0.135906	0.024174
<b>Murcia</b>	0.159122	0.137931	0.025939
<b>Ceuta</b>	0.142153	0.129189	0.00962
<b>Melilla</b>	0.283365	0.075558	-0.027847
<b>Canary Islands</b>	0.204969	0.218032	0.019463
<b>Total</b>	0.193936	0.136439	0.001237

The distributional effect generated by the IMV (Pol2) is even greater than that achieved by the current system (Pol1) in regions such as Galicia, La Rioja, Aragón, Baleares and Canarias. The regions where the system of RMI helps reduce inequality (those in which the RS is negative) are Asturias, Cantabria, Basque Country, Madrid, Catalonia, the Balearic Islands and Melilla. There is some correlation with the average amounts paid and the redistributive capacity in the regions (except for Madrid), although the redistributive effect also depends on the initial distribution and the way in which benefits are distributed.

Graph 4 shows the distributional effects separately for each benefit payment, the current system, IMV (always positive) and elimination of RMI (which for some regions is negative).

**Graph 4.** Redistributive effect (RS) of the payment of current benefits (Pol1), inclusion of IMV at the current system (Pol2) and elimination of RMI by regions (Pol3).



### 3.2. Poverty effects

In this section, we estimate the poverty effects of the simulated scenarios for two alternatives: general poverty – we use the 60% of the median income as poverty line - and extreme poverty – we use the 25% of the median income as poverty line -. The calculated indexes are FGT with parameters 0, 1 and 2, being able to check the incidence, intensity and inequality among the poor, respectively. The results are calculated for the total population and also for the regional level.

Table 9 shows the poverty results for the total population in four distributions: the original income, before receiving any benefit, the net income of policy 1, that is, contributing the current monetary benefit system, the net income of policy 2, which would add the IMV to the previous benefits, and finally, the net income of policy 3, which subtracts the RMI from the previous one. The effects on poverty shown refers to the application of the policies described, that is, that in any case the current benefits system is included. The following table presents the results of the changes in poverty generated by including the IMV and removing the RMI separately.



**Table 9.** Indexes of poverty FGT (0), FGT (1), FGT (2) for the original income and net income policies 1, 2 and 3. Line: 60% of the median income. Total distribution.

	<b>FGT (0)</b>	<b>FGT (1)</b>	<b>FGT (2)</b>
<b>Original Income</b> poverty line: € 761 / month	<b>0.398567</b>	<b>0.3126581</b>	<b>0.2859762</b>
<b>Net Income (Pol1)</b> poverty line: € 1,351.6 / month	0.2601826	0.0937092	0.0489678
<b>Pol1 effect: current benefits</b>	<i>0.1383844</i>	<i>0.2189489</i>	<i>0.2370084</i>
<b>Net Income (Pol2)</b> poverty line: € 1,351.8 / month	0.2573034	0.0820058	0.0356956
<b>Pol2 effect: current + IMV</b>	<i>0.1412636</i>	<i>0.2306523</i>	<i>0.2502806</i>
<b>Net Income (Pol3)</b> poverty line: € 1,345 / month	0.2628511	0.0858974	0.0383181
<b>Pol3 effect: current +IMV-RMI</b>	<i>0.1357159</i>	<i>0.2267607</i>	<i>0.2476581</i>

The percentage of poor households - FGT (0) - when considering the original income is 39.85%, falling by 14 percentage points to 26.02% when adding the current benefit payment. If the IMV payment is also added, the percentage drops slightly to 25.73 %, and if the RMI were eliminated, a rebound to 26.29 % would be produced. The intensity of poverty -FGT (1) - falls from 0.3127 to 0.094 when applying the current benefit system, which implies a large volume of income transfer, and to a lesser extent when considering the payment of IMV, to 0.082. The RMI elimination would mean an increase in intensity to 0.086. The same conclusion is obtained when poverty is measured through the FGT (2), which also considers inequality among the poor: poverty falls significantly (from 0.286 to 0.049) due to the effect of the payment of current benefits, something more when adding the IMV (up to 0.036) and rises (up to 0.038) when eliminating the RMI.

The analysis of the separate effects generated on poverty incorporating the new IMV and removing the RMI is presented in Table 10, and compared with the effect of the current system:

**Table 10.** Effects of variation in poverty rates FGT (0), FGT (1), FGT (2) of the payment of current benefits, incorporation of IMV and elimination of RMI considered separately<sup>2</sup>.

	<b>FGT (0)</b>	<b>FGT (1)</b>	<b>FGT (2)</b>
<b>Current system effect</b>	-0,1383844	-0,2189489	-0,2370084
<b>+ IMV effect</b>	-0.0028792 (2%)	-0.0117034 (5%)	-0.0132722 (6 %)
<b>-RMI effect</b>	0.0055477 (-4%)	0.0038916 (- 2%)	0.0026225 (-1%)

The findings indicate that the current system reduces poverty in all its dimensions, including the IMV also additionally reduced while the RMI elimination increase poverty in all its dimensions. If the weight of the effects is compared with those achieved by the current system, it can be concluded that the IMV would continue to reduce the incidence of poverty by 2% of what the current total system does, the intensity by 5% and a 6% considering inequality between the poor people. The RMI elimination has an increasing incidence weight

<sup>2</sup> Note: the percentage weight of variation of the poverty index in relation to that generated with the current benefit payment policy is shown in brackets)

equivalent to the 4% incidence reduction generated by the current system, while poverty considering intensity and inequality would rise by 2% and 1% compared to the effects caused by the current system. The same analysis just described is carried out to analyze the effects on extreme poverty, with a poverty line of 25% of the median:

**Table 11.** Extreme poverty indexes FGT (0), FGT (1), FGT (2). Poverty Line: 25% of the median income. Total distribution.

	<b>FGT (0)</b>	<b>FGT (1)</b>	<b>FGT (2)</b>
<b>Original Income</b> poverty line: € 317/month	<b>0.2984457</b>	<b>0.2606727</b>	<b>0.2641829</b>
<b>Net Income (Pol1)</b> poverty line: € 563.1/month	0.0464888	0.0205665	0.0139523
<b>Pol1 effect: current benefits</b>	<i>0.2519569</i>	<i>0.2401062</i>	<i>0.2502306</i>
<b>Net Income (Pol2)</b> poverty line: € 563.23/month	0.0267556	0.0064327	0.0029429
<b>Pol2 effect: current + IMV</b>	<i>0.2716901</i>	<i>0.25424</i>	<i>0.26124</i>
<b>Net Income (Pol3)</b> poverty line: € 560/month	0.0307584	0.0073734	0.0033873
<b>Pol3 effect: current +IMV- RMI</b>	<i>0.2676873</i>	<i>0.2532993</i>	<i>0.2607956</i>

The incidence of extreme poverty is reduced very significantly by the payment of the current benefit system, going from having 29.8% of households in extreme poverty to 4.6%. The payment of IMV would reduce the percentage of poor households to 2.7%, and the RMI elimination would raise it to 3.1%. In terms of intensity, the values are reduced from 0.261 to 0.021 for the payment of the current system, and to 0.006 for the payment of the IMV, and the elimination of the RMI would generate an increase in the intensity of poverty to 0.007. If the inequality between the extreme poor is analyzed again, there is a significant decrease due to current policy, from 0.264 to 0.014, an additional decrease due to the payment of IMV to 0.0029 and an increase due to the RMI elimination 0.0034.

If we calculate the effects of the incorporation of the IMV and the elimination of the RMI separately, the results are those presented in table 12:

**Table 12.** Effects of variation in the extreme poverty indexes FGT (0), FGT (1), FGT (2) of the payment of current benefits, incorporation of IMV and elimination of RMI considered separately.

	<b>FGT (0)</b>	<b>FGT (1)</b>	<b>FGT (2)</b>
<b>Current system effect</b>	-0.2519569	-0,2401062	-0,2502306
<b>+ IMV effect</b>	-0.0197332 (8%)	-0.0141338 (6%)	-0.011009 (4%)
<b>-RMI effect</b>	0.0040028 (-2%)	0.0009407 (-0.4%)	0.00044 (-0.2%)

The application of the current system generates the greatest effects of reducing extreme poverty in all its dimensions, the inclusion of the IMV reduces the incidence of extreme poverty by 8% of what the current system achieves, and by 6% in terms of intensity and 4% if inequality among the poor is considered. The elimination of the RMI would raise extreme poverty in all its dimensions, but less than what the payment of the IMV reduces, since the percentage weights in relation to the current system are in this case 2%, 0.4% and 0%.

When analyzing the distribution of the country it can be concluded that the inclusion of the IMV generate a reduction of poverty in all its dimensions and being compared with the achievements of the current system the additionally reductions are between 2% and 5%, since the distribution of benefits involves a much smaller volume. Furthermore, these are effects - in terms of reducing intensity and inequality among the poor (not in incidence) - more powerful than those achieved by the current RMI system. Focused on extreme poverty, the results indicate that the inclusion of the IMV has a much greater power to reduce extreme poverty than the RMI in all its dimensions, of an order of between 4% and 8% of what the current system achieves.

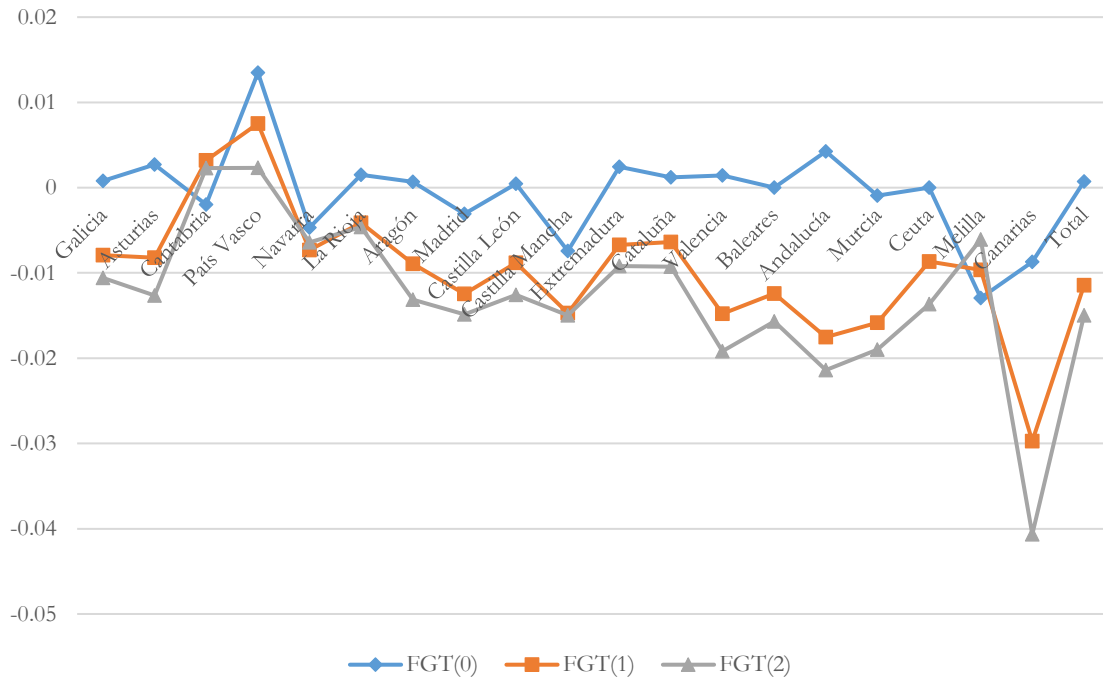
In addition to analyzing the effects on the total Spanish distribution, it is interesting to analyze the effects in the different cities and Autonomous Communities. Appendix I presents FGT values of the original income and net income resulting from the application of the three policies considered, from which one can obtain the effects on poverty reduction - so independent - from the current system, the IMV and RMI, which are presented in the following tables.

**Table 13.** Effects of variation in the poverty rates FGT (0), FGT (1), FGT (2) of the payment of current benefits, incorporation of the IMV and elimination of RMI considered separately and for each Autonomous Community.

	FGT (0)			FGT (1)			FGT (2)		
	current	Add IMV	remove RMI	current	Add IMV	remove RMI	Current	Add IMV	remove RMI
<b>Galicia</b>	-0.142	0.0000	0.0008	-0.234	-0.010	0.0025	-0.2628	-0.012	0.0019
<b>Asturias</b>	-0.179	-0.003	0.0065	-0.287	-0.017	0.0089	-0.3158	-0.020	0.0079
<b>Cantabria</b>	-0.136	-0.002	0.0006	-0.261	-0.015	0.0186	-0.2953	-0.013	0.0158
<b>Basque Country</b>	-0.199	-0.015	0.0290	-0.251	-0.017	0.0247	-0.2612	-0.013	0.0160
<b>Navarre</b>	-0.163	-0.013	0.0083	-0.204	-0.011	0.0046	-0.2096	-0.008	0.0022
<b>The Rioja</b>	-0.159	-0.003	0.0046	-0.192	-0.004	0.0007	-0.1953	-0.004	0.0003
<b>Aragon</b>	-0.171	0.0000	0.0007	-0.237	-0.010	0.0012	-0.2462	-0.014	0.0012
<b>Madrid</b>	-0.110	-0.004	0.0017	-0.164	-0.015	0.0026	-0.1712	-0.016	0.0012
<b>Castilla Leon</b>	-0.142	-0.002	0.0027	-0.246	-0.012	0.0035	-0.2610	-0.014	0.0022
<b>Castilla Mancha</b>	-0.061	-0.004	-0.0031	-0.220	-0.014	-0,0001	-0.2565	-0.015	0.0001
<b>Extremadura</b>	-0.138	0.0000	0.0025	-0.253	-0.009	0.0030	-0.2834	-0.011	0.0021
<b>Catalonia</b>	-0.141	-0.002	0.0034	-0.188	-0.010	0.0041	-0.1948	-0.011	0.0025
<b>Valencia</b>	-0.125	-0,000	0.0023	-0.235	-0.016	0.0018	-0.2636	-0.020	0.0012
<b>Balearics</b>	-0.071	0.0000	0.0000	-0.105	-0.011	-0,0005	-0.1134	-0.015	-0,0003
<b>Andalusia</b>	-0.138	-0.003	0.0082	-0.243	-0.020	0.0032	-0.2664	-0.023	0.0016
<b>Murcia</b>	-0.104	-0.001	0.0007	-0,200	-0.018	0.0022	-0.2396	-0.019	0.0009
<b>Ceuta</b>	-0.032	0.0000	0.0000	-0.139	-0.009	0.0004	-0.1426	-0.013	0.0000
<b>Melilla</b>	-0.099	-0.020	0.0071	-0.149	-0.023	0.0138	-0.1772	-0.012	0.0063
<b>Canary Islands</b>	-0.091	-0.001	-0.0076	-0.191	-0.034	0.0051	-0.2203	-0.044	0.0040
<b>Total</b>	-0.131	-0.003	0.0040	-0.215	-0.015	0.0043	-0.2333	-0.017	0.0027

The IMV introduction policy reduces poverty in all its dimensions, as shown by the negative signs of variation in the indexes. The RMI elimination does not lead to such a generalizable conclusion to all regions. In general, eliminating RMI increases poverty in all its dimensions and in all regions, but there are exceptions, such as in terms of incidence in Castilla La Mancha and the Canary Islands. The Balearic Islands and Castilla-La Mancha would reduce the intensity of poverty if they would eliminate RMI, and only the Balearic Islands show a reduction in FGT (2) due to the RMI elimination. The comparison of the effects of the two policies considered together is presented in the following graph, indicating the negative values that the reduction of poverty by introducing the IMV is stronger than the increase generated by eliminating the RMI.

**Graph 5.** Poverty reduction by introduction of IMV and simultaneous elimination of RMI.

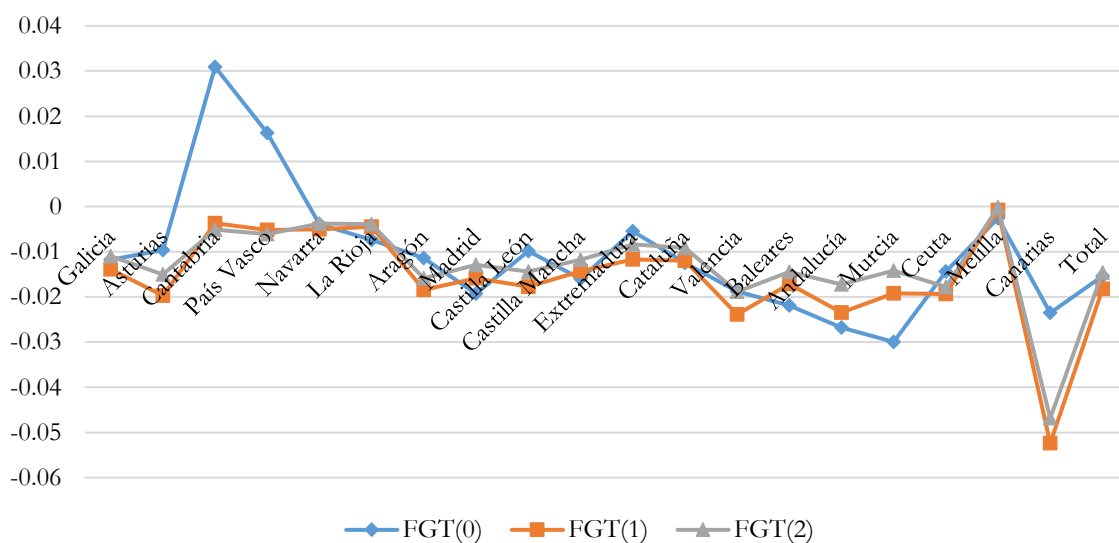


In the case of the Basque Country, the introduction of IMV together with the RMI elimination would lead to a worsening of poverty in all its dimensions, since the improvement effect generated by IMV would be nullified by the RMI elimination. In Cantabria, incidence would decrease, but the situation would be worse when considering intensity and inequality among the poor. In other Autonomous Communities, the incidence would increase, but poverty would be reduced in its other two dimensions, as is the case of Galicia, Asturias, La Rioja, Aragón, Castilla-León, Extremadura, Catalonia, Valencia and Andalusia. For the other regions, poverty decrease in all dimensions to consider IMV introduction and RMI elimination simultaneously, highlighting the intensity of the effects in the case of Canary Islands.

**Table 14.** Effects of variation in the extreme poverty indexes FGT (0), FGT (1), FGT (2) of the payment of current benefits, incorporation of IMV and elimination of RMI considered separately and for each Autonomous Community.

	FGT (0)			FGT (1)			FGT (2)		
	current	Add IMV	remove RMI	current	Add IMV	remove RMI	current	Add IMV	remove RMI
<b>Galicia</b>	-0.263	-0.014	0.0031	-0.263	-0.014	0.0002	-0.300	-0.011	0.0000
<b>Asturias</b>	-0.321	-0.030	0.0211	-0.324	-0.024	0.0048	-0.348	-0.017	0.0024
<b>Cantabria</b>	-0.301	-0.014	0.0451	-0.300	-0.008	0.0051	-0.339	-0.005	0.0006
<b>Basque Country</b>	-0.278	-0.015	0.0319	-0.259	-0.009	0.0039	-0.263	-0.006	0.0008
<b>Navarre</b>	-0.213	-0.008	0.0042	-0.203	-0.005	0.0005	-0.223	-0.003	0.0001
<b>La Rioja</b>	-0.210	-0.010	0.0029	-0.189	-0.004	0.0003	-0.186	-0.003	0.0000
<b>Aragon</b>	-0.271	-0.020	0.0087	-0.244	-0.019	0.0009	-0.241	-0.016	0.0001
<b>Madrid</b>	-0.177	-0.019	0.0000	-0.171	-0.015	-0,0001	-0.171	-0.012	0.0000
<b>Castilla Leon</b>	-0.276	-0.014	0.0049	-0.256	-0.018	0.0003	-0.267	-0.014	0.0000
<b>Castilla Mancha</b>	-0.292	-0.016	0.0000	-0.270	-0.014	-0,0001	-0.275	-0.011	0.0000
<b>Extremadura</b>	-0.299	-0.012	0.0069	-0.288	-0.012	0.0007	-0.307	-0.008	0.0001
<b>Catalonia</b>	-0.206	-0.014	0.0021	-0.193	-0.012	0.0006	-0.194	-0.009	0.0004
<b>Valencia</b>	-0.272	-0.022	0.0033	-0.266	-0.024	0.0003	-0.301	-0.018	0.0000
<b>Balearics</b>	-0.137	-0.021	0.0000	-0.115	-0.017	0.0000	-0.110	-0.014	0.0000
<b>Andalusia</b>	-0.282	-0.030	0.0041	-0.274	-0.023	0.0003	-0.276	-0.017	0.0000
<b>Murcia</b>	-0.236	-0.030	0.0000	-0.246	-0.019	0.0002	-0.309	-0.014	0.0004
<b>Ceuta</b>	-0.142	-0.014	0.0000	-0.133	-0.019	-0,0001	-0.131	-0.017	0.0000
<b>Melilla</b>	-0.161	-0.002	0.0000	-0.187	-0,000	-0,0001	-0.224	-0,000	0.0000
<b>Canary Islands</b>	-0.234	-0.034	0.0113	-0.239	-0.053	0.0012	-0.235	-0.047	0.0001
<b>Total</b>	-0.245	-0.020	0.0055	-0.236	-0.018	0.0007	-0.247	-	0.0002
							0.0148		

**Graph 6.** Extreme Poverty reduction by introduction of IMV and simultaneous elimination of RMI.



The simultaneous consideration of the introduction of IMV and elimination of RMI generates a more uniform pattern of results on extreme poverty than the one analyzed on poverty in general. With the exception of Cantabria and the Basque Country (regions in which the incidence and the other two dimensions of poverty would increase), all the other regions decrease extreme poverty in all its dimensions, highlighting once again the power of the effects in the case of Canary Islands

#### 4. Final Remarks and Conclusions

This paper has shown evidence of the results that would be generated in terms of inequality and poverty of both, the consideration in the Spanish current benefit system of the introduction of the new “Minimum Vital Income” (IMV) approved by the Spanish Central Government after the COVID-19 crisis as well as the possible alternative of replacing the regional minimum income schemes (RMI) with this new benefit.

The final goal of this paper is to provide objective elements for assessment and decision-making, without seeking to judge the appropriateness of each of the policies considered. The final assessment must be carried out by weighing the country's needs, the priorities to attend them, budgetary costs, the choice between alternatives, labour-supply consequences, administrative feasibility, and the political cost of assuming all of them. How an action contributes to improvement in terms of inequality and poverty should be just one more element into consideration for decision-making.

The introduction of IMV is a policy that would imply an increase in income for all recipients – in this case, eligible households - and in no cases a loss, since the incompatibility with the child benefit allows choosing the most favorable option. The RMI elimination, however, would mean a loss of income in any case for recipients/eligible households. For this reason, the effects of both policies are analyzed separately and jointly in terms of redistribution and poverty.

The group categorized as poor people (eligible households for IMV or/and RMI) has on average a net income of 572 €/monthly with the current benefit system, and the IMV benefit will add 192 €/monthly over the 156 €/monthly that now the RMI scheme gives to them. In aggregate terms, the cost of the IMV is estimated at € 4,178 million per year and the savings from the RMI elimination when *non-taken up* is not assumed *would* amount to € 3,395 million per year. The savings due to the incompatibility of the child benefit would be 406 million per year. The joint consideration of the inclusion of IMV and removal of RMI would generate only a final cost of 377 million annually.

The contribution to the distributive effect is very important when analyzing the current system as a whole, for whatever group is considered: 0.181069 for the non- poor group, and somewhat higher for IMV and/or RMI eligible households, 0.193936. The inclusion of IMV or removal of RMI does not generate any redistributive effect among non-recipients, so RS is null. The redistribution on the group that would receive IMV (0.131699) is of a much greater order than that generated by the RMI elimination (0.002189).

When the effects are analyzed by regions, it is verified how the payment of current benefits and the IMV reduces inequality in all the territories, but the RMI elimination improves distribution in some regions and worsens it in others.

The redistributive effect generated by the IMV is even greater than that achieved by the total benefits in force in regions such as Galicia, La Rioja, the Balearic Islands and the Canary

Islands. The regions in which maintaining the RMI system contributes to reducing inequality are Asturias, the Basque Country, Madrid, Catalonia, the Balearic Islands and Melilla.

In terms of poverty, we can affirm that the current system reduces poverty in all its dimensions, the inclusion of the IMV would reduce it additionally, while the RMI elimination would increase it in all its dimensions. If the weight of the effects is compared with those achieved by the current system, it can be concluded that the IMV would reduce the intensity of poverty by 2% of what the current system does, and the incidence and intensity by 5%. The RMI elimination has an increasing incidence weight equivalent to the 4% incidence reduction generated by the current system, while poverty considering intensity and inequality would rise by 2% and 1% compared to the effects caused by the current system.

The analysis of the inclusion of IMV and simultaneous to the RMI elimination leads to different results by regions. In the case of Basque Country, it would lead to a worsening of poverty in all its dimensions, since the improvement effect generated by the IMV would be nullified by the elimination of the RMI. In Cantabria, incidence would decrease, but the situation would be worse when considering intensity and inequality among the poor. In other Autonomous Communities the incidence would increase, but poverty would be reduced in its other two dimensions, as is the case of Galicia, Asturias, La Rioja, Aragón, Castilla-León, Extremadura, Catalonia, Valencia and Andalusia. For the rest, poverty would decrease in all its dimensions, highlighting the intensity of the effects in the Canary case.

## References

- Autoridad Independiente de Responsabilidad Fiscal (AIReF): “Los programas de Rentas Mínimas en España”. Estudio de la AIRef, Junio 2019. [https://www.airef.es/wp-content/uploads/RENTA\\_MINIMA/20190626-ESTUDIO-Rentas-minimas.pdf](https://www.airef.es/wp-content/uploads/RENTA_MINIMA/20190626-ESTUDIO-Rentas-minimas.pdf).
- Ayala, L. (2016), “El gasto público en programas de lucha contra la pobreza: tendencias, determinantes y necesidades de reforma”. *Papeles de Economía Española*. n.º 147, 2016. ISSN: 0210-9107.
- Ayala, Luis; Arranz, José María y Martínez, Lucía (2016), “El sistema de garantía de ingresos en España: tendencias, resultados y necesidades de reforma”. Comisión Europea.
- Badenes Plá, N. (2010) “¿Cómo se mide la pobreza?. Ejemplos a partir de una base de datos simulada”. *e-pública: revista electrónica sobre la enseñanza de la economía pública*, ISSN-e 1885-5628, N.º. 2, 2007, págs. 12-36 <http://e-publica.unizar.es/es/articulo/como-se-mide-la-pobreza-ejemplos-a-partir-de-una-base-de-datos-simulada>
- BOE n.º 154 1 de junio de 2020. Real Decreto-ley 20/2020, de 29 de mayo, por el que se establece el ingreso mínimo vital, <https://www.boe.es/boe/dias/2020/06/01/pdfs/BOE-A-2020-5493.pdf>
- Cantó, O., “Los Efectos Redistributivos de las Políticas Públicas de Carácter Monetario: Un Análisis de Microsimulación con EUROMOD”, en J. Embid (coord.), Primer Informe sobre la desigualdad en España 2013, Fundación Alternativas, Madrid, 2013, pp. 193-243.
- Hernández, A. F. Picos, S. Riscado (2020) “Moving towards fairer regional minimum income schemes in Spain” *JRC Working Papers on Taxation and Structural Reforms* No 04/2020.
- Llano, J.C. (2019) “El estado de la pobreza. Seguimiento del indicador de riesgo de pobreza y exclusión social en España”. 9º informe/2019. [https://www.eapn.es/estadodepobreza/ARCHIVO/documentos/Informe\\_AROPE\\_2019\\_Resumen\\_Ejecutivo.pdf](https://www.eapn.es/estadodepobreza/ARCHIVO/documentos/Informe_AROPE_2019_Resumen_Ejecutivo.pdf)
- Matsaganis M., H. Levy, M. Flevotomou (2010) “Non Take Up of Social Benefits in Greece and Spain”. *EUROMOD Working Paper No. EM7/10* .November 2010.
- Noguera, J. A. (2019), “Las rentas mínimas autonómicas en España: balance y retos de futuro”, in J. SEVILLA (dir.) “Reforzar el bienestar social: del ingreso mínimo a la renta básica”. Observatorio Social de La Caixa. Barcelona. 87–117. [https://observatoriosociallacaixa.org/documents/22890/182418/Informe+renta+basi+ca\\_es.pdf/3642780f-87f5-8141-5993-864af1851e31](https://observatoriosociallacaixa.org/documents/22890/182418/Informe+renta+basi+ca_es.pdf/3642780f-87f5-8141-5993-864af1851e31)
- ONU (2020) Informe del Relator Especial sobre la extrema pobreza y los derechos humanos acerca de su visita a España. <https://undocs.org/es/A/HRC/44/40/Add.2> (Elaborado por Philip Alston).
- UNICEF (2016) Report Card 13 de UNICEF “Equidad para los niños: una tabla clasificatoria de la desigualdad respecto al bienestar infantil en los países ricos”. [https://www.unicef.es/sites/unicef.es/files/equidad\\_para\\_los\\_ninos\\_una\\_tabla\\_clasificatoria\\_de\\_la\\_desigualdad\\_respecto\\_al\\_bienestar\\_infantil\\_en\\_los\\_paises\\_ricos.pdf](https://www.unicef.es/sites/unicef.es/files/equidad_para_los_ninos_una_tabla_clasificatoria_de_la_desigualdad_respecto_al_bienestar_infantil_en_los_paises_ricos.pdf)



## APPENDIX

**Table A.1.** Poverty rates FGT (0), FGT (1) and FGT (2), of the original income, and net income of policies 1, 2 and 3.

60% median	FGT (0)				FGT (1)				FGT (2)			
	Original income	Net income Pol1	Net income Pol2	Net income Pol3	Original income	Net income Pol1	Net income Pol2	Net income Pol3	Original income	Net income Pol1	Net income Pol2	Net income Pol3
<b>Galicia</b>	-0.1425	0.0000	0.0008	-0.2341	-0.0105	0.0025	-0.2628	-0.0125	0.0019	-0.1425	0.0000	0.0008
<b>Asturias</b>	-0.1796	-0.0038	0.0065	-0.2872	-0.0171	0.0089	-0.3158	-0.0205	0.0079	-0.1796	-0.0038	0.0065
<b>Cantabria</b>	-0.1362	-0.0026	0.0006	-0.2612	-0.0154	0.0186	-0.2953	-0.0135	0.0158	-0.1362	-0.0026	0.0006
<b>Basque Country</b>	-0.1996	-0.0155	0.0290	-0.2519	-0.0172	0.0247	-0.2612	-0.0137	0.0160	-0.1996	-0.0155	0.0290
<b>Navarre</b>	-0.1633	-0.0130	0.0083	-0.2045	-0.0119	0.0046	-0.2096	-0.0086	0.0022	-0.1633	-0.0130	0.0083
<b>The Rioja</b>	-0.1593	-0.0031	0.0046	-0.1929	-0.0048	0.0007	-0.1953	-0.0049	0.0003	-0.1593	-0.0031	0.0046
<b>Aragon</b>	-0.1718	0.0000	0.0007	-0.2371	-0.0101	0.0012	-0.2462	-0.0143	0.0012	-0.1718	0.0000	0.0007
<b>Madrid</b>	-0.1104	-0.0048	0.0017	-0.1646	-0.0150	0.0026	-0.1712	-0.0160	0.0012	-0.1104	-0.0048	0.0017
<b>Castilla Leon</b>	-0.1429	-0.0023	0.0027	-0.2460	-0.0124	0.0035	-0.2610	-0.0148	0.0022	-0.1429	-0.0023	0.0027
<b>Castilla Mancha</b>	-0.0612	-0.0044	-0.0031	-0.2205	-0.0146	-0.0001	-0.2565	-0.0151	0.0001	-0.0612	-0.0044	-0.0031
<b>Extremadura</b>	-0.1388	0.0000	0.0025	-0.2536	-0.0097	0.0030	-0.2834	-0.0112	0.0021	-0.1388	0.0000	0.0025
<b>Catalonia</b>	-0.1417	-0.0022	0.0034	-0.1880	-0.0105	0.0041	-0.1948	-0.0118	0.0025	-0.1417	-0.0022	0.0034
<b>Valencia</b>	-0.1252	-0.0009	0.0023	-0.2355	-0.0166	0.0018	-0.2636	-0.0204	0.0012	-0.1252	-0.0009	0.0023
<b>Balearics</b>	-0.0716	0.0000	0.0000	-0.1059	-0.0119	-0.0005	-0.1134	-0.0154	-0.0003	-0.0716	0.0000	0.0000
<b>Andalusia</b>	-0.1384	-0.0039	0.0082	-0.2433	-0.0207	0.0032	-0.2664	-0.0230	0.0016	-0.1384	-0.0039	0.0082
<b>Murcia</b>	-0.1041	-0.0016	0.0007	-0.2009	-0.0180	0.0022	-0.2396	-0.0199	0.0009	-0.1041	-0.0016	0.0007
<b>Ceuta</b>	-0.0328	0.0000	0.0000	-0.1392	-0.0091	0.0004	-0.1426	-0.0136	0.0000	-0.0328	0.0000	0.0000
<b>Melilla</b>	-0.0999	-0.0201	0.0071	-0.1496	-0.0234	0.0138	-0.1772	-0.0124	0.0063	-0.0999	-0.0201	0.0071
<b>Canary Islands</b>	-0.0915	-0.0011	-0.0076	-0.1919	-0.0348	0.0051	-0.2203	-0.0446	0.0040	-0.0915	-0.0011	-0.0076
<b>Total</b>	-0.1314	-0.0033	0.0040	-0.2150	-0.0157	0.0043	-0.2333	-0.0177	0.0027	-0.1314	-0.0033	0.0040

**Table A.2.** Extreme poverty indexes FGT (0), FGT (1) and FGT (2), of the original income, and net income of policies 1, 2 and 3.

25% median	FGT (0)				FGT (1)				FGT (2)			
	Original income	Net income Pol1	Net income Pol2	Net income Pol3	Original income	Net income Pol1	Net income Pol2	Net income Pol3	Original income	Net income Pol1	Net income Pol2	Net income Pol3
<b>Galicia</b>	-0.2637	-0.0149	0.0031	-0.2637	-0.0141	0.0002	-0.3009	-0.0110	0.0000	-0.2637	-0.0149	0.0031
<b>Asturias</b>	-0.3215	-0.0307	0.0211	-0.3246	-0.0245	0.0048	-0.3483	-0.0174	0.0024	-0.3215	-0.0307	0.0211
<b>Cantabria</b>	-0.3011	-0.0142	0.0451	-0.3008	-0.0088	0.0051	-0.3395	-0.0057	0.0006	-0.3011	-0.0142	0.0451
<b>Basque Country</b>	-0.2782	-0.0156	0.0319	-0.2591	-0.0090	0.0039	-0.2638	-0.0069	0.0008	-0.2782	-0.0156	0.0319
<b>Navarre</b>	-0.2131	-0.0080	0.0042	-0.2034	-0.0055	0.0005	-0.2239	-0.0038	0.0001	-0.2131	-0.0080	0.0042
<b>The Rioja</b>	-0.2105	-0.0103	0.0029	-0.1891	-0.0048	0.0003	-0.1867	-0.0039	0.0000	-0.2105	-0.0103	0.0029
<b>Aragon</b>	-0.2718	-0.0201	0.0087	-0.2442	-0.0193	0.0009	-0.2410	-0.0160	0.0001	-0.2718	-0.0201	0.0087
<b>Madrid</b>	-0.1773	-0.0193	0.0000	-0.1717	-0.0157	-0.0001	-0.1717	-0.0129	0.0000	-0.1773	-0.0193	0.0000
<b>Castilla Leon</b>	-0.2761	-0.0147	0.0049	-0.2560	-0.0180	0.0003	-0.2679	-0.0144	0.0000	-0.2761	-0.0147	0.0049
<b>Castilla Mancha</b>	-0.2922	-0.0160	0.0000	-0.2704	-0.0142	-0.0001	-0.2753	-0.0117	0.0000	-0.2922	-0.0160	0.0000
<b>Extremadura</b>	-0.2994	-0.0124	0.0069	-0.2886	-0.0124	0.0007	-0.3071	-0.0085	0.0001	-0.2994	-0.0124	0.0069
<b>Catalonia</b>	-0.2069	-0.0146	0.0021	-0.1937	-0.0126	0.0006	-0.1940	-0.0095	0.0004	-0.2069	-0.0146	0.0021
<b>Valencia</b>	-0.2729	-0.0220	0.0033	-0.2669	-0.0242	0.0003	-0.3017	-0.0189	0.0000	-0.2729	-0.0220	0.0033
<b>Balearics</b>	-0.1378	-0.0219	0.0000	-0.1156	-0.0171	0.0000	-0.1109	-0.0144	0.0000	-0.1378	-0.0219	0.0000
<b>Andalusia</b>	-0.2823	-0.0309	0.0041	-0.2741	-0.0238	0.0003	-0.2762	-0.0173	0.0000	-0.2823	-0.0309	0.0041
<b>Murcia</b>	-0.2361	-0.0300	0.0000	-0.2463	-0.0194	0.0002	-0.3098	-0.0145	0.0004	-0.2361	-0.0300	0.0000
<b>Ceuta</b>	-0.1425	-0.0144	0.0000	-0.1330	-0.0192	-0.0001	-0.1310	-0.0178	0.0000	-0.1425	-0.0144	0.0000
<b>Melilla</b>	-0.1617	-0.0026	0.0000	-0.1872	-0.0007	-0.0001	-0.2240	-0.0002	0.0000	-0.1617	-0.0026	0.0000
<b>Canary Islands</b>	-0.2347	-0.0348	0.0113	-0.2396	-0.0536	0.0012	-0.2357	-0.0470	0.0001	-0.2347	-0.0348	0.0113
<b>Total</b>	-0.2457	-0.0209	0.0055	-0.2365	-0.0189	0.0007	-0.2473	-0.0148	0.0002	-0.2457	-0.0209	0.0055