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Rules in Times of Crisis**

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MINIMUM INCOME IN PORTUGAL: CHANGING THE RULES IN TIMES OF CRISIS

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Abstract

The aim of this paper is to estimate the impact on the distribution of household income and poverty of the 2010 reform of the law that establish the non-contributory social benefits entitlement conditions in Portugal, with particular incidence in the Social Integration Income (RSI).

Carried out in a period of serious deepening economic and social crisis, the changes in the resources condition appear fundamentally as a way of limiting and reducing the resources earmarked for social policies usage, precisely at the time when increased social insecurity should lead to a significant increase in the importance of such social policies.

Using micro-data from the European Union Statistics on Income and Living Conditions (EU-SILC), we simulate the impact of the reform and estimate its effects on the income distribution and on different dimensions of monetary poverty. The change in the size of government expenditure required to finance these programs will also be estimated.

Keywords: Social Policy, Income Distribution, Inequality, Poverty Alleviation, Portugal

JEL Classification: D63, I32, I38

MINIMUM INCOME IN PORTUGAL: CHANGING THE RULES IN TIMES OF CRISIS^{*}

The need for a profound change in the non-contributory social benefits entitlement conditions in Portugal has been identified and proposals have been put forward by researchers and analysts of the Portuguese social policy for some time. The disparity in the definition of the conditions of access, based on alternative definitions of family unit, scales of equivalence, and income used in the calculation of the resources condition, has reduced the efficacy and efficiency of the social policies in their aim to protect the most vulnerable parts of the population against poverty and social exclusion. Overall, the proposals identified the need to align the different options to be considered within the different social policies with those that underlie the measurement of the various dimensions of poverty in the EU.

The new Portuguese means-tested condition.

Although the specific characteristics of each social benefit (minimum income, child benefit, etc.) were recognised, it was assumed that the convergence between the definition of the conditions of access to each of them and the way the indicators of poverty are estimated would lead to gains in efficacy and efficiency of the social policies.

The law that redefines the non-contributory benefits entitlement conditions was approved in 2010 (DL 70/2010) and follows some of these directions. However, its main objective is clearly to restrain the growth of public expenditure restricting the scope of intervention of the social policies.

Carried out in a period of serious deepening economic and social crisis, the changes in the resources condition appear fundamentally as a way of limiting and reducing the resources earmarked for social policies usage, precisely at the time when increased social insecurity should lead to a significant increase in the importance of such social policies.

The main reforms introduced in the resources condition are:

- Increase in the categories of income considered in the evaluation of the resources of the beneficiaries. The relevant income categories now take into account some benefits in kind like housing benefits, financial and property income ;

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- Alteration of the concept of 'family unit' used in the aggregation of resources of the different individuals that apply together to the benefits;
- Change in the equivalence scales, imposing the OCDE scale as the reference scale;
- Abolition of certain supplementary benefits associated with the main benefits;
- Re-enforcement of compliance and anti-fraud measures.

The first of these measures - higher comprehensiveness of resources to be considered – is clearly a positive move, as it allows a more effective evaluation of the resources of the household. Its impact can be judged by the fact that non-monetary income represents more than 10% of the total household income in Portugal.

The second measure – change in the definition of the family reference unit – allows for a better approximation to the concept of household used in the measurement of poverty, and therefore follows the proposals for improvements in the resources condition. However, its implementation together with the alterations in the equivalence scales and the unchanged threshold values may lead to an artificial increase in the resources (equivalent income) of the most destitute households and to the reduction in, or even their exclusion from, benefits.

The main alteration is, however, the change of the equivalence scales. An obvious question is why the original OECD equivalence scale was adopted. If the objective was to harmonize the equivalence scale used in the implementation of social policy with the one used in its evaluation the modified OECD scale should have been chosen. The answer is straightforward: the alteration was made to keep unchanged the nominal value of the main benefits.

If the aim of the alteration in the equivalence scales used was to increase the efficacy and efficiency of the social policies, it would have also involved a change in the threshold values so that it would be budget neutral. The move from a more generous system to a tighter scale should require an increase in the threshold values guaranteeing that, in general, households participating in the programme would not suffer reductions in their income or be excluded from it due to the simple alteration in the scale.

As it is, the implemented alteration reveals that its fundamental aim was to cut costs, with actual loss in the efficacy of the measures and negligible improvements in their efficiency.

The fourth implemented measure – abolition of some supplementary benefits – again reveals the objective of reducing costs, without any visible efficiency increase.

Finally, the re-enforcement of the compliance and control measures of the means-tested conditions seems clearly adequate.

The overall evaluation of the reform in the non-contributory social benefits entitlement conditions implemented in 2010 can be summarised as: an alteration that was needed, implemented at the worst possible moment due to the economic and financial crisis, and lead mainly by the need to cutting costs. The potential efficacy and efficiency gains that could be achieved were clearly eliminated by the intension to keep unchanged the benchmarked values, leading instead to a reduction in the efficacy of most benefits with minimum gains in terms of their efficiency.

The changes in the means-tested condition and the RSI.

The reform of the non-contributory benefits entitlement affects particularly the “Social Integration Income Programme” (RSI). This programme, introduced in 1997, is a main component of the Government’s anti-poverty social policy in Portugal. Its aim is to reduce extreme poverty through the reduction of poverty intensity of the most vulnerable sectors of the population. It consists of a monetary allowance and a social integration programme.

Using the household micro-data from the European Union Statistics on Income and Living Conditions (EU-SILC), we simulate the impact of the changes in the means tested conditions in the implementation of the RSI, and in its effectiveness and efficiency in reducing poverty and social exclusion.

The simulation uses data from the 2009 wave of EU-SILC where the income reference period is the previous calendar year (*i.e.*, 2008). We simulated the changes in the implementation of the RSI that will occur in 2008 as if the law was changed in that year.

When simulating the RSI, we attempted to reproduce the existing legal framework (before and after the reform) as far as the available information would allow.

The main objective of this simulation is to identify the families and the individuals that are eligible to receive the RSI benefits both before and after the change in the means-tested conditions, as well as the calculation of the amounts to which they are entitled. The simulation will also allow for the comparative analysis of the income distribution before and after the implementation of the two RSI systems, and the calculation of the financial cost of each of them.

The transformation of the 2009 Portuguese EU-SILC into a usable database for simulation requires a significant amount of transformations such as the imputation of missing values, and the splitting and allocation of minimum values to some benefits. The final database only differs from the original one

by less than 1% of the total equivalent income. However, without these transformations it would not be possible to perform the simulations required to evaluate the changes in the conditions of the implementation of the RSI.

A limitation of this simulation is that it assumes the inexistence of 'non-take-up'. In reality, not all the legally eligible individuals actually apply for the benefits to which they are entitled. This problem, designated as "incomplete take-up", is usually explained by the unawareness of the potential beneficiaries about their entitlements, coupled with the complexity of the application procedure, and the social stigma often associated with the participation in this type of programme. Furthermore, the simulation is constructed under the assumption that there is no behavioural change in either households or individuals as a consequence of their participation in the RSI or as a consequence of the changes in the rules.

The main changes introduced by the reforms in the non-contributory social benefits entitlement conditions in the RSI are:

- Changes in the definition of the family unit considered when computing the eligibility and/or the amount of the benefits. Before this reform the unit of analysis was the family. However, if a large family became eligible to the benefit, then the family could be split into smaller units (for instance, one or more grandparents could be "separated" from the large family and be dealt with as a "new" family). Now, the family unit is a wider concept, close to the household concept. It now includes every relative that is living and sharing resources with the recipient of the benefit;
- Changes in the definition of the equivalence scale. The previous RSI equivalence scale assigned the value of 1.0 to each adult, for up to two adults, 0.7 to each adult, from the third adult onwards and 0.5 to each of the first two children and 0.6 to the third or more children. The new scale is the OECD scale which gives the weight of 1 to the first adult, 0.7 to each subsequent adult and 0.5 to each child;
- Some supplementary benefits (for example, the supplement for housing costs) are abolished;
- The definition of the reference threshold remains unchanged (the value of the RSI benefit was 187.91 euros/month per equivalent adult in 2008).

The change in the equivalence scale reduces the threshold value for a large number of families. For example, a household consisting of a couple and three children was eligible to the programme if their annual income was below €8118. This value falls to €7216 (-11.1%) after the reform.

The effect of the modification of the equivalence scale can be increased by the simultaneous alteration in the definition of the family unit. Continuing with the previous example, if a relative eligible to the programme as a separate RSI unit lived with the family, the new definition of the family unit means that the value of the RSI paid to the whole household falls by more than 15%.

Simulated Impact of the means-tested conditions of the RSI: Main Results.

In Table 1 we present a summary of the overall results of the implementation of the RSI before (RSI 1) and after (RSI 2) the reform of the means-tested conditions.

Table 1 - Simulated Impact of the means-tested conditions of the RSI - Main Results

2008	RSI (1)	(%)	RSI (2)	(%)	Var. (%)
Individual Participation Rate	502364	4.7	411852	3.9	- 18.0
Household Participation Rate	164980	4.2	122939	3.1	- 25.5
RSI (1) Families Participation Rate	188327	3.4	159700	2.9	- 15.2
Total Expenditure (million €/year)	521.3		286.5		- 45.0
Mean Transfer per Person (€/month)	86.5		58.0		- 32.9
Mean Transfer per RSI(1) Family (€/month)	230.7		-		
Mean Transfer per Household (€/month)	263.3		194.2		- 26.2

Source: 2009 Portuguese EU-SILC. Author's calculations using microdata.

The above values should be considered as the potential effects of the changes in the rules of the RSI programme rather than the real ones because of the assumptions required in the simulation, particularly that of full take-up, as discussed above. These results also assume that nothing has changed in the families incomes. When the law was introduced in 2010 the decrease in the disposable incomes of a large number of families could generate an opposite effect with new families getting access to the programme. Nevertheless, the results in Table 1 clearly reveal the type of changes and the kind of impact we should expected from the reform.

Comparing the results of the simulation for RSI(1) (before the reform) and RSI(2) (after) in Table 1, there is an 18% reduction in the number of beneficiaries and the household participation rate falls by more than a quarter. The strong impact on the level of total expenditure of the programme reveals both the effects of the modifications of the definitions of the family unit/equivalence scale and the abolition of some supplementary benefits that contribute to around 11% of the RSI transfers before the reform.

The most immediate effects of the changes in the entitlement conditions on the income distribution can be seen in Table 2. This table shows the increase in the mean income per equivalent adult due to the RSI by decile.

**Table 2 - Simulated Impact of the means-tested conditions of the RSI
Equivalent Income by decile (euros/year)**

2008	Before RSI	After RSI (1)	Var. (%)	After RSI (2)	Var. (%)
1 st decile	2777	3593	29.4	3232	16.4
2 nd decile	4759	4778	0.4	4769	0.2
3 rd decile	5922	5922	-	5922	-
4 th decile	6971	6971	-	6971	-
5 th decile	7959	7959	-	7959	-
6 th decile	9031	9031	-	9031	-
7 th decile	10442	10442	-	10442	-
8 th decile	12352	12352	-	12352	-
9 th decile	15950	15950	-	15950	-
10 th decile	29710	29710	-	29710	-
Total	10590	10673	0.8	10636	0.4

Source: 2009 Portuguese EU-SILC. Author's calculations using microdata.

Before the implementation of the reforms the RSI has an aggregate impact of 0.8% in the equivalent income of the Portuguese households. However, this impact is very significant for the individuals of the first decile whose income increases by almost 30%. After the change of the means-tested conditions this impact is substantially reduced.

Using the pre-reform family units we can analyze the family characteristics of the main beneficiaries of the RSI and examine what type of families are more affected by the changes in the law. Table 3 presents the family participation rate before and after the reforms thus helping to clarify the differences in targeting of the two systems.

**Table 3 - Simulated Impact of the means-tested conditions of the RSI
Participation Rate and Distribution of Beneficiaries by Family Type**

2008	Participation Rate		Distribution of Beneficiaries	
	RSI (1)	RSI (2)	RSI (1)	RSI (2)
One person family	1.9	1.9	25.7	30.4
Two adults younger than 65 years	3.4	2.8	16.3	15.8
Two adults, at least one aged 65 years and over	0.5	0.0	1.7	0.1
Other households without dependent children	0.0	0.0	0.0	0.0
Single parent household with dependent children	12.6	11.5	15.8	17.1
Two adults with one dependent child	3.6	2.5	13.7	11.1
Two adults with two dependent children	6.1	4.8	14.7	13.7
Two adults with three or more dependent children	27.0	22.1	10.0	9.6
Other Households with dependent children	13.2	11.4	1.2	1.2
Total	3.4	2.9	100.0	100.0

Source: 2009 Portuguese EU-SILC. Author's calculations using microdata.

The composition of the beneficiaries by family type does not seem to change in a significant way. However, it is interesting to observe that the individuals living with no other adult, i.e., either living alone or as single parents, see their relative weight increase, whereas two adults living together (with or without children) see their relative weight decrease. It is a direct result of the new scale which 'penalises' the 2nd adult in the household.

**Table 4 - Simulated Impact of the means-tested conditions of the RSI
Individual Participation Rate and Distribution of Beneficiaries by Age**

2008	Participation Rate		Distribution of Beneficiaries	
	RSI (1)	RSI (2)	RSI (1)	RSI (2)
Less than 16 years	9.7	8.2	31.7	32.5
Between 16 and 24 years	6.3	5.4	13.8	14.4
Between 25 and 44 years	4.9	4.1	31.7	31.9
Between 45 and 64 years	3.9	2.8	21.3	18.8
65 years and over	0.4	0.5	1.5	2.3
Total	4.7	3.9	100.0	100.0

Source: 2009 Portuguese EU-SILC. Author's calculations using microdata.

Table 4 presents the individual participation rate and the distribution of the beneficiaries of the RSI by age. The conclusion that emerges from it is very similar to those the previous tables: the reduction in the number of families and individuals participating in the RSI programme does not induce a very significant alteration in the pattern of the beneficiaries.

Simulated Impact of the means-tested conditions of the RSI: Effectiveness.

The simulation of the RSI makes it possible to analyse the effectiveness of the programme before and after the reforms in the reduction of inequality and poverty. In Table 5 the changes in several inequality indices due to the implementation of the two systems of the RSI are reported.

**Table 5 - Simulated Impact of the means-tested conditions of the RSI
Inequality Measures**

2008	Before RSI	After RSI (1)	Var. (%)	After RSI (2)	Var. (%)
Gini Index	0.353	0.343	- 2.8	0.347	- 1.7
Atkinson Index (e=0.5)	0.106	0.098	- 7.5	0.101	- 4.7
Atkinson Index (e=1.0)	0.195	0.176	- 9.7	0.182	- 6.7
Atkinson Index (e=2.0)	0.366	0.295	- 19.4	0.310	- 15.3
S80/S20	6.1	5.5	- 9.8	5.7	- 6.6
S90/S10	10.7	8.5	- 20.6	9.2	- 14.0

Source: 2009 Portuguese EU-SILC. Author's calculations using microdata.

The equalizing effect of the RSI is clearly reduced after the changing in the entitlement conditions: all indices show considerably higher reductions in inequality after the implementation of the 'original' RSI(1) than after the reformed RSI(2).

The impact of the two systems in reducing poverty can be further judged from Table 6 below. Defining the poverty line as 60% of the median pre-RSI income per equivalent adult we can estimate the family of poverty indices suggested by Foster, J., J. Greer and E. Thorbecke. (1984).

The effectiveness of the RSI in reducing the poverty rate is clearly smaller: a reduction in poverty incidence of only 0.3 points before the reform (from 17.8% to 17.5%) and 0.1 points after the change in the law (from 17.8% to 17.5%). This relatively modest fall should not be surprising considering that the RSI threshold corresponds to only 44% of the value of the poverty line. The RSI programme actually should have no impact on the poverty rate, as no beneficiary should cease to be poor simply by receiving RSI benefits.

**Table 6 - Simulated Impact of the means-tested conditions of the RSI
Poverty Measures**

2008	Before RSI	After RSI (1)	Var. (%)	After RSI (2)	Var. (%)
Incidence (F0)	17.8	17.5	- 1.7	17.7	- 0.6
Intensity (F1) x 100	5.2	3.7	- 28.8	4.3	- 17.3
Severity (F2) x 100	2.5	1.1	- 56.0	1.5	- 40.0

Source: 2009 Portuguese EU-SILC. Author's calculations using microdata.

However, a more significant result of the implementation of the RSI is in the decrease in both the intensity and the severity of poverty. Before the alterations of the resources conditions, “After RSI(1)”, the reduction in the intensity (Foster’s F1 measure) and in the severity of poverty (F2) is equal to 29% and 56%, respectively. This is to us the most successful achievement of the RSI programme: a significant improvement in the living conditions of the least privileged households and individuals living in Portugal.

The simulation of the programme after the changes in its means-tested conditions, “After RSI(2)”, clearly reveals a weakness in its effectiveness in reducing poverty intensity and severity: the reduction in the intensity (17%) and severity (40%) of poverty, though important, is much less so.

Simulated Impact of the means-tested conditions of the RSI: Efficiency.

The analysis of the effectiveness of the RSI programme presented above must be complemented by studying the level of efficiency in the programme application, *i.e.*, by an assessment of what proportion of the RSI benefits effectively contributes to the reduction of poverty.

The concept of poverty reduction efficiency associated with social transfers was developed by Beckerman (1979) who suggests the use of the following two measures:

- i. Vertical Efficiency of the Programme (VEP) – the proportion of the total transfers received by households that were poor before the programme;
- ii. Poverty Reduction Efficiency (PRE) – the proportion of the total transfers that effectively contributes to a reduction in the initial poverty gap.

Beckerman recognises that the use of efficiency measures does not eliminate the need for measures of the effectiveness of the poverty reduction programme and that, indeed, they are complimentary. It should be noted that a high level of efficiency of the programme does not necessarily mean that poverty is greatly reduced, nor does a low level of efficiency imply that there has been an insignificant reduction in poverty. Efficiency measures only explain why, given the amount of money spent, the programme has had a particular impact.

Since the above two measures, VEP and PRE, cannot evaluate the effectiveness of a benefit in reducing poverty, some authors suggest a third indicator called “Poverty Gap Efficiency” (PGE). This indicator is a measure of horizontal efficiency, calculating the proportion of the aggregate poverty gap reduced by the transfers.

Table 7 shows the main indicators suggested by Beckerman. The modifications of the benefits entitlement conditions of the RSI introduced by the Law 70/2010 allow some small gains in terms of

efficiency: the Vertical Efficiency of the Programme increases 0.3% and the Poverty Reduction Efficiency has an increase of 2.5%. However, we can question if those gains are enough to compensate the loss of effectiveness in terms of poverty reduction and the decrease in the Poverty Gap Efficiency by 40%.

Table 7 - Simulated Impact of the means-tested conditions of the RSI Efficiency

10 ⁶ euros	RSI (1)	RSI (2)	Var. (%)
Total Amount of Transfers	521.3	286.5	- 45.0
Total Amount of Transfers to Poor Population	518.3	285.7	- 44.9
Poverty Gap before the Programme	1842.4		
Poverty Gap after the Programme	1339.1	1558.9	+ 16.4
Reduction of the Poverty Gap	503.3	283.5	- 43.7
VEP – Vertical Efficiency of the Programme	99.4	99.7	+ 0.3
PRE – Poverty Reduction Efficiency	96.6	99.0	+ 2.5
PGE - Poverty Gap Efficiency	27.3	15.4	- 40.0

Source: 2009 Portuguese EU-SILC. Author's calculations using microdata.

Conclusions.

The simulation of the changes introduced in the RSI fully corroborates the appreciation we made at the beginning of this paper about the main characteristics of the reform of the means-test conditions implemented in 2010. The aim of create a “harmonized framework for non-contributory benefits” was clearly subordinated to the objective of restraining the growth of public expenditure. The gains in efficiency that result from the changes in the entitlement conditions can hardly justify a strong reduction in its effectiveness in reducing poverty intensity and severity.

The current economic and financial crisis imposes, undoubtedly, the need of a more rigorous implementation of the social policies, but it should also imply the strengthening of both their efficiency and effectiveness.

REFERENCES

- Beckerman, W. (1979), "The Impact of Income Maintenance Programmes on Poverty in Four Developed Countries", International Labour Office, Geneva.
- Cowell, F. (1999), "Measurement of Inequality", in Atkinson, A.B. e Bourguignon, F. (eds.), Handbook of Income Distribution. North Holland, Amsterdam, 87-166.
- Cowell, F. (1994), Measuring Inequality, LSE Handbooks in Economics, London (2nd ed.).
- Figari, F., H. Levi and H. Sutherland (2007), "Using The EU-SILC For Policy Simulation: Prospects, some Limitations and Suggestions", EUROMOD Working Paper EM1/07, ISER, University of Essex, Colchester.
- Foster, J., J. Greer e E. Thorbecke. (1984), "A Class of Decomposable Poverty Measures", *Econometrica*; 52(3), 761-66.
- Gouveia, M. and C.F. Rodrigues (2002), "The Impact of a Guaranteed Minimum Income Program in Portugal", *Public Finance and Management*, 2(2).
- Harris, G. (1994) "The Take-up of Income Related Benefits: Inaccuracies in the Estimation of Take-up Rates.", ASD-Department of Social Security, UK.
- Rodrigues, C.F. (2004), "The Redistributive Impact of the Guaranteed Minimum Income Programme in Portugal", Instituto Superior de Economia e Gestão (ISEG), Economics Department, Working Paper 09/2004