Implementing a Negative Income Tax. Net Cost, Poverty and Inequality Effects*

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Abstract

The main aim of this paper is to propose a financially viable alternative to the current Spanish system of social protection: A Negative Income Tax (NIT) unifying in a single mechanism the system of public benefits and income tax. We analyse the main characteristics of the NIT and simulate several NIT proposals for Spain, using the Living Conditions Survey. These proposals are distinct in that they do not suppose an additional cost in the tax-benefit system. The results of our simulations indicate a radical improvement in the indicators of poverty and inequality, especially extreme poverty, and also a redistribution of income from the elderly to families with children.

Keywords: Basic Income, Negative Income Tax, Poverty, Inequality, Microsimulation.

JEL Classification: C8, H24, I38.

1. Introduction

One of the most disappointing results of social policy is that strong economic growth in recent decades has not led to a reduction in poverty in European countries (Cantó, 2018; European Commission, 2018). This situation has been aggravated by the economic crisis, which has led countries such as Spain to poverty rates above 22%. According to the EUROSTAT data, in 2015 Spanish social transfers managed to reduce the poverty rate in 8 percentage points (from 30.1% to 22.1%), less than the UE average 8.8 points (from 26.1% to 17.3%).

Among the proposed measures to fight poverty is the creation of a Basic Income (BI). A BI would consist of a universal and unconditional benefit that would replace current non-contributory benefits of the welfare state[1]. The BI could be implemented through one of two

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mechanisms: through a periodic, monetary and personal transfer; or using the Tax Administration with a Negative Income Tax (hereinafter, NIT).

Although these two alternatives are theoretically equivalent, NIT manages to combine the tax system and the public benefit system into a single mechanism, which has three main advantages. Firstly, it would avoid revenue and expenditure inconsistencies (i.e., an exempted minimum pension scheme producing reorder effects), as they would be adjusted by NIT. Secondly, the progressivity of the whole tax-benefit system would be ensured. Finally, it would simplify the management of the system, favouring its transparency and support among citizens (Sanzo and Pinilla, 2004).

A progressive income tax, such as the current Spanish Personal Income Tax (PIT), has a significant redistributive effect, far above social contributions and indirect taxes (Onrubia and Rodado, 2014) and even greater than many public benefits (Cantó, 2013). However, this redistribution effect does not take into account people who do not pay any tax because their income is too low. The NIT would also consider these citizens, not only when they do not pay taxes but also when they would receive a public benefit in the form of BI.

In the second section of this paper, we detail the basic characteristics of NIT, relating them to the historical origin of these proposals as well as analysing their basic elements. In the third section, we simulate different alternatives of our NIT proposal, which will naturally take as a base scenario the previous estimate of the current Spanish PIT. For this, we use the micro-data of the Survey of Living Conditions. In section four, we collect the main results of NIT, and in the fifth we analyse poverty and inequality effects. Finally, the sixth section presents the main conclusions.

2. Negative Income Tax Characteristics

Tax and social protection systems have traditionally been studied in isolation. However, there is an increasing tendency to move towards integrating them. This integration has clear advantages, since it makes the system more transparent and coherent, while removing the need to establish means tested mechanisms associated with each benefit (Mirrlees, 2011).

In this sense, within the tax system, and especially in the area of income tax, tax expenditures (allowances, deductions from the tax base, tax credits, etc.) introduce unnecessary complexity and distortions and, above all, undermine the redistributive capacity and tax progression. In other words, individuals and families with lower incomes are often less favoured by several tax credits, as the tax payable works as a threshold. It is in this environment that the possibility of introducing new instruments would be considered as integrating, within the income tax, the two aspects previously mentioned: the question of taxation and of social protection. From this point of view, a number of instruments have been proposed such as refundable tax credits, which allow the tax payable to become negative, changing it into

a net benefit (Oliver and Spadarao, 2017; Ayala and Paniagua, 2018). From this point of view, the NIT could be considered as a generalization of a refundable tax credit.

The origin of the NIT is often associated with the American economist Milton Friedman, although previous proposals exist that pose a very similar tax-subsidy system. The most relevant is the proposal of Rhys-Williams (1943). According to this British politician, the State should provide a minimum income (called 'National Dividend') to every working person or every person willing to work. This plan would be financed through a proportional tax on income, where national dividend would be subtracted from the taxable income. That is, the national dividend received for every citizen would not be part of taxable income[2].

However, the most famous proposal is that of Friedman, who proposes a NIT with a single 50% tax rate (Friedman, 1962; Friedman and Friedman, 1980). According to Friedman, a NIT would have several advantages over traditional public subsidy programs. Firstly, it would be specifically directed at solving the problem of poverty by providing cash assistance. Secondly, the cost of this measure would be explicit for society. Thirdly, the disincentive effect on labour supply would be lower than with other types of aid. Finally, Friedman stresses that joint management of the tax-subsidy program would reduce administration costs.

Friedman's proposal opened an important debate around the idea of a NIT; a debate which reached a peak in the 60s and 70s of the last century[3], with several experiments being carried out in the USA. Even President Nixon made a NIT proposal for the whole country, which, ultimately, was not implemented. The academic debate on a NIT declined in subsequent decades, but reappeared when its use was considered as a possible mechanism for a BI, both in Spain (Martínez Álvarez, 2002; Pinilla, 2002; Sanzo and Pinilla, 2004) and in other countries (Moffitt , 2003; Hamilton, 2010; Sommer, 2016).

From the perspective of BI, other reasons have been used to support a NIT. Firstly, it would be a useful mechanism to increase individual choice, since each individual could choose his or her own lifestyle once their basic needs were assured by BI (Van Parijs, 1995). Secondly, in line with the principles of redistributive justice (Rawls, 1971), NIT establishes a right to a decent living standard for all citizens, regardless of their personal circumstances. In addition, important technical advantages over other aid programs can be highlighted (Salvador, 2016): the elimination of the poverty trap, as well as differences in coverage and treatment of current programs; a reduction in fiscal spending by removing deductions, tax credits and tax rebates thus providing an additional source of funding for this measure; greater flexibility of the labour market, since workers could more easily adapt to fluctuations in work availability knowing they have subsistence conditions.

Obviously, the NIT has also received criticism. The first one would be the high cost of such a measure. While it is true that the first proposals of a NIT would have led to prohibitive costs, there are now alternatives that reduce costs significantly. The second criticism is that it discriminates against those who work. This criticism is hardly defensible, since all citizens

would receive the same amount of subsidy regardless of their situation in the labour market. Thirdly, its negative impact on labour supply has been criticized. However, it should be clarified that this problem is common in all income maintenance programs, and the empirical evidence is inconclusive (Sommer, 2016). The last criticism refers to the pull effect that such a measure could have. This problem can be solved with the regulation of the measure, establishing certain requirements of residence.

Figure 1 shows the basic characteristics of a NIT, as defined by Friedman, as well as its relationship with Income Tax (IT) and BI. Actually, a NIT would be formed by the combination of a tax with a subsidy for all citizens. The IT would tax all taxpayers at a single rate from their first euro of income, as it appears on the dotted line. The universal grant (BI) would be the same amount for all citizens regardless of their income. These two measures (IT and BI) can operate independently, but can also be instrumented together through an NIT. For this, we simply have to obtain the resulting balance of IT payable for each citizen, minus the BI they are entitled to receive. For some people this balance will be positive, leading to a payment of tax to the Tax Administration, while others will get a negative balance, therefore receiving a subsidy.
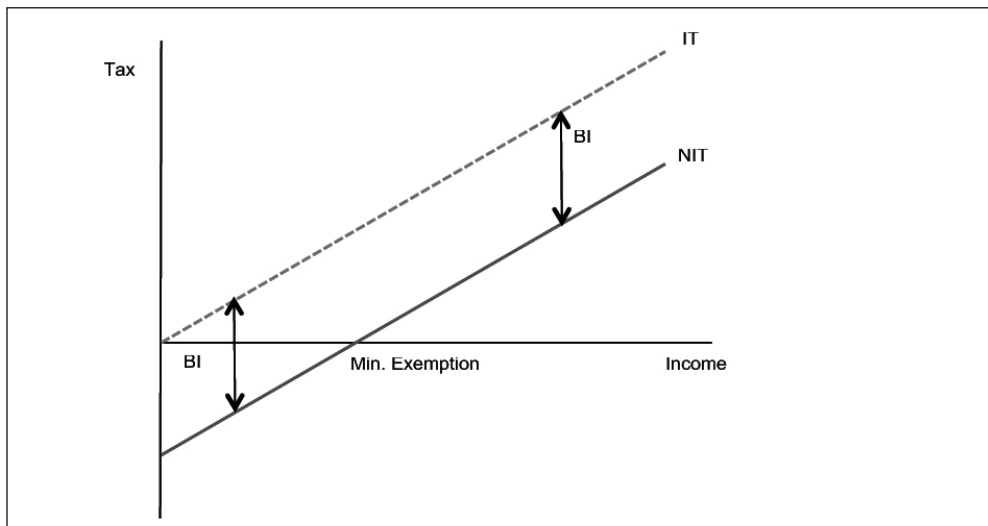

Figure 1: Relationships between NIT, BI and IT

Source: Own elaboration.

When designing a NIT, it is important to set two of these three elements:

- The Tax Rate (TR): a high TR could have a disincentive effect on the labour supply, both in the negative part of the tax and in the positive part, while a very low tax rate would generate an insufficient BI.

- Minimum Exemption (ME): income level from which the IT paid would be higher than the BI received, i.e., the balance between tax and subsidy would be positive. Below this amount the individual would receive a net grant.

- BI amount: the minimum amount for survival, which is usually set on the basis of some poverty threshold.

These three elements are related to each other and, as such, any of them can be calculated from the other two. For example, having specified the amount of the Minimum Exempt and Tax Rate, the BI would be determined as: BI = ME x TR.

The NIT designed by Friedman is a relatively simple theoretical model. However, for it to be implemented it would be necessary to take a number of decisions to solve various operational problems. In addition to establishing the level of BI and the TR, one must choose an individual or family configuration of the tax, whether or not regional differences should be considered and how to obtain the resources to finance the system. In Granell and Fuenmayor (2016) the advantages and disadvantages of all these alternatives are analysed.

3. Simulating a Negative Income Tax for Spain

In order to evaluate the effects of fiscal reforms, microsimulation techniques are a fundamental instrument since they allow the calculation of the impact of a fiscal reform on thousands of real families. Likewise, when the data source used is representative of the population, it is possible to analyse the consequences of the tax reform in terms of both tax collection and distribution over different population groups.

3.1. Microsimulation of 2013 Spanish Income Tax

The simulation of any tax proposal requires, as a previous step, a simulation of the current situation to function as a base scenario. Only then will we be able to compare the results of the proposal made with the real life situation. Therefore, our first task is to simulate the current Spanish Income Tax. We used the Living Conditions Survey for 2014 (Encuesta de Condiciones de Vida, ECV, 2014), whose household income data refer to 2013. For this reason, we performed the 2013 IT simulation, and made some adjustments to socio-economic data corresponding to 2014[4].

The Spanish Income Tax is a direct, personal, and progressive tax. It is designed to be performed by individuals, but couples can opt for joint filing. The tax scheme is summarized in Figure 2. Almost every source of income must be included: from labour, property, capital gains and losses, even some imputed income. From this gross income, some deductible expenses can be deducted to form the Adjusted Gross Income (AGI). To convert AGI to Tax-

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┌─────────────────────────────────────────────────────────────────────┐
│  ADJUSTED GROSS INCOME                                                │
│  (income from labour, investment and property                         │
│  income, net self-employment revenues minus                           │
│  deductible expenses; imputed income; capital                         │
│  gains and losses)                                                    │
│  -   DEDUCTIONS     (private   pension                                 │
│  plans,…)                                                             │
│  ─────────────────────────────────        ─────────────────────────  │
│  TAXABLE INCOME                            PERSONAL AND FAMILIAR  MINIMUM │
│  x Tax Schedule                            x Tax Schedule             │
│  ─────────────────────────────────        ─────────────────────────  │
│  TAX PAYABLE_TI                            - TAX PAYABLE_PFA          │
│  ─────────────────────────────────────────────────────────────────   │
│                    TAX PAYABLE                                        │
│                   - Tax Credits                                       │
│                   ─────────────────                                   │
│                   NET TAX (≥0)                                        │
│                   - Maternity Tax Credit                              │
│                   ─────────────────                                   │
│                   TAX DUE (±)                                         │
└─────────────────────────────────────────────────────────────────────┘
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Figure 2: The Spanish Income Tax

Source: Own elaboration.

able Income (TI), some items can be subtracted (joint taxation deduction, pension plans, etc.). Separately, the Personal and Familiar Minimum (PFM) must be calculated, depending on personal and familiar circumstances. The next step consists on applying the Tax Schedule on TI and PFM separately. The first result, the Tax Payable derived from TI is positive, but the second one, the Tax Payable derived from PFM is negative. The net result is the Tax Payable (TP). From this TP, Tax Credits (TC) are deducted, obtaining the Net Tax (NT). Finally, taxpayers could deduct Maternity Tax Credit, which is considered separately because is the only refundable Tax Credit.

When using ECV, the first issue for simulating personal income tax is to determine fiscal units[5], since the survey data contains more complex household data. Only from the family units can we work out the tax payment made through joint returns and, if appropriate, compare this result with the sum of the individual tax bills. In addition to the usual treatment of the database, we removed the observations corresponding to the Basque Country and the Autonomous Community of Navarre, since they have their own tax. As a result of these tasks, the sample finally used is made up of 28,685 individuals (23,993 adults and 4,692 children).

The simulation of personal income tax from data using ECV has some limitations, since the estimation of some variables is not as accurate as the official data collected in the IT statistics, as can be seen in Table 1. These divergences produce some deviations in the estimation of different items in taxable income and in some tax credits although, in the end, the tax due, which would represent the IT annually paid by each taxpayer, is quite close to the figure that appears in the official statistics (98.4%). In any case, the importance

of the divergences between official data and those derived from the simulation is not crucial. What really matters is to make a detailed comparison between the estimation of the tax in force in 2013 and the result that would have been derived from the simulation of its reform.

Table 1
MAIN RESULTS FROM 2013 SPANISH INCOME TAX MICRO-SIMULATION

Item	Total amount (million €)		(2)/(1)
	(1) Official data	(2) 2013 IT simulation	
Labour income	306,553	350,809	114.4%
Saving and Investments	18,093	16,969	93.8%
Land and property income	6,830	6,848	100.3%
Business income	22,389	26,073	116.5%
Adjusted Gross Income (AGI)	369,950	401,783	108.6%
Deductions from AGI	18,391	20,614	112.1%
Taxable Income	352,245	381,169	108.2%
Tax Payable	72,084	70,327	97.6%
Housing tax credits (investment and rental)	4,191	3,454	82.4%
Net Tax	67,745	66,873	98.7%
Maternity tax credit	747	822	110.1%
Final payment	67,148	66,050	98.4%

Source: Agencia Estatal de Administración Tributaria, ECV and own calculations.

Starting from the 2013 Spanish IT, the main purpose of this paper is to simulate a tax modification in line with the introduction of a NIT. In Spain, Sanzo and Pinilla (2004) performed a simulation with the EspaSim program of a BI as a deduction in the NIT with a single rate of 50%, later modified to 45%. Arcarons *et al.* (2014) performed a simulation using the administrative data (Muestra IEF-AEAT 2010) with a single tax rate of 49.5%. Undoubtedly, these previous works are of great interest, working with microdata and obtaining tax results that can be extrapolated to the Spanish population. However, the data used in these studies do not allow calculations of the benefits who receive each citizen, so they cannot complete a tax-benefit analysis.

In our case, we simulate a NIT that is financially viable and that considers the set of taxes and benefits of the welfare state at a household level. Considering taxes and also benefits, we will be able to estimate at an individual level which people would benefit and which would lose under a NIT scheme. In addition, we will better understand the influence of the new NIT on the main indicators of inequality and poverty.

3.2. A first approach

As a starting point, we performed a first simulation exercise, introducing the least possible changes regarding the current Spanish IT. The idea that motivated this initial proposal was to keep the 2013 Spanish IT unchanged for the positive part (when the final tax bill is positive) and to introduce changes in the negative part (when the tax becomes a benefit). The main change regarding the Personal Income Tax was to allow taxpayers whose Personal and Family Allowance (see Figure 2) was higher than their taxable base to receive a benefit in the form of a negative tax. In addition, we allow all taxpayers to apply the tax credits for housing, regardless of their tax payable. In other words, these tax credits would be reimbursable so that people with lower incomes could benefit from them. In this first exercise we did not eliminate any public benefits. These benefits would be complementary to the NIT itself.

Results indicate that, although this NIT proposal could have very important effects on the reduction of poverty and inequality, its cost in terms of revenue would be very high. It should be noted that with this first proposal there would be no losers: people with middle and high incomes would remain in the same situation, whereas those with low income would receive the corresponding subsidy from negative tax. According to our estimates, the tax collection would be reduced from approximately 66,000 million to 18,000 million euros. Funding of these 48 billion € would be unworkable without the introduction of new sources of income or a significant cut in public benefits and services. For this reason, it is essential to work out alternative proposals that have an affordable cost for the government.

3.3. A financially viable NIT: different proposals

In order to make a financially viable NIT proposal, there are alternative options. Of course, new sources of income could be sought, such as an increase in taxes (direct or indirect) or higher social security contributions. However, obtaining almost 50,000 million euros annually through this type of actions is not feasible. On the expenditure side, public services or welfare benefits could also be reduced, but they would also be highly unpopular measures that would worsen the redistribution of income.

Our goal is to find a NIT that is self-financing and, therefore, does not require additional resources. To achieve this financial sufficiency, we can count on two main sources of revenue. In the first place, non-contributory public benefits, which are intended to solve or at least alleviate the situation of need of certain people, would no longer make sense. After the introduction of a NIT, all these people would become net beneficiaries and would no longer require other public aid. Of course, in order to eliminate these benefits, the NIT would have to guarantee all citizens a basic income that equals or exceeds the amount of these non-contributory benefits. Secondly, the positive side of the NIT must be able to get more revenue than the current Spanish IT. To achieve this, different reforms could be undertaken. The most

obvious would be to raise tax rates to raise revenues, but also various existing tax benefits could be removed, such as deductions in the tax base or tax credits from the tax payable.

Following these premises, we will present various NIT proposals. All of them have common elements. These are limits that we have not wanted to change in order not to distort the economic and social meaning of these taxes. We will now describe these common elements.

Eliminated benefits

The new NIT implies the removal of non-contributory benefits, as the essential needs are covered with the Basic Income contained in the negative tax itself. As these benefits are not listed separately from the general information offered by the ECV, we asked the Spanish Institute of Statistics (INE) for this disaggregation. Finally, we suppressed the following non-contributory benefits to all the beneficiaries: economic benefit per child or child in care; economic benefits for child birth or adoption; economic benefit for multiple childbirth or adoption; other family benefits; social assistance benefits; housing benefits; unemployment assistance; income guarantee benefit (Renta Activa de Inserción); other unemployment benefits; other sickness benefits; non-contributory disability pension; school grants or education allowances. In addition, despite not being officially non-contributory benefits, we also decided to remove the minimum complement to pensions. In our opinion, this amount seeks to ensure a vital minimum that would already be covered by the NIT. According to our estimates, based on the data provided by INE, these benefits represent a total amount of 20,890 million euros in 2013, an amount that could be used to finance the new negative tax.

Equivalent tax collection

The new NIT must achieve the same revenue as the previous 2013 Spanish IT (66,050 million). We allowed an adjustment margin of 0.1% (66 million). The removal of non-contributory benefits would go some way to meeting this amount by providing 20,890 million, but there would still be a shortfall of more than 45,000 million, which the NIT itself would need to generate.

Simplicity

The NIT must have a structure as simple as possible. This simplicity would facilitate people's understanding of its function and would minimize the distortions generated by the tax benefits existing in the current 2013 Spanish IT. In this sense we propose the following changes: eliminate joint taxation, establishing mandatory individual taxation; return to a

single tax base, abolishing the existing dual tax; eliminate deductions in the tax base (income from work and contributions to pension schemes); remove tax credits (for housing and maternity). The elimination of all these tax benefits will generate an increase in the collection, which will go a long way to financing the negative part of the tax.

A uniform and sufficient Basic Income

The amount of BI, implicit in the design of the NIT, will be identical for all residents in Spain. We will not take into account differences in age, personal or family circumstances. The only exception, as it has been proposed in other works, concerns minors. Children would be entitled to a lower amount than the one proposed for adults, because the additional expenditure of a child in a household usually is lower than the expenditure of an adult. However, there is no agreement in the literature about the most suitable percentage to take into account the expenditure of the children. The implicit equivalence scale of the 2013 Spanish income tax was 35.6% for children (the Personal and Familiar Minimum was €5,151 for an adult and €1,836 for a child). The previous works about BI published in Spain recommend a BI for minors equal to 30% of the corresponding income for adults (Sanzo and Pinilla, 2004; Gimeno, 2015), except Arcarons *et al.* (2014), who suggest a 20%-30% range. In this paper, following this previous works and the most used and accepted equivalence scale, the OECD scale, we propose a percentage of 30% of BI.

BI should be of a sufficient amount to meet basic needs in our society. Although it is difficult to reach a consensus on this amount, it could be based on a generally accepted poverty threshold, as a percentage of the average or median, as it appears in the Eurostat statistics. However, it could also be argued that BI should reach the extreme poverty threshold (30-40% of the median) or should be sufficient to reach the general poverty line (60% of the median)[6]. In the present work, we have decided to take a more practical decision. As the NIT is going to replace the non-contributory benefits of the current system, the necessary condition is that the NIT is always above the minimum non-contributory Social Security pension in 2013 (€ 5,108.60). This amount would be close to 40% of the median equivalent income. With this amount, we can conclude that the NIT would ensure that only a very basic level of needs is met.

Starting from the four common elements that we have just analysed, we made three NIT proposals, summarized in Table 2.

The first proposal (a) is undoubtedly the simplest. This is a NIT as defined by Friedman, with a single tax rate of 50%, both for positive and for negative parts. The minimum exemption for adults would mean that only those with an income higher than €10,310 would be taxed, while those with a lower income would receive a benefit that could reach a maximum of €5,155 per year (slightly above the current non-contributory pension). Minors who did not obtain any income, could receive €1,547 per year from the NIT.

Table 2
THREE NIT PROPOSALS WITH SIMILAR TAX COLLECTION

Proposals	(a)	(b)	(c)
Minimum Exemption (adults)	10,310	10,643	10,870
Minimum Exemption (minors)	3,093	3,193	3,261
Basic Income (adults)	5,155	5,108.60	5,108.60
Basic Income (minors)	1,547	1,532.60	1,532.60
Tax rates (TP: Tax Payable)	50%	48% (TP ≤ 12.800) 56% (TP > 12.800)	47% (TP ≤ 0) 50% (TP ≤ 21,000) 60% (TP > 21,000)

Source: Own elaboration.

When looking for alternatives to this first proposal, undoubtedly the most obvious would be to try to reduce the tax rate applied. However, with the limitations set out above, there is very little margin for such a reduction. If we want to keep the level of tax collection constant and the BI at the minimum non-contributory pension amount (€5,108.60) the tax rate must be 49.62%. This alternative would be virtually identical to the view above so we have not simulated it.

Where there is room for change is in the distribution of the tax burden under the NIT. Instead of using a single rate, various types of tax rates could be introduced with the aim of increasing progressivity. In any case, it should be remembered that a NIT with a single tax rate actually behaves as a progressive tax, provided it includes a minimum exemption. Proposal (b) considers two types of taxation: a rate of 48% for negative tax bases (where the minimum exemption is higher than income) and also for the positive ones that do not exceed €12,800 and a marginal rate of 56% for Taxable Income above this amount. The proposal (c) tries to differentiate more tax rates according to the level of income, establishing three tax brackets. As can be seen, the margin of adjustment is not very large if we want to keep the same tax collection. It is true that the tax rate for lower income may be slightly reduced at the expense of taxpayers who earn more, but these changes cannot be excessive[7].

4. Main results of Negative Taxation

In Table 3 we present the main results of the NIT simulations under the assumptions described in the previous section. As can be seen, in the three proposals the Adjusted Gross Income[8] is much higher than the one existing in 2013, mainly due to the elimination of the labour income deduction. This difference is even greater in terms of Taxable Income, by eliminating two important tax benefits: joint taxation and reduction by contributions to pension schemes. However, the Minimum Exemption would be much higher than the 2013 Personal and Family Minimum, for several reasons. Firstly, this amount almost doubles the individual level, up to more than €10,000 for all adults. Secondly, with the disappearance of

joint taxation, everybody would be entitled to the minimum regardless of their marital status. Finally, all minors would benefit from a higher minimum exemption. The small differences in the minimum exemption at the individual level among the three proposals also lead to different amounts at the aggregate level.

The biggest difference with respect to the 2013 Spanish IT has to do with the calculation of Tax Payable. The minimum exemption would now produce negative tax payable, so the aggregated amount is seriously reduced. The elimination of tax credits for housing and maternity leads to final payments for the three proposals that slightly exceed 45,000 million. This amount is clearly lower than that obtained in 2013, but thanks to the disappearance of non-contributory benefits, a total collection of 66,000 million would finally be reached, practically identical to that achieved with the 2013 Personal Income Tax.

Table 3
ESTIMATING TAX COLLECTION FROM NIT (MILLION €)

	2013 Spanish IT Estimation	NIT (a) Estimation	NIT (b) Estimation	NIT (c) Estimation
Labour income	350,809	433,538	433,538	433,538
Business income	26,073	26,073	26,073	26,073
Other income	24,901	23,758	23,758	23,758
Adjusted Gross Income (AGI)	401,783	483,370	483,370	483,370
Deductions from AGI	20,614	-	-	-
Taxable Income	381,169	483,370	483,370	483,370
Personal and Familiar Minimum (M. Exemption)	136,521	393,938	406,659	415,311
Tax Payable	70,327	45,217	45,157	45,109
Housing tax credits	3,454	-	-	-
Net Tax	66,873	45,217	45,157	45,109
Maternity tax credit	822	-	-	-
Final payment	66,050	45,217	45,157	45,109
Removed Benefits	-	20,890	20,890	20,890
FINAL TAX COLLECTION	**66,050**	**66,107**	**66,047**	**65,999**

Source: Own calculations.

To conclude this section, we want to analyse the results obtained with the NIT according to the different types of household, comparing them with the 2013 Spanish IT. In Table 4 we present both the number of households and the final amount paid (or received) by all of them, distinguishing whether it is a positive, zero or negative amount. In this comparison, we do not take into account the removal of social benefits, but we just compare the 2013 Spanish Income Tax with the three NIT proposals. Following the classification established in ECV 2014 (hx060 variable) we have divided the households into 6 categories: households with an

adult of 65 or more years (1A≥65); households with two adults, at least one aged 65 or over (2A≥65); households with 1 adult under 65 years (1A<65); households with 2 or more adults under 65 (2A<65); households with an adult and children (1A+C); households with 2 or more adults with children (2A+C).

Panel a) in Table 4 shows the number of households in each of the 6 categories described and in the last row of this panel all types of households are included. As can be seen in this last row, there are large differences between the 2013 Spanish IT and the three NIT proposals. Firstly, in the 2013 Spanish IT there are more households that will end up with a tax bill than in the NIT (72% vs. 50% -52%). Obviously, the latter would be those households whose income was low enough to take advantage of the negative part of the NIT. Secondly, while negative statements are an exception (2%) in the 2013 Spanish IT and are due exclusively to the maternity deduction, with a NIT these cases would be generalized and about half of the households would end up receiving a net benefit. Finally, in the 2013 Spanish IT there are a large number of households that do not pay tax but also receive no benefit (26%). With a NIT such as the one proposed, there are no neutral households, since they will either pay a net tax or receive a net benefit, even though it might be minimal.

If we break down households according to their characteristics, we can see how the NIT does not affect all taxpayers equally. Those who benefit most from the negative part of the tax would be single-parent households, since 62% -63% of them would receive a benefit. After them, two-person households and couples with children are highlighted, since in both cases more than half of the households would receive a net grant in all three simulations. In the other three types of households, more than half of households would be net contributors, but in all cases the number of negative tax returns is greater than 40%.

Panel b) of Table 4 represents the Final Payment that would have to be paid or received by each of these 6 types of household. On the one hand, in aggregated terms, the NIT scheme is a much more powerful tool aiming redistribution. The current 2013 scheme collects 66,050 million euros (66,307 minus 257), and distribute 20,890 million euros (Table 3). NIT (a), for instance, supposes a similar final impact (45,217 million euros), but collecting much more resources (92,178 million euros) and distributing more benefits (46,961 million euros).

On the other hand, while it is true that in all groups there are both positive and negative statements, the resulting balance is very different in each type of household. Following the reasoning of the previous paragraph, the only households that would have negative balance would be the single parent, while the rest of households would end up paying a net positive tax to fund the benefits.

We think that the results presented are of interest because they make it possible to compare the effect of two radically different taxes on households. However, with the NIT, much of the revenue obtained with a tax like the current one is lost. In order to be able to compare them in terms of equality, we need to deduct in each household the non-contributory benefits they would lose when they were entitled to the NIT. In Table 5 we performed this simulation

Table 4

2013 SPANISH IT AND NIT PROPOSALS. RESULTS BY HOUSEHOLD TYPE

a) Thousands of households and % over total

	2013 Spanish System			NIT (a) Estimation		NIT (b) Estimation		NIT (c) Estimation		Total
	Tax>0	Tax<0	Tax=0	Tax>0	Tax<0	Tax>0	Tax<0	Tax>0	Tax<0	
1A≥65	1,253	0	543	998	798	964	832	932	864	1,796
	(70%)	(0%)	(30%)	(56%)	(44%)	(54%)	(46%)	(52%)	(48%)	(100%)
2A≥65	1,857	0	528	1,177	1,208	1,119	1,266	1,106	1,279	2,385
	(78%)	(0%)	(22%)	(49%)	(51%)	(47%)	(53%)	(46%)	(54%)	(100%)
1A<65	1,590	0	875	1,451	1,014	1,405	1,060	1,392	1,073	2,465
	(65%)	(0%)	(35%)	(59%)	(41%)	(57%)	(43%)	(56%)	(44%)	(100%)
2A<65	3,771	0	969	2,581	2,159	2,517	2,223	2,504	2,236	4,740
	(80%)	(0%)	(20%)	(54%)	(46%)	(53%)	(47%)	(53%)	(47%)	(100%)
1A+C	270	43	265	221	357	217	361	216	363	578
	(47%)	(7%)	(46%)	(38%)	(62%)	(37%)	(63%)	(37%)	(63%)	(100%)
2A+C	3,830	307	1,281	2,528	2,892	2,473	2,947	2,461	2,959	5,419
	(71%)	(6%)	(24%)	(47%)	(53%)	(46%)	(54%)	(45%)	(55%)	(100%)
Total	**12,571**	**350**	**4,462**	**8,955**	**8,428**	**8,694**	**8,690**	**8,611**	**8,773**	**17,383**
	(72%)	**(2%)**	**(26%)**	**(52%)**	**(48%)**	**(50%)**	**(50%)**	**(50%)**	**(50%)**	**(100%)**

(Continued)

b) Tax paid / Benefit received (million €)

	2013 Spanish System			NIT (a) Estimation			NIT (b) Estimation			NIT (c) Estimation		
	Tax>0	Tax<0	Diffe-rence	Tax>0	Tax<0	Diffe-rence	Tax>0	Tax<0	Diffe-rence	Tax>0	Tax<0	Diffe-rence
1A≥65	2,408	0	2,408	4,923	-1,745	3,178	4,793	-1,805	2,988	4,780	-1,858	2,922
2A≥65	6,735	0	6,735	10,284	-4,903	5,381	10,303	-5,101	5,202	10,293	-5,204	5,089
1A<65	6,468	0	6,468	11,050	-3,276	7,774	11,095	-3,311	7,784	11,141	-3,356	7,785
2A<65	23,368	0	23,368	31,233	-13,580	17,653	31,413	-13,960	17,453	31,544	-14,147	17,398
1A+C	1,048	-35	1,013	1,669	-1,824	-155	1,708	-1,844	-136	1,726	-1,860	-134
2A+C	26,281	-223	26,058	33,019	-21,633	11,386	33,989	-22,122	11,867	34,363	-22,315	12,048
Total	**66,307**	**-257**	**66,050**	**92,178**	**-46,961**	**45,217**	**93,301**	**-48,144**	**45,157**	**93,848**	**-48,739**	**45,109**

1A≥65: households with an adult of 65 or more years; 2A≥65: households with two adults, at least one aged 65 or over; 1A<65: households with 1 adult under 65 years; 2A<65: households with 2 or more adults under 65; 1A+C: households with an adult and children; 2A+C: households with 2 or more adults with children.

Source: Own calculations.

Table 5
WINNERS AND LOSERS AFTER NIT REFORM

	NIT (a) Estimation				NIT (b) Estimation				NIT (c) Estimation			
	Winners (thous.)	Losers (thous.)	Profit/Loss (-) Total (Mill €)	Average (€)	Winners (thous.)	Losers (thous.)	Profit/Loss (-) Total (Mill €)	Average (€)	Winners (thous.)	Losers (thous.)	Profit/Loss (-) Total (Mill €)	Average (€)
1A≥65	364 (20%)	1,432 (80%)	-2,991	-1,665	429 (24%)	1,367 (76%)	-2,801	-1,560	460 (26%)	1,336 (74%)	-2,736	-1,523
2A≥65	1,044 (44%)	1,341 (56%)	-2,533	-1,062	1,097 (46%)	1,288 (54%)	-2,354	-987	1,126 (47%)	1,259 (53%)	-2,242	-940
1A<65	976 (40%)	1,489 (60%)	-2,572	-1,043	1,020 (41%)	1,445 (59%)	-2,582	-1,047	1,049 (43%)	1,416 (57%)	-2,583	-1,048
2A<65	2,459 (52%)	2,281 (48%)	-816	-172	2,556 (54%)	2,184 (46%)	-617	-130	2,585 (55%)	2,155 (45%)	-561	-118
1A+C	337 (58%)	242 (42%)	495	855	354 (61%)	225 (39%)	477	824	353 (61%)	226 (39%)	474	819
2A+C	3,347 (62%)	2,072 (38%)	8,357	1,542	3,411 (63%)	2,009 (37%)	7,876	1,453	3,424 (63%)	1,996 (37%)	7,695	1,420
Total	**8,527**	**8,857**	**-67**	**-4**	**8,867**	**8,517**	**-3**	**0**	**8,996**	**8,388**	**51**	**3**

1A≥65: households with an adult of 65 or more years; 2A≥65: households with two adults, at least one aged 65 or over; 1A<65: households with 1 adult under 65 years; 2A<65: households with 2 or more adults under 65; 1A+C: households with an adult and children; 2A+C: households with 2 or more adults with children.

Source: Own calculations.

to find out the number of winners and losers as a result of both the introduction of NIT and the elimination of benefits, distinguishing between the six types of households we have previously presented.

If we focus on the last row, we can see how in all three proposals the number of households that would win is practically the same as the number of losers. In addition, in the case of proposals with an equivalent tax collection, the total gain or loss would be negligible. However, when detailing the information according to the type of household, the differences concerning 2013 Spanish IT are considerable. The most disadvantaged with the new NIT would be households with a person over 65, who in the three simulated proposals could lose, on average, more than €1,500. Households made up of two elderly people and an adult under 65 years would also suffer significant losses, around €1,000 per year. The situation of couples under 65 would be quite similar to the current one, although on average they would lose between 118 and 172 euros. The clear winners with a NIT would be households with children. While single-parent households would earn on average more than €800, households with two or more adults with children in all three simulations would average more than €1,400 gain.

Moreover, it is important to stress that in every type of household there is a strong redistribution between poorer and richer. For example, in households composed by two adults younger than 65, almost half of them are winners and the other half are losers. It means that, although the average change for this type of household is not very important, the internal redistribution between rich and poor households is very intense. This effect will have strong results in terms of poverty and inequality.

5. Inequality and poverty analysis

In this section we estimate the impact of NIT on inequality and poverty. Based on the most widespread methodological criterion in terms of poverty and inequality, we use households as a unit of measurement instead of individuals or fiscal units, using the modified OECD scale as an equivalence scale.

Our aim is to compare the current situation, which a PIT and a set of non-contributory benefits, with the proposed NIT, a single measure that includes a positive tax for taxpayers whose income is above the minimum exemption and a negative tax for the rest. The starting point will be the income before taxes and subsidies, which takes into account market income and contributory benefits. We compare this initial situation, in terms of inequality and poverty, with the current system of PIT and non-contributory benefits and finally with the three alternatives of NIT proposed in the previous section.

The first results on inequality are shown in Table 6. The first column shows the Gini index for income before taxes and benefits and its value after introducing the 2013 PIT and,

finally, non-contributory benefits of the same year. We also compute the Reynolds-Smolensky index, which measures the redistributive capacity of the tax, as the difference between the Gini index before and after income tax. As can be seen, the current tax is able to improve 4 percentage points the distribution of income, but it does so exclusively by deducting income from households. The non-contributory benefits reduce inequality another 4.1 percentage points, with a global improvement of 8.1 points in the Reynolds-Smolensky index. On the contrary, a NIT would achieve redistribution in only one step, deducting the tax from those who can pay it and making transfers to individuals that do not reach the minimums indicated.

Table 6
INEQUALITY INDEXES AND REDISTRIBUTIVE EFFECT

	2013 Spanish System		NIT (a)		NIT (b)		NIT (c)	
	Gini	R-S	Gini	R-S	Gini	R-S	Gini	R-S
Income before taxes and benefits	0.417	-	0.417	-	0.417	-	0.417	-
Income after 2013 Income Tax	0.377	0.04	-	-	-	-	-	-
Income after taxes and benefits/NIT	0.336	0.081	0.249	0.169	0.243	0.174	0.241	0.176

Source: Own calculations.

In the last columns of the table, Gini[9] and Reynolds-Smolensky[10] indices are shown for the three alternatives proposed. The results of the three proposals draw similar conclusions. The introduction of an NIT would reduce inequality much more than the current system, with a final Gini index below 0.25. Although the three proposed alternatives achieve a significant redistributive effect, it should be noted that the results are different. Proposal (a), with a single tax rate of 50%, is the one with the lowest redistributive effect generated, while the second (b) and the third (c) increase this effect by introducing a progressive tax schedule with two and three tax brackets, respectively.

This is a very powerful result. The introduction of a NIT such as the proposed here will produce strong results on redistributive indexes. As stated by Cantó (2018) "(…) to measure the redistributive capacity of any system, it is necessary to look at two key elements: progressivity and the dimension of both direct taxes and monetary benefits for the most in need". In this sense, the NIT increases both progressivity and the size of spending in social protection. The striking reduction of these indexes is due, among others, to the following reasons:

1) The NIT is a more powerful mechanism than the current system, because it redistributes many more resources. The current system collects 66,050 million and pays benefits of 20,890. However, the NIT collects 92,178 million and pays benefits of 46,961 (Table 4). This higher spending on social protection is associated with a stronger reduction in inequality (Sánchez and Pérez-Corral, 2018). According to OECD, "Countries which achieved large increases in the redistributive effect of ben-

efits did so mainly through growing average benefit amounts, while the degree of benefit targeting ("progressivity") changed less. The relatively small change in benefit progressivity and its limited impact on the redistribution properties of cash transfers highlights the importance of spending levels for inequality outcomes" (OECD, 2011, p. 292).

2) The positive part of the NIT is much more redistributive than the current PIT. There are two main reasons. First, the minimum exemption is much higher than in the current PIT (€10,310 vs €5,151). Second, the marginal tax rate (50%) is higher than the marginal tax rate in the current PIT (beginning from 24.75%).

3) The benefits of the NIT are more important and redistributive than in the current system. There are several reasons to explain this result. First, the current benefit system requires that the "poor" person applies for the benefit but, in some cases, this person does not know the existence of the benefit or does not want to apply for it (non take-up problem). With the NIT this problem does not exist, because every citizen has to complete a tax return. Second, in the current non-contributory benefit system, the head of the household receives in many cases a fixed amount or an amount that increases slightly with the size of the family. However, with the NIT, each adult of the household receives the general amount and the children an additional 30%, therefore the amount of the NIT is much more generous than with the current system.

After these general inequality indexes, we analyse the average effective tax rates of the 2013 Spanish tax-benefit system and the alternative NIT, considering households in deciles of equivalent income. As can be seen in the first columns of Table 7, the 2013 system is divided into two tax rates, the personal income tax rate and the benefit rate of the non-contributory benefits. The combination of both measures is presented in the "Tax-Benefit" column and can be compared with the three proposals of NIT that are shown in the last columns of this table.

The average rate is 12.82% in the Spanish 2013 PIT, but this tax rate is very different by deciles. The households of the first decile are the only with a negative tax rate, due to the maternity tax credit received by some of these households. The rest of the deciles have positive tax rates, which are growing with the progressive tax until 22.55% in the last decile. On the contrary, the benefit system generates negative rates for all the households, but are especially important in the low-income households. The combination of both measures shows the progressivity of the Spanish tax-benefit system, with the first four deciles with average negative rates, and the continuous increase of the positive rates in the following deciles.

Although these results seem important in terms of progressivity, are much more limited than the effects of the NIT. The three proposals maintain the same average tax rate for all the population than the current system (8.77%), but have a more important distributional effect.

The NIT produces higher negative rates than the current system for the lowest deciles of the distribution. However, with the NIT high-income taxpayers have to pay much more taxes than with the current system. The results of three proposals are very similar, but the NIT (c) is the most redistributive with an average tax rate slightly higher for the last decile (36.10%).

Table 7
AVERAGE EFFECTIVE TAX-BENEFIT RATES (%)

Decile	2013 Spanish System			NIT (a)	NIT (b)	NIT (c)
	PIT	Benefits	Tax-Benefit			
1	-0.25	-172.08	-172.34	-445.13	-442.59	-443.53
2	0.15	-32.42	-32.27	-79.93	-80.62	-81.46
3	1.07	-11.09	-10.02	-37.07	-38.17	-38.8
4	2.49	-6.35	-3.86	-17.71	-18.97	-19.43
5	4.89	-3.77	1.12	-5.69	-6.95	-7.26
6	7.08	-2.7	4.39	3.37	2.14	1.89
7	9.61	-1.37	8.24	11.46	10.42	10.25
8	12.16	-0.75	11.4	18.2	17.53	17.37
9	15.47	-0.58	14.9	24.78	24.86	24.7
10	22.55	-0.22	22.33	33.59	35.42	36.1
Total	**12.82**	**-4.06**	**8.77**	**8.78**	**8.77**	**8.76**

Source: Own calculations.

Regarding the results on poverty, Table 8 shows the poverty rates developed by Foster, Greer and Thorbecke (1984). These indices vary in their meaning as a function of the parameter α employed. If $\alpha = 0$, we are measuring the incidence (the percentage of poor population); if $\alpha = 1$, we are also taking into account the intensity (the distance between the income level of the poor and the poverty line); if $\alpha = 2$, we are also considering inequality among the poor. These rates have been calculated for pre-tax and subsidies income, after-tax income (2013 Spanish IT and NIT proposals), and finally after applying the tax and non-contributory benefits.

Indexes have been calculated for a poverty line of 60% of the median income and also with the extreme poverty threshold (40% of the median income). In this exercise, we have anchored poverty lines, since the tax collection is positive in all the simulations.

Taking as a reference 60% of the median income, we can observe how the NIT behaviour is clearly superior to 2013 system in terms of poverty reduction. The 2013 Spanish IT increases slightly the incidence of poverty (from 27.2% to 27.6%). The other two indexes FGT (1) and FGT (2) also indicate a slight increase of poverty after the 2013 Spanish IT. However, non-contributory benefits have an important effect in the reduction of poverty, which finally places at 21.3%.

Table 8
POVERTY INDEXES

Poverty level: 60% median income (anchored: €8,530.20)

	2013 Spanish System			NIT (a)			NIT (b)			NIT (c)		
	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)
Income before taxes and benefits	0.272	0.132	0.096	0.272	0.132	0.096	0.272	0.132	0.096	0.272	0.132	0.096
Income after 2013 Income Tax	0.276	0.133	0.097	-	-	-	-	-	-	-	-	-
Income after taxes and benefits / NIT	0.213	0.083	0.054	0.116	0.024	0.01	0.115	0.024	0.01	0.114	0.024	0.01

Poverty level: 40% median income (anchored: €5,686.80)

	2013 Spanish System			NIT (a)			NIT (b)			NIT (c)		
	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)
Income before taxes and benefits	0.164	0.09	0.077	0.164	0.09	0.077	0.164	0.09	0.077	0.164	0.09	0.077
Income after 2013 Income Tax	0.166	0.091	0.077	-	-	-	-	-	-	-	-	-
Income after taxes and benefits / NIT	0.103	0.048	0.04	0.027	0.005	0.006	0.027	0.005	0.006	0.027	0.005	0.005

Source: Own calculations.

However, the NIT proposals have much more intense results. Being an instrument that combines the tax with the transfers, the data of poverty improve dramatically. In any case, the incidence dropped by more than 15 percentage points in all three proposals, reaching an index below 12%. Even more striking is the decline of the other two indicators, when intensity of poverty and inequality among the poor are taken into account. On the other hand, although the differences between the three proposals are very small, proposal (a), with a single rate of 50%, would reduce the incidence of poverty the least.

But if we consider the severe poverty level (40% of pre-tax median income) as a poverty line, the results are more evident. This is not surprising since we have introduced a very important restriction when activating the negative part of the tax, when we have set the BI to the amount of the non-contributory benefit in Spain. This amount is clearly below 60% of the median, so the effect of NIT will be softened.

Again, 2013 Spanish IT is almost neutral in terms of poverty, and the non-contributory benefits reduce the poverty line more than one third (from 16.6% to 10.3%). But the effects of NIT are much more powerful than before, reducing the incidence rate to 2.7%. The FGT (1) indicates that the intensity falls dramatically, showing that those still below the threshold are closer to the extreme poverty line, while the FGT (2) is very close to zero, which shows less inequality among those who remain poor. Finally, it should be noted that the three proposals offer exactly the same results in terms of reducing extreme poverty.

The strong reduction of poverty indexes derived from the NIT scheme could be explained through two main reasons. First, the above-mentioned non-take up problem. The current benefit system requires that the "poor" households apply for the benefit but, in some cases, they do not do it. The NIT does not have this problem, as every citizen has to complete a tax return. Therefore, with the NIT the number of households who receive benefits is higher than with the current system, reducing the index of incidence of poverty FGT(0). Second, in the current non-contributory benefit system, the head of the household receives a fixed amount or an amount that increases slightly with the size of the family. However, with the NIT, each adult of the household receive the general amount and the children an additional 30%, therefore the amount of the NIT grows more sharply than with the current system. This bigger amount allow more households to exit from poverty, reducing the FGT(0) index. Moreover, households that continue below the poverty line would have more disposable income, reducing the intensity of poverty FGT(1) and the inequality within poor people FGT(2).

6. Conclusions

In this paper we have proposed an alternative to the existing social protection system in Spain. Instead of a system with multiple benefits managed by different administrations, we propose a universal Basic Income that guarantees all citizens a minimum standard of living.

This Basic Income can be received in the form of a monetary benefit, but also through a refundable deduction included in the Income Tax, which would thus become negative (NIT).

Approaches to NIT have varied radically over time. Originally defended from liberalism, the arguments of redistributive justice are much more relevant today. Regardless of the reasons given to justify it, NIT is a useful mechanism to introduce a Basic Income, because it allows the combination of the tax policy and the social policy into a single system.

We have put forward three alternative NIT proposals that have several common starting points. Firstly, these are proposals with a tax collection equivalent to the 2013 Spanish IT. To obtain this amount, we consider the resources generated by the NIT itself and also by the elimination of non-contributory benefits, which would no longer be necessary when a universal benefit was received. Secondly, every adult would have at least the minimum contributory pension, so that people who lost these benefits would not be harmed by the introduction of a negative tax. Thirdly, we have established for children a benefit equivalent to 30% of the amount set for adults, according to the OECD equivalence scale. Our first proposal is a NIT with a single rate of 50% and a minimum exemption of €10,310. From this proposal we have elaborated two other NITs, introducing a progressive tax schedule of two and three tax brackets respectively.

In order to carry out our simulations, we have used the 2014 Living Conditions Survey (with economic data from 2013) and adapted the socio-economic information contained to current Income Tax regulations, from which the new NIT will be derived. The results of the three proposals are very prominent, and similar to each other. With a NIT, it would be possible to maintain the collection of income tax, but the distribution of income would change radically, greatly reducing inequality and monetary poverty. In addition, there would be significant changes in the distribution by type of household. Families with children would benefit most from a negative income tax scheme, while households with older people would lose out on such reforms. Moreover, we can verify a strong redistribution within each type of household. Poor households in every case will be much better treated under NIT scheme than by the current system. Reversely, rich households will pay a bigger amount than before.

Finally, we would like to stress that the simulations carried out are static, and do not consider how the proposed changes could influence the decisions of citizens, such as saving behaviour or tax compliance. In this sense, it is especially important to take into consideration the expected change of behaviour in the labour supply, which we will try to estimate in future research.

Notes

1. For an analysis of BI characteristics, see Salvador (2016) and Raventós (2001).
2. See Martínez Álvarez (2002) for a detailed analysis of Rhys-Williams plan.

3. Lampman (1965), Boskin (1967), Green y Lampman (1967), Hildebrand (1967), Rolph (1967) or Tobin *et al.* (1967).

4. We have used ECV-2014 instead of other databases, as EUROMOD, for two reasons. On the one hand, the Spanish Statistical Institute (Instituto Nacional de Estadística, INE) has improved the quality of data since this wave: income data were performed using administrative registers from the Spanish Tax Agency. On the other hand, we have obtained a disaggregation of benefits from the INE, which allow us to improve the estimation of removing some benefits. For this year, EUROMOD data did not provide these improvements.

5. The definition of the family unit relating to IT is covered in art. 82 of Law 35/2006, of 28 November, of Income Tax. Basically, a family unit is made up of a married couple (with or without young children), or a single parent with young children.

6. According to Eurostat, the Median Equivalent Income in Spain was €13.268 in 2013 (ECV 2014). Therefore, the poverty threshold defined as 60%, 40% and 30% of the median would be €7,961, €5,307 and €3,980 respectively.

7. For example, if we reduce the tax rate to 47% for taxpayers with tax bases below € 30,000, those with a higher income should pay a marginal rate of 85% to get an equivalent tax collection.

8. See Figure 2 for the Spanish Income Tax scheme.

9. We have calculated Atkinson and Theil indexes, using different parameters of inequality aversion. In all cases, the results draw similar conclusions as those presented for the Gini indexes.

10. We have also calculated the re-ranking coefficients for all the alternatives. These coefficients are 0.004 for the current system and the three NIT alternatives, indicating that the re-ranking problem has not worsened with the NIT.

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Resumen

El objetivo de este trabajo es plantear una alternativa financieramente viable al actual sistema de protección social español. Se trata de un impuesto negativo sobre la renta (INR), que tendría la virtud de unir en un solo mecanismo el sistema de prestaciones públicas y el Impuesto sobre la Renta. Tras exponer las características básicas del INR, simulamos con la Encuesta de Condiciones de Vida varias propuestas de INR para España. Estas propuestas se caracterizan por no suponer un coste adicional en el sistema de impuestos-subvenciones. Los resultados de nuestras simulaciones indican una mejora sustancial en los indicadores de pobreza y desigualdad, especialmente de la pobreza severa y también una redistribución de la renta desde las personas mayores hacia las familias con niños.

Palabras clave: renta básica, impuesto negativo, pobreza, desigualdad, microsimulación.

Clasificación JEL: C8, H24, I38.