

## A PROPOSAL FOR A BASIC SOCIAL PROTECTION FLOOR

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### **Abstract**

This paper explores whether “basic income” can be used as a measure to guarantee a basic level of social and economic security for all members of society throughout their lives instead of the current minimum income grants and other benefits. Because unexpected life circumstances, the loss or reduction of productive capacity, between others, can hinder a person’s or a family’s well-being. In order to protect ourselves from social risks and resulting insecurities, social security benefits, as Basic Income are powerful tools to combat poverty and inequality. Its main purpose is to meet the essential needs of individuals. For this, we obtain the main expense items by using Spanish microdata from the Household Budget Survey (2010) and analyse the factors that determine essential needs. We find the significant explanatory factors using a quantile regression model.

### **Keywords.**

Basic income; Quantile regressions; Poverty

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## **1. INTRODUCTION**

Social security is a human right and is enshrined as such in the Universal Declaration of Human Rights (1948). In its article 25 says: "Everyone has the right to a standard of living adequate for the health and well-being of himself/herself and of his/her family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control".

In fact, this issue is so interesting to national governments (Nelson, 2010), thus, all states have sought to reduce poverty and improve the welfare of their citizens. Welfare systems in Europe have a long history: they originated in 1889 when Germany adopted a social insurance programme for the elderly. That programme was designed by Otto von Bismarck to promote the welfare of workers (ILO, 2009). Later, in 1942, during the Second World War, the UK Government published the Beveridge Plan, which resulted actually in the creation of the first unified social security system. This plan proposed to build "a welfare system capable of protecting citizens from the cradle to the grave and attack the five giant evils of modern society: squalor, ignorance, want, idleness and disease" (Beveridge, 1942). Six years later, a minimum income guarantee was incorporated via the National Assistance Act (Barr, 2004).

The achievement of social security for all citizens is at the core of the International Labour Organization (ILO). The Declaration of Philadelphia (1944) which is an integral part of the ILO Constitution, recognises the countries obligation to achieve the extension of social security measures to provide a basic income to all in need of such protection and comprehensive medical care. (ILO, 1944)

Nowadays, ILO and other international institutions continue adopting new initiatives aimed towards the realization of social security for all. For instance, the ILO worked out a larger system " to prevent poverty in old age; and which will provide indexed, guaranteed and reliable (but moderate) provisions for those on average (but not excessively high) incomes..." (Gillion, 2000).

Recently, the World Bank passed from a three pillars system of social protection to a five pillars system (Holzmann & Hinz, 2005), by adding:

- a "zero pillar" based on non-contributory or assistance pensions,
- another "pillar" based on family or informal transfers.

In the same way as World Bank, in June 2012, the Social Protection Recommendation in order to ensure that all people enjoy at least a basic level of social security throughout their lives was adopted by ILO (ILO, 2012).

This recommendation of ILO and the "zero" pillar of World Bank would be considered a basic pension for all citizen of a country to cover their basic survival needs. This income would be paid annually taking into account the country's demographic and economic situation. In this sense, this income fulfils the definition of Basic Income (Van der Veer, 1998), that is, a minimum income which every citizen has a right to receive, individually, unconditionally and universally, in order to improve freedom, autonomy and security of persons (Van Parijs, 1992a; 1992b). Moreover, this income should be sufficient to cover personal basic needs and it should not be subject to any other condition than citizenship or residency (BIEN, 2012).

The Basic Income (BI) is an income allocation for people who have no income or who, having salary or assets returns and/or social benefits, fail to attain the minimum level (Wispelaere, 1999). The BI can also be view as an income that helps to reduce employee working hours (Gorz, 1991). In this sense, this minimum income is a key instrument for reducing unemployment, poverty, promoting social inclusion and ensuring adequate living standards (European Parliament, 2010). Several studies of minimum income have been conducted (Bahle, Pfeifer & Went, 2010; Van Mechelen *et al.*, 2011; Immervoll, 2012), but they have not analysed the expenses which should be addressed. In some European Union countries, the Minimum Income (MI) seeks to meet the basic needs of family members (Figari *et al.*, 2013). The target of MI is to give safety because in the cycles of economic growth the inequality and poverty do not yield (Ayala *et al.*, 2009).

Taking into account this context, one of the objectives of this paper is to analyse if BI can be a tool for improving the zero pillar permitting personal and professional development for citizens of retirement age.

Another objective of this paper is to define a basic income according to the individual characteristics of each citizen. On the other hand, a lot of the research on social rents use aggregate public expenditure values (Figari *et al.*, 2013). However, other studies use models based on household approach (Gough *et al.*, 1997; Adema, 2006; Frazer & Marlier, 2009; Nelson, 2010; Van Mechelen *et al.*, 2011; Immervoll, 2012) taking into account the different families types. Furthermore, in many surveys income (Johansson, 2007), especially the income

of poor families, is not reported (Meyer, Mok & Sullivan, 2009). Therefore, it is more appropriate to use the incurred costs of goods allocated to a basic shopping cart. Using this approach it is possible to determine at household level the proportion of total expenditures currently being spent (at subsistence level).

In the literature there is not agreement about the minimum standard of living (Storm & Van den Bosch, 2009), and usually is taking either the poverty line or 60% of median income distribution (European Parliament, 2010), although each household allocates different amount of resources to vital needs. The aim of this paper is to analyse the factors (number of family members, number of dependents, region of residence, household head features, etc) that determine the amount of individual household basic income. This is done with the Spanish Household Budget Survey applying quantile regression. The regression result is then used to provide a basic income proposal for each household type .

The rest of the paper is structured as follows. Section 2 sets the context and implications of basic income. Section 3 presents the methodology followed to differentiate the amount of basic income depending on household composition. Finally, Section 4 concludes with a summary of the results obtained and some comments on the implications of their implementation.

## **2. BASIC INCOME AS ZERO PILLAR**

### **2.1. Set up**

In this paper, a basic income is an income unconditionally granted to all citizens basis, with no test or work requirement. It can be considered as a minimum income, but it differs from those that now exist in various European countries in almost three important ways:

- it is paid to individuals;
- it is paid irrespective of other sources of income;
- it is paid without requiring the performance of work or the willingness to accept a job offered.

Perhaps, the concept of “basic income” (BI) would may not be well understood in some cultures. It is important to establish requirements to guarantee the right to a basic income, because it may be seen as a right to receive money for nothing: it must therefore be built on a social contract (Van Parijs, 2006) that sets out the obligations of citizens. By dint of citizenship, an individual has civil, political and social rights (freedoms, housing, health, education) but also certain duties towards the society in which he/she lives (public property, paying taxes, protecting the environment and heritage, etc). In short, the individual has a set of rights and

duties that grant him/her full membership of society (Marshall, 1950; Ringen, 1987; Baldwin, 1990).

It is accepted that citizenship must be independent of concrete economic environment. Therefore it would be not an economic concept which defines the position of an individual according to his/her contribution to the production process. So, social rights should not depend only on the income of the beneficiaries since welfare is not only a monetary benefit. In general, they are defined as material rights (housing, health, survival, food security) to enable citizens achieve a minimum standard of living (Pateman, 2006).

In European Union countries there are many different approaches to minimum income under different names, but there are not many real experiences of basic income in the world. Some of them are shown in Table 1.

Table 1: Basic Income approaches in the world

	<b>ALASKA</b>	<b>CANADA</b>	<b>MEXICO</b>	<b>GREECE</b>	<b>BRAZIL</b>	<b>CUBA</b>	<b>NAMIBIA</b>
<b>CONCEPT</b>	Partial Universal BI without income requirements	Universal Benefit. Part of it without income requirements	Universal Benefit	Partial Universal BI	1) Partial income if the salary is less than twice the minimum salary 2) A family grant per child	BI in kind. Basic Goods.	Universal BI
<b>BENEFICIARIES</b>	Residents	Retired Residents	Retired Citizens	Retired Citizens	Residents	Citizens	Citizens
<b>FUNDED BY</b>	Government by way of oil Fund	Federal Government	Government	Government	Government	Government	Government

Source: Own work

Perhaps, the most important one may be the Alaska oil dividend (APFC, 2009) because it is currently the only full basic income programme. Other approaches that could be considered as basic incomes are the Canadian universal pension to all Canadian citizens or legal residents over 65 (Service Canada, 2012), the universal citizen's pension in the Federal District of Mexico for all over 68's, regardless of their socioeconomic characteristics, and the basic pension that is to be implemented in Greece as a result of the social security reform undertaken by the Greek state (Nektarios, 2012a). This system will see the state pay € 360 to pensioners, regardless of whether or not they reach the minimum requirement for the contributory pension (Nektarios, 2012 b). Other programmes include the Guaranteed Minimum Income Programme and Basic Low Income in Brazil. The income in kind programme in Cuba assures that everyone is provided with certain basic goods to meet their minimum nutritional requirements. Finally, the Basic Income programme of Otjivero village in Namibia, which provides \$10 per month to improve nutrition and housing or even for investment in small businesses (Van den Bosch, 2011), has substantially improved living conditions (Haarmann, 2012);

## 2.2. Implications

The four pillars theory proposed by ILO (2012) is based on the fact that in most countries the pension system comprises: 1) a compulsory first pillar, financed by a pay-as-you-go system; 2) the occupational pillar, focused on funded systems; 3) a voluntary pillar through individual savings. In this sense, BI helps to redefine the previous pillars due to:

- i) It assures a minimum income for the whole population (Herce *et al*, 2003) by unifying existing subsidies. This enables different kinds of subsidies under Pillar 1 to be homogenised. Moreover, there would be no need to demonstrate continuously that recipients meet the requirements for assistance, which would avoid deterioration in the dignity and autonomy of persons (Harvey, 2005). It could become the basic national social protection system (ILO, 2012). If the final amount is above the poverty level it could help put an end to poverty (Raventós, 2007), and it can reduce the number of people on low incomes (Standing, 2011).
- ii) It can be seen as a negative income tax. The proposal, supported by authors such as Friedman (1966), Tobin (1966) and Meade (1993) guarantees a minimum income level. This minimum income is usually near the poverty threshold or the minimum welfare benefit for the entire population.
- iii) The "second cheque" is a salary payment to offset cuts in salary due to reductions in working hours. This measure can be applied to promote employment (Gorz, 1991) and thereby allow individuals to move gradually towards retirement while ensuring a fixed income to meet living expenses. This measure helps to reduce gender inequalities since a lot of women do not earn a full working wage (Khosla, 2003; Stephenson *et al* 2003, Evans 2008). On the other hand, it could also help youth emancipation (Lo Vuolo, 2008)
- iv) Basic income provides an income related to a "socially useful" task. This can be seen as civil service (Zoll, 1995; 1998), participation income (Atkinson, 1995a; 1995b), a certain number of hours of social work (Gorz, 1992) or minimum income related to a flexible participation condition (Vanderbrouke, 1997). This measure avoids the costs of social assistance, poverty, unemployment and non-take-up (Atkinson 1991).
- v) Basic income could allow senior workers and retirees continue in part-time working, contributing to society and to their own personal well-being (Freysson, 2011). It could promote to "spontaneous sharing" of employment by making it

possible and desirable for many individuals to work fewer hours. Other workers can then fill the "space" that they leave free. It also allows greater freedom in the allocation of time and remuneration for work (paid, domestic and voluntary) (Van Parijs, 1998) and can help to place most of the population within the economic and production system (Whitehouse et al, 2009). For the employer, it mitigates the personal exchange risk aversion and allows innovation (Arcarons et al 2010).

In the last 25 years the number of individuals in the retirement age has increased, however their physical capacity is not diminished, so they could still be in the labour market (Giarini, 2012). Therefore, it could be necessary to reorganise pensions by establishing a basic income. It is a need to establish conditions to reorganise the last years in work in the fourth pillar (i.e. the maximum working age, gradual and partial retirement, etc.), and this will allow for greater labour flexibility, increase working years with part-time periods, foster personal development among the elderly, allow better distribution of useful time, etc.

The decision to retire is a very difficult one, sometimes it is not voluntary and it is usually not reversible, even if the worker is physically in optimal condition. If the worker leaves his/her job for a long period of time, he/she loses skills, technological expertise and practical abilities (Ostaszewski, 2012). By providing an income floor, basic income can allow gradual, flexible retirement.

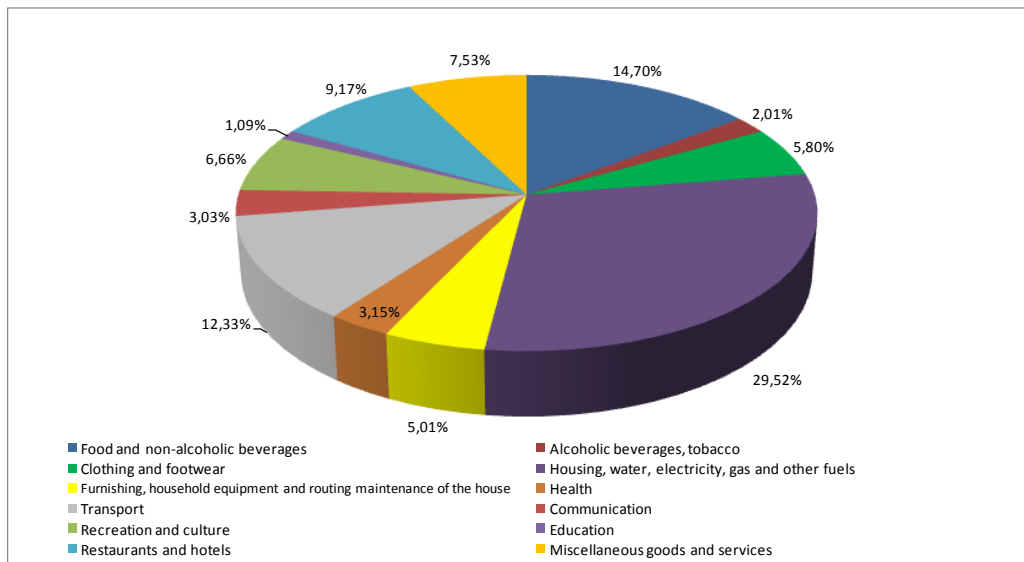
### **3. METHODOLOGY**

#### **3.1. The Household Budget Survey (HBS)**

To determine the amount of the BI one must focus not on each individual's income but on the uses to which it is put. It is more appropriate to use the level of spending on a range of products that serve to maintain an adequate standard of living (Storms & Van der Bosch, 2009), since what income level is deemed adequate in a region may not always be explicit (Figari, Matsaganis & Sutherland, 2013).

Basic income must meet the requirements for spending on the necessities of life. There are many variables that influence consumption patterns: age, gender, education level of the household head, size and class of the household, etc., This information can be obtained from standard household budget surveys (European Commission -EC-, 1999).

Graph 1: Percentages of spending according to the Household Budget Survey (2010)



Source: Own work with micro-data from the 2010 HBS (Household Budget Survey)

The sample used in this paper is made up of 22,203 households, and the average values for the principal expenses groups in Spain for 2010 are shown in Graph 1. Although the survey is conducted per household, all the expenses are per capita. This provides a great deal of information about the kind of expenses incurred by each family in line with the level of total expenses. For instance, it is noteworthy that in the case of Spain most homes are owner-occupied. Thus, 40% of total expenditure on housing, water, electricity, gas and other fuels (29.52% of all spending) is due to the attributed rent, determined as the cost of the hypothetical rent that would be paid if the home were not owned by the occupants.

There is considerable empirical evidence that in this type of survey income measures carry a high degree of error (Johansson, 2007), since usually the real income is less than currently declared and households try to conceal benefits received. Therefore our focus is on the total current costs per household as a proxy for household income. On the other hand, taking into account that basic income is not normally focused on families but on individuals, or alternatively on homogeneous households, the figure to be considered is not household spending but individual one. Indeed, in the income Survey the data collection unit is the household but the emphasis is on the individual. An analysis of the information in the survey conducted in 2010 for Spain (Graph 1) shows that almost a third of expenditure goes on paying for housing or its maintenance (Group 4: Housing, water, electricity, gas and other fuels). Spending on food (Group 1: food and non-alcoholic beverages) at 14.70%, transport at 12.33% (subgroup 7.3 public transport) have relevant weights in the consumer basket. By contrast, little weight is given to education (1.09 %) and health (3.15 %).



The expenditures considered as essential are those that have most weight within the structure of twelve standard expenditure items. In that sense they are basic goods<sup>1</sup>, and we focus our analysis on them since we consider them as vital, necessary to survival and therefore to be covered by BI.

We have considered that these goods are necessary, vital or primary for survival: food, clothing and footwear, housing and public transport are independent of the time in which individuals live. Consumers do not begin to worry about other goods until the basic-needs goods are covered (Maslow, 1943), and those goods are difficult to cover for persons who live below the poverty line (Guio, 2005).

### 3.2. Main factors

Our proposal is that the basic income proposal should include differentiated factors to discriminate the final amount to be paid to each citizen according to what type of household they belong to. There are many features in a household that render current expenditure distinctive. In general, economic needs increase as the number of family member increases, but not proportionally (Ando and Modigliani, 1957). Moreover, the region where the household is located also affects expenditures in terms of differentiated prices.

In general, with the exact number of factors that affect it being unknown, the household basic income would be set up as a fixed amount plus variable amounts that depend on household characteristics (number of individuals, dependents, location, etc.) as follows.

The basic income for a household “h” is

(1)

where

- : Basic income of the household “h” that corresponds to quartile % of income and year “t”.
- : Constant basic income for every individual in the household who corresponds to quartile % of income and year “t”.
- : Number of individuals in household “h” in year “t”.
- : Differential of basic income for factor “j”, which corresponds to quartile % of income and year “t”.

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<sup>1</sup> are defined with an income elasticity demand that is positive (but less than 1) (Bleichmar, 1977)

$s$  : Number of different factors.

$i$  : Number of individuals in the household concerned with factor “ $j$ ” for year “ $t$ ”.

$s_j$  and  $i_j$  could be equal or different depending on the number individuals affected by the factor. For instance if the factor is the region where the household is located, all individuals are affected, so  $s_j = i_j$ . But if it is the number of dependents (members up to 14 years old) in the household then usually  $s_j > i_j$ .

”Basic goods” expenditure is classified in quantiles (from lesser to greater value) according to the total expenditure of households. We develop a quantile regression to determine the influence of the different factors or characteristics of the household. If they are significant they will be the instrument that defines the different amounts payable as BI to each citizen according to the characteristics of the household to which he/she belongs.

### 3.3. Econometric methodology

Now, many of the issues that social researchers pay attention, are phenomena related to non-core values of the analyzed variable, ie are important those observations located in the tails of the distribution. One popular analyzed example is how to compensate students that fall in the percentage of lower notes of the distribution or how to care students whose grades are located in the highest part of the distribution. Both groups need different pedagogical actions regarding applied respect to the average group. Similarly, in studies of inequality in wages, income, health, social skills, etc. - an important part of actual research can not be treated statistically in an appropriate way using the usual models that refer to the analysis of the conditional mean (least squares methods).

In the empirical literature, various methods to obtain reliable estimates of the influence of the explanatory variables on the dependent variable, and provide some information about the connection between the interest variable (minimal expenditures, MI) and sociodemographic variables (gender, age, number of children) are used. Most of methodologies assume that the coefficients are constant across the expenditure conditional distribution but there is not, a priori, any reason to suppose this uniformity. The quantile regression method, proposed in this paper, measures the effect of the explanatory variables at various points in the expenditure distribution. The difference in expenditures at various quantiles provides very relevant information about the effects of the considered variables (gender, children, ...) on the expenditure dispersion.

Ordinary least-squares (OLS) regression models look for relationships between one or more covariates,  $X$ , and the conditional mean of a response variable,  $Y$  ( $E(Y|X_i) = X_i'\beta$ ). Quantile regression (Koenker and Bassett, 1978) is a method for estimating functional relationships between variables for all portions of a probability distribution, so quantile regression (QR) models seek the relationship between  $X$  and the conditional quantiles of  $Y$  ( $Q_\tau(Y|X_i) = X_i'\beta(\tau)$ ). This makes it especially useful in applications where extremes are important, such as minimum expenditure studies where lower quantiles of income are critical from a social perspective. This type of regression seeks to extend the ideas of linear regression to the estimation of conditional quantile functions/models in which quantiles of the conditional distribution of the response variable are expressed as functions of observed covariates. That is, whereas OLS estimates the conditional mean of the response variable given certain values of the predictor variables, QR aims to estimate either the conditional median and/or other quantiles of the response variable.

Although most analyses of minimum income have used conventional least squares regression methods it has been recognised that the resulting estimates of various effects on the conditional mean of minimum income are not necessarily indicative of the size and nature of these effects on the lower/upper extreme of the income distribution. Quantile regression offers a natural complement to these prior modes of analysis.

In general, the quantile regression model for the conditional quantile of  $Y$  is:

$$Y_i = X_i'\beta(\tau) + \mu_i(\tau) \quad \text{and} \quad Q_\tau(Y|X_i) = X_i'\beta(\tau)$$

Where:

$Q_\tau(Y|X_i)$  is the  $\tau$ th conditional quantile of  $Y$ <sup>2</sup>.

$X_i'$  is the vector of explanatory variables

$\beta(\tau)$  is the regression quantile coefficient.

$0 < \tau < 1$  is the  $\tau$  quantile.

The estimation of the parameters in the quantile regression is performed through minimizing the following expression

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<sup>2</sup> It is assumed that both the dependent variable and the explanatory variables are observed without error and the equation is correctly specified. In this sense, the measurement error and omitted variables problems are not discussed. In fact if the equation is not correctly specified, for example is not linear in the parameters, one can consider the model as the best linear predictor for conditional quantile Buschinsky (1998).

It is clear that  $\frac{\partial Q_\tau(Y|X_i)}{\partial X_j} = \beta_j(\tau)$ , the estimation of the regression quantiles' coefficients,  $\beta(\tau)$

, can differ across  $\tau$ , so the marginal effect of a particular explanatory variable may not be homogeneous across different quantiles. It is important to note that a quantile regression model proposes different regression lines for different levels of the conditional distribution of Y, which we find interesting in this paper, as the levels of spending in households with lower income levels may not be comparable to the costs of very high income families. Parameter estimates in linear quantile regression models have the same interpretation as those in any linear regression model. The  $\beta(\tau)$  coefficients are rates of change conditional on adjusting for the effects of the other variables in the model, but are now defined for a specified quantile. (Koenker, 2005). It is reasonable to assume that in the lower tail of the expenditure distribution is more likely to have not only less income also less quantity of other variables (i.e. education) that harm the family in terms of expenditures.

#### 4. RESULTS

By using data from the Household Budget Survey for 2010 a basic income is estimated. The sample is made up of 22,203 households and the average expenditure on primary consumer goods obtained is € 4,541.02 (14.70%) on Food and non-alcoholic beverages; € 1,791.43 (5.80%) on Clothing and footwear; € 9,115.95 (29.52%) on Housing, water, electricity, gas and other fuels; and € 3,808.28 (12.33%) on transport services.

The different factors analysed under current expenditure items in the Household Budget Survey are age, the town size in which the household is located (Type 1: 10,000-50,000 inhabitants and Type 2 >50,000 inhabitants), the status of household head (employed, unemployed, retired or other (housewife, student)), the region of Spain in which the household is located and the gender of the household head.

Table 2 shows the coefficients and associated standard errors (in parentheses) for both OLS and QR estimates. The observed dependent variable is an amount per capita of annual average expenditure on primary consumer goods.

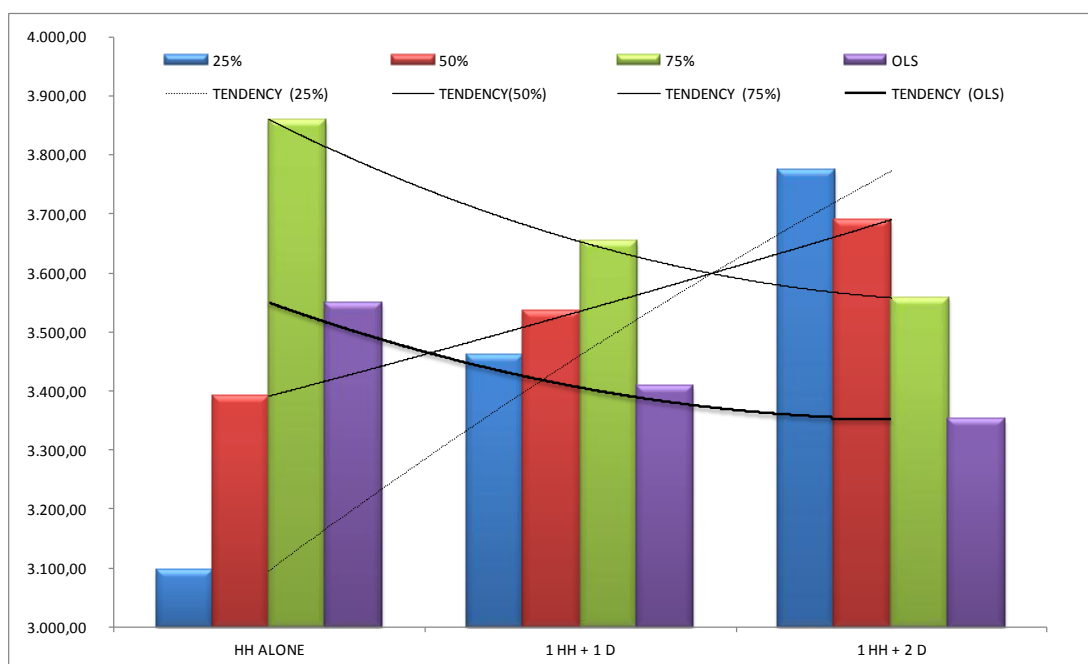
Table 2: Quantile and OLS regressions

		QUANTILE REGRESSION			OLS
		25%	50%	75%	
Age		49.71* (128.07)	50.53* (5.28)	51.83* (4.49)	63.85* (5.81)
Age square		-0.27* (-72.2)	-0.24* (-2.47)	-0.21* (1.97)	-0.28** (-2.7)
Number of dependents (D)		-648.87* (-681.21)	-891.53* (37.99)	-1276.62* (45.12)	-1141.48* (-42.38)
Town	(10.000; 50.000)	508.35* (256.7)	538.74* (11.04)	454.47* (7.27)	567.89* (10.14)
	More than 50.000	214.60* (96.58)	199.36* (3.64)	13.96 (0.21)	96.03 (1.52)
Head of household (HH)	Unemployed	-273.09* (-89.94)	-162.59** (-2.17)	-9.08 (-0.1)	-180.79** (-2.1)
	Retired	216.11* (73.17)	472.01* (6.49)	692.13* (7.88)	429.90* (5.14)
	Other	86.37 (21.71)	555.33* (5.66)	744.56* (6.31)	464.59* (4.13)
Constant		1107.64* (105.36)	1370.20* (5.29)	1786.33* (5.72)	996.38* (3.35)
Income		0.12* (2662.4)	0.16* (141.97)	0.21* (154.89)	0.17* (129.09)
Gender		459.26* (248.29)	685.95* (15.05)	1001.55* (18.23)	845.74* (-16.17)

Note: \*\*\*, \*\*, and \* represent significance at the 10%, 5% and 1% levels respectively. T-statistics are in parentheses. Regional dummies are also included in all regressions.

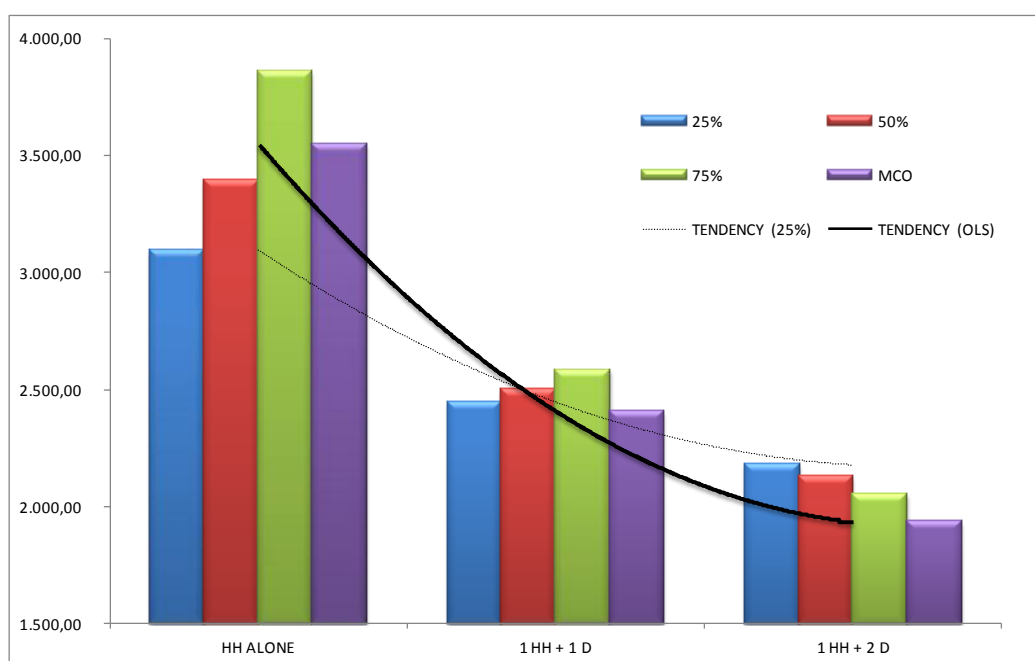
The OLS and QR results determine that all the factors are statistically significant. That is, all the factors influenced current expenditures by the household in its quantile. Moreover, the effect of each factor on BI has several characteristics,

Graph 2: BI based on the number of individuals in the household



- Spending on primary consumer goods per quantile increases in the household when the number of dependents (children under 14) is considered. In this sense, an increment in the number of individuals in the household results in a less-than-proportional increment in budget for 25% quantile, as can be seen in Graph 2. The slope of the 50% quantil is lower than the increase of the 25% quantil. As the family unit has more incomes (75%) and the number of individuals in the household is higher, the amount spent in basic goods diminishes.

Graph 3: BI per capita according to the number of individuals in the household



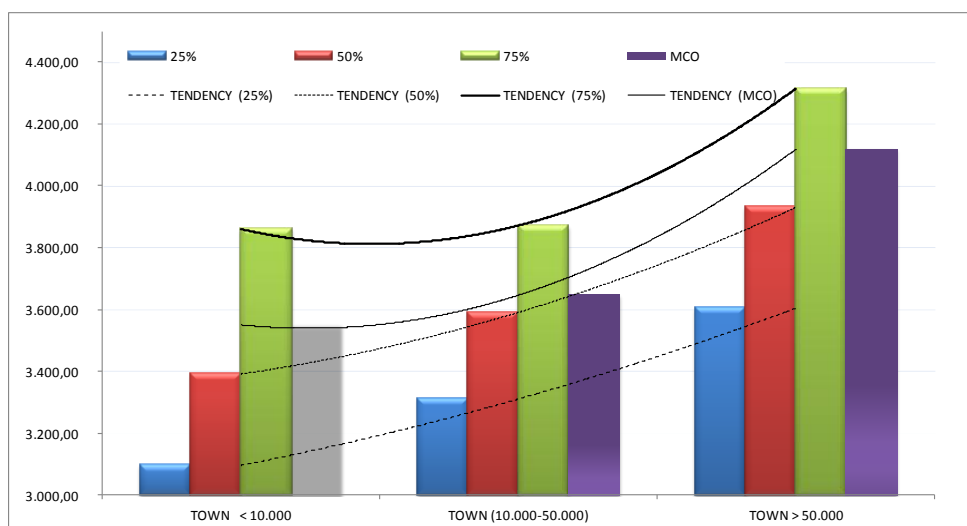
Source: Own work with micro-data from 2010 HBS (Household Budget Survey)

Consequently, the amount of BI per capita in the household increases as the number of members increases (Graph 3), but it does so less than proportionally.

- Spending on basic goods per quantile diminishes in the household if the gender of the household head is taken into account. The budget is lower for men than for women. Likewise, the age of the household head is a positive factor.
- The size of the town where the household lives is particularly influential. The biggest expenditures take place in the towns which have more than 50,000 inhabitants, follow by towns between 10,000 and 50,000 inhabitants and the lowest expenditures take place in

towns with 10,000 inhabitants or less. This implies a high variation in basic income, as shown in Graph 4. This trend holds for both the OLS and for the QR of 25 %.

Graph 4: BI according to the size of the town



Source: Own work with micro-data from 2010 HBS (Household Budget Survey)

- Spending on basic goods per quantile varies widely according to the type of the household head. If the household head is unemployed, he/she spends less than if he/she is employed. He/she undoubtedly adjusts his/her budget to fit his /her lack of income. On the other hand, the biggest spenders are retired persons, follows by “HH working” category. Though the biggest increase per quantile corresponds to the category “unemployed”. This is shown in Table 3.

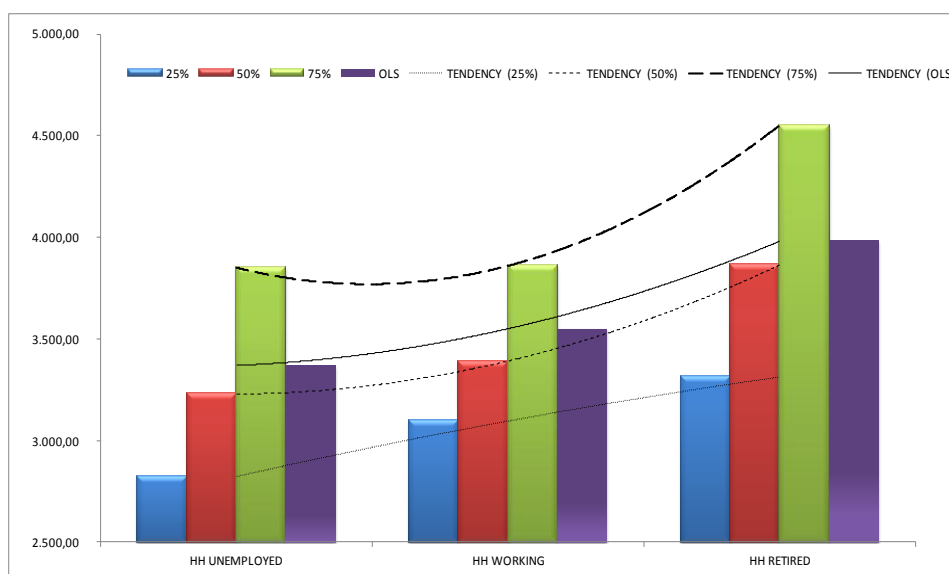
Table 3: BI in euros for an individual depending on the type of household head (HH)

	QUANTILE			OLS
	25%	50%	75%	
HH UNEMPLOYED	2822.94	3228.79	3850.47	3369.51
HH WORKING	3096.03	3391.39	3859.55	3550.30
HH RETIRED	3312.15	3863.40	4551.68	3980.20

Source: Own work with micro-dates from 2010 HBS (Household Budget Survey)

It is possible to analyse the effects of the labour transition and the budget of the household head. In this sense, BI corresponding to a transition from unemployment to employment and finally retirement gives a progressive increase in spending on essential goods over every quartile (Graph 5). This transition has a parallel effect in all quantiles. As expected, the OLS value remains between 25% and 50 % quartile.

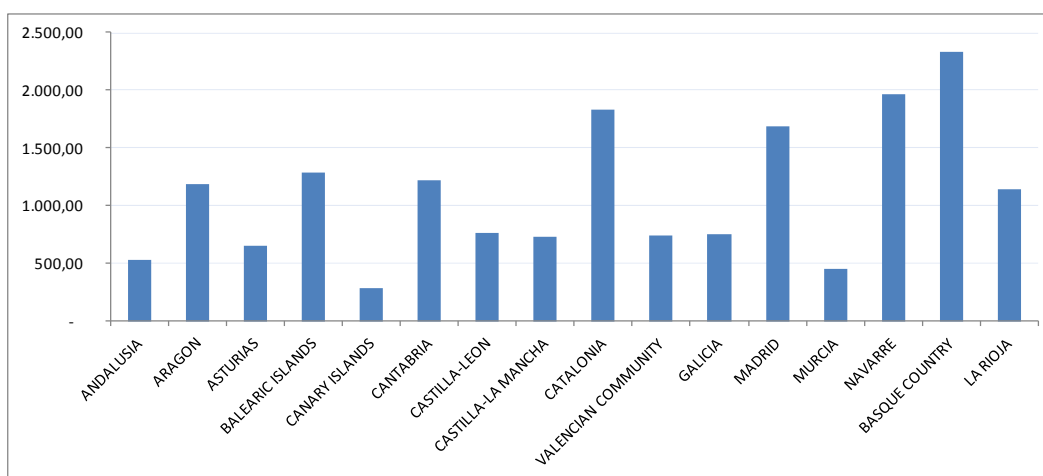
Graph 5: BI according to transition from unemployment to retirement



Source: Own work with micro-data from 2010 HBS (Household Budget Survey)

- In Spain there are different regions with different economical development. In this sense in graph 6 we can observe the differential amount to be paid to a household depending on the region where he/she lives. The characteristics of the own region has influence in the consumption of basic goods. Sometimes there are facilities to have an own self-consumption economy in several regions. However, in other regions the huge offer of services and the number of inhabitants produces higher prices and so, more expensive basic goods.

Graph 6: Differential amount upon the region where the household lives.

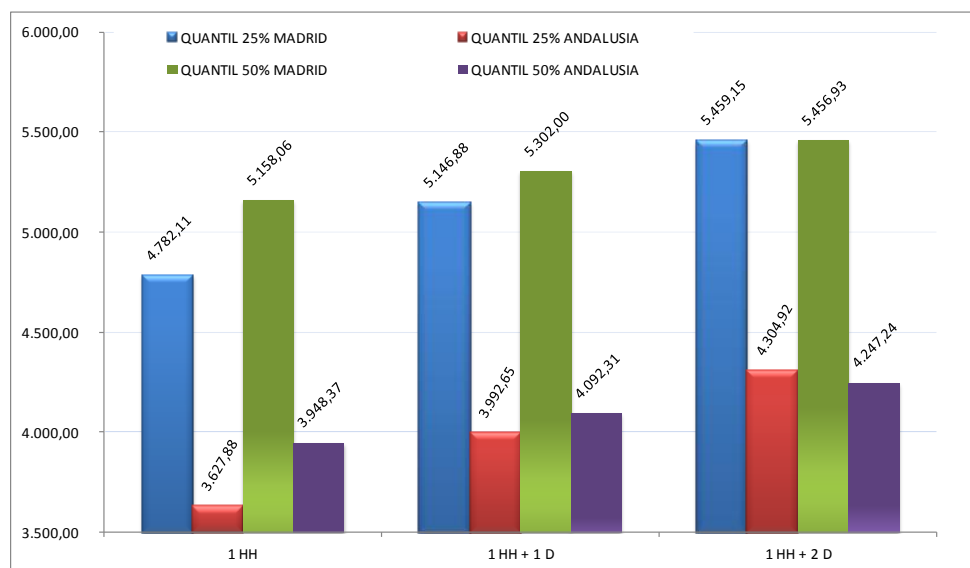


Source: Own work with micro-data from 2010 HBS (Household Budget Survey)



- There are several differences on consumption depending on the kind of region where the household lives. That is a small region plenty of services like Madrid and a wide and agricultural region as Andalusia. If we analyse the spending on basic goods per quantile taking into account these regions, we can see that the consumption of basic goods is higher in Madrid than Andalusia. That is, the people who live in industrial regions spend more in basic goods than the others who live in agricultural regions as could be observed in graph 7.

Graph 7: BI according to the Region. Madrid versus Andalusia for quantil 25% and 50%



Source: Own work with micro-data from 2010 HBS (Household Budget Survey)

## 5. CONCLUSIONS

This paper provides estimations of a new benefit model referred to as Basic Income for Citizens, which could serve to readapt the system of national benefits that is in force. We estimate its amount for different main characteristics of citizens. To that end it is necessary to estimate current expenditure on basic goods using microdata based on model households (Nelson, 2010; Van Mechelen et al, 2011; Immervoll, 2012; Figari, Matsaganis & Sutherland, 2013). We follow such an approach for the case of Spain.

With respect to the first objective of this paper, i.e. determining whether basic income could be a tool for improving the zero pillar and permitting the personal and professional development of citizens, BI would allow greater labour flexibility and would permit an extension of working years through part-time periods by offsetting the reduction in salary due to the reduction in working hours (Gorz, 1991), and would thus foster the personal development of the elderly (helping them to feel good) (Freysson, 2011), and ensuring a better distribution of useful time

(Van Parijs, 1998), etc. Basic income allows to protect ourselves from social risks and resulting insecurities, becoming a powerful tool to combat poverty and inequality.

With respect to the other objective set, the evidence presented here suggests that there are many factors that influence spending on essential goods. Some of them must not be taken into account, precisely because they are counter to the definition applied here and would entail discrimination (e.g. gender discrimination). In this sense, BI helps to reduce gender inequalities (Khosla, 2003; Stephenson et al 2003, Evans 2008).

The major and highly significant factors to take into account to determinate a basic income for each citizen are the following ones:

- Number of dependents in the household. When the number of members increases, consumer spending in basic goods becomes higher so, a bigger budget is needed to meet essential expenses. Nevertheless, it is shown that the increase is not proportional. The household as a group produces synergies and as the number of members increases the amount per capita falls.
- Size of the town where the household is located. The place of residence has a direct effect on minimum essential spending. In case of Spain there are several regions where lower spending is required to acquire the same essential goods.
- Age of the household head. This factor is significant, and entails a higher BI when the age increases.
- The region where the family lives. The characteristics of the own region has influence in the consumption of basic goods. The huge offer of services and the number of inhabitants produces higher prices in several regions (Madrid; Basque Country; Catalonia) and so, they have to spend more for the same basic goods.

The current crisis is likely to lead to a thorough revision of minimum income schemes in several EU countries. To meet the challenge of providing a basic income benefit scheme capable of becoming an efficient tool, it is necessary to extend cover to all citizens, building up a social contract between society and governments, helping to place most of the population within the economic and production system. In this sense BI could become the basic national social protection system (ILO, 2012).

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