

Session Number: Poster Session II
Time: Thursday, August 28, 17:30-18:30

*Paper Prepared for the 30th General Conference of
The International Association for Research in Income and Wealth*

Portoroz, Slovenia, August 24-30, 2008

Title of Paper

**“The vulnerability of households to poverty: the role of household wealth in Spain
and in the United Kingdom”**

Author(s)

Francisco Azpitarte

For additional information please contact:

Name: Francisco Azpitarte

Affiliation: Universidade de Vigo

Full mailing address: Facultade de Economía, Campus Lagoas Marcosende s/n, 36310 Vigo, Pontevedra.

Email address: azpitarte@uvigo.es

This paper is posted on the following website: <http://www.iariw.org>

Introduction

Important contributions to welfare economics have recognized the multidimensional character of poverty.¹ Despite these contributions, families' well-being has been traditionally identified with family income in regular poverty analysis. Actually, the official poverty measures in both the U.S. and the U.E. countries are based on household income data. However, as Bourguignon and Chakravarty (2003) conclude, "income as a sole indicator of family well-being is inappropriate and should be supplemented by other attributes and variables ...". In this sense, the idea of vulnerability constitutes a relevant recent refinement in the economics of poverty (Chaudhury 2001, Pritchett et al. 2000). Individuals are exposed to uncertainty and face real risk of suffering economic deprivation, which represents an important cost in terms of household welfare. Consequently, families are willing to insure against poverty risk. In particular, assets are the main instruments households have for doing so.²

Thus, wealth is central to the economic security of households as it is the main source of liquidity in times of economic hardship such as those derived from unemployment, sickness or family break-up. Furthermore, the lack of assets may prevent poor households from taking risky actions that would imply a future increase in household welfare, such as running a new business or quitting a job in order to look for a more desirable one. This, in turn, may lead to a situation of chronic vulnerability to poverty as these households move progressively towards a poor-welfare steady state characterized by low levels of both income and wealth (Barret and McPeak, 2006)

The important contribution of assets to family well-being has been only partially considered in the traditional income-based welfare approach. Indeed, the only contribution of wealth to household welfare that standard income measures account for is the direct income flows provided by assets. However, beyond the income contribution, assets are welfare enhancing as they reduce the vulnerability of households to economic shocks that may lead them to suffer some form of economic deprivation. Thus, other things being equal, households with accumulated wealth are clearly better off than those with no wealth because of the protection against future contingencies provided by assets.

The aim of this paper is to look at the security contribution of wealth to households' welfare. Thus, our first goal is to measure and characterize asset-poor households in Spain. In particular, we want to look at those households that lack enough savings to sustain them during a period of economic hardship. We argue the identification of these households is an important issue for welfare policy design as it allows to identify unprotected households that are more vulnerable to income shocks and consequently more likely to experience economic deprivation in times of economic crisis. Our analysis contributes to improve our knowledge about households' well-being and complements previous research on poverty in Spain that uses equivalent household income as welfare indicator (Cantó et al. 2007, 2006, Bárcena and Cowell 2006, Ayala and Palacio, 2000), by looking at the vulnerability dimension of welfare that cannot be measured by means of current household income.

To the best of our knowledge, this is the first work that looks at the extent of asset poverty in Spain. In our purpose, we use the first wave of the Spanish Survey of

¹ Kolm (1977) and Atkinson and Bourguignon (1982) are among the first works that defend the multidimensional approach to the measurement of well-being. More recently, Tsui (2002) and Bourguignon and Chakravarty (2003) propose alternative measures that take into account the multidimensionality of poverty.

² The role of savings as insurance mechanism relates to the precautionary motive for saving, which induces people to build up a reserve against unforeseen contingencies. For an excellent survey on the saving behaviour literature see Browning and Lusardi (1996).

Household Finances (Encuesta Financiera de las Familias, EFF) conducted by the Bank of Spain in 2002, which is the first survey that provides detailed information about the wealth holdings of Spanish households.³ Previous research on wealth poverty is mainly limited to the U.S. Thus, Caner and Wolff (2004) analyse the evolution of asset poverty in this country in the period 1984-1999 and they find that despite a sharp decline in the poverty rate the severity of asset poverty increased during this period. Moreover, their results show that young households, whose head is not working or low-educated are more likely to be asset-poor than others. Furthermore, there has been many attempts to integrate wealth into welfare analysis in this country (Zagorsky 2006, Short and Ruggles 2006, Caner and Wolff 2004, Ruggles and Williams 1989, Weisbrod and Hansen 1968). The results of these studies show that the economic position of the aged improves significantly when wealth is included in the measure of economic resources.⁴ Indeed, the inclusion of wealth reduces significantly the poverty rates among the elderly, while poverty among the non-elderly remains almost unaltered.

On the other hand, the second goal of this paper is to compare the results regarding asset-poverty in Spain with those obtained for the United Kingdom. This comparison is interesting for various reasons. Thus, these countries differ importantly regarding the generosity of the social protection system, with the Spanish system being less generous than the British one. As a consequence, the incentives households have for saving are not the same in the two countries,⁵ which may lead to differences on the extent of asset-poverty. Most importantly, the comparison is interesting due to the differences in the demographic structure and the household formation process observed between these two countries (Duclos and Mercader-Prats, 1999). Thus, in Spain, as in other Mediterranean countries, the share of young people living with their parents and the proportion of elderly coresiding with an adult is traditionally larger than in Northern European countries like the United Kingdom (Reher, 1998). Consequently, the household structure of this two countries will differ importantly regarding the age distribution and the type of living arrangements, which, given the important variation in saving behaviour and accumulated wealth over the life cycle (Gourinchas and Parker, 2002) will condition the number of asset-poor households. We provide evidence on the link between the household structure and the incidence of poverty. In particular, we apply counterfactual analysis to measure the contribution of the demographic structure to differences in asset poverty rates. Our results suggest that in the case of the United Kingdom and Spain this contribution is significant.

The rest of the paper is organized as follows. Section 2 describes the data sources we use in the analysis. Section 3 shows the portfolio composition of Spanish and British households. In Section 4 we look at the incidence of asset poverty and the identification of asset-poor households in Spain and the United Kingdom and we summarize the main differences between the household structure of these two countries. We end this section with the details and the results of the decomposition of the poverty gap using counterfactual analysis. In Section 5 we analyse the correspondence between asset and income asset poverty. Finally, Section 6 offers some conclusions.

³ Of course, the absence of previous research on this issue is motivated by the lack of appropriate data and not because of the lack of interest.

⁴ All these works apply the income-net worth approach proposed first by Weisbrod and Hansen (1968). According to these authors, the household's economic welfare is equal to its current income plus the annual lifetime annuity value of its current net worth.

⁵ Hubbard et al. (1995) demonstrate theoretically that social insurance programs with means based tested on assets discourage saving by households, especially by those with expected low permanent income.

Data Sources

The first goal of this paper is to quantify and to identify asset-poor households in Spain. For this purpose, we draw on data from the first wave of the Spanish Survey of Household Finances (EFF) conducted by the bank of Spain in 2002.⁶ The EFF is a survey on wealth aimed to provide detailed data about the wealth holdings of Spanish households. Thus, the first wave contains information about the ownership status and the value of a wide range of real and financial assets, as well as information on the debt holdings of household's members. For the United Kingdom we use data from the tenth wave of the British Household Panel Survey (BHPS) conducted by the Economic and Social Research Council (ESRC) in 2000.⁷ The BHPS is an annual survey that provides multiple socio-economic information about British households since 1991. In particular, every wave of the BHPS contains data on the value of the principal residence, other real state, the net value of vehicles, and the mortgage debt own by the household. Moreover, in the tenth wave this information is complemented with an specific module where household's members are asked to report the value of financial assets and the non-mortgage debt, which makes this wave of the BHPS the best suitable available dataset to describe British households' wealth.⁸ The information in the EFF allows us to construct a broad net worth measure for Spanish households. This variable is defined as the total value of real and financial assets minus the current value of debts. Real assets are defined as the sum of the gross value of owner-occupied housing, other real estate, business equities related to self-employment, vehicles, collectibles⁹ and other consumer durables. Financial assets include the current value of transaction and saving accounts, total bonds, stocks, mutual and investment funds, private pension schemes, life insurance and other financial assets. Finally, the value of total debt is the sum of mortgage debt, which includes all outstanding loans households have on the principal residence and other real state, and the value of non-mortgage debt, which is the sum of all financial commitments with non-mortgage guarantee. Importantly, the BHPS does not provide information on some of these assets.¹⁰ Thus, in order to allow comparability, we define a common net worth measure that only includes those items reported in both surveys.¹¹ This variable is defined as the sum of real and financial assets minus the value of debts, where real assets include the gross value of owner-occupied housing, other real state and the net value of vehicles; financial assets are defined as the sum of the current value of saving and deposits accounts, total bonds, stocks, mutual and investment funds

⁶ For a detailed description of the methodology used in the first wave of the EFF see Bover (2004).

⁷ For a detailed description on the methods used in the BHPS see Taylor et al. (2007).

⁸ Indeed, this dataset has been included in the Luxembourg Wealth Study (LWS) to provide information about British households' wealth. The LWS is an international project launched in 2003 whose primary goal is to harmonize existing micro data on wealth. For a discussion about wealth surveys comparability and some preliminary results using LWS database see Sierminska et al. (2007).

⁹ The category of collectibles includes the value of jewellery, works of art, and antiques.

¹⁰ Thus, the British survey does not provide the value of business equities, consumer durables other than vehicles, transaction accounts, private pension schemes, and life insurance programs. A detailed comparison of the information included in the BHPS and the EFF is presented in the appendix.

¹¹ The cost of comparability can be measured by the weight excluded assets have of the Spanish portfolio. In our case these assets represent about 15 percent of Spanish total assets.

and other financial assets;¹² and the value of debts is the sum of mortgage and non mortgage debt. Moreover, in some parts of the analysis we decompose this net worth measure in its two main components, that are, housing and non-housing wealth. The former is defined as the sum of the net values of the principal residence and other real state owned by the household, while non-housing wealth includes the rest of real and financial assets and the value of non-mortgage debt.

In the BHPS every individual who has financial assets or non-mortgage debt is asked to report if it is held on her sole name or if it is jointly held with someone else. The possibility that an asset or debt may not be held solely by one individual creates obvious problems when generating any measure of household wealth. Following Banks et al. (2003) we address this issue with a bounding approach. In particular, we construct an upper and a lower bound for those assets and debts in which joint ownership is reported.¹³ Then, we use these values to compute an upper and lower bound of household net worth. Thus, to compute the upper value we add the upper bound of financial assets and subtract the lower bound of the non-mortgage debt, whereas the lower bound is computed using the lower bound of assets and the upper bound of the debt component. Fortunately, the results we get are not sensitive to the alternative employed.¹⁴ The first wave of the Spanish survey includes a sample with 5,143 households. The EFF provides complete information on households' wealth holdings even if they fail to respond to a complete questionnaire. This is because in this survey this problem is corrected using a multiple imputation method¹⁵ that provides five imputed values for each missing value, which allows for the construction of five complete datasets. In the tenth wave of the BHPS only 5,321 households out of the 8,761 initially interviewed report all the information required about wealth holdings. To control for the potential bias this selection may cause, we weight each complete observation with the inverse of the probability that a household completes the full questionnaire.¹⁶ An important difference between the Spanish and British sample is the oversampling of the wealthy. Thus, this group of households are only over-represented in the Spanish sample. However, since we focus our attention on the wealth holdings of those at the bottom of the distribution, this difference in sample design is not expected to play a role when performing comparisons on asset poverty between the two countries.

Both the EFF and the BHPS also contain data on the different sources of income. In particular, we work through this analysis with household annual gross income (before taxes and contributions to the Social Security System). This variable is the sum of capital income, wages and salaries, self-employment earnings, unemployment benefits, private and public retirement pensions and other transfers received by any household member.

¹² In the BHPS, data on these assets is collected in two broad categories denominated savings and investments, where the first one includes the value of saving accounts and deposits, while the second one reflects the value of fixed income securities, investment funds, shares, and other financial assets.

¹³ The upper bound is computed assuming that any jointly held asset is held solely by the individual, while the lower bound is calculated assuming that the individual only owns a fraction $1/N$ of the asset, where N is the number of adults in the household.

¹⁴ Indeed, the results we present henceforth are computed using the upper bound of wealth holdings. The results with the lower bound are available from the authors upon request.

¹⁵ The imputation method is the Federal Reserve Imputation Technique Zeta (Fritz). This is a stochastic method with a sequential and iterative structure. For more details see Kennickell (1998 and 2000).

¹⁶ We estimate this probability by means of a regression on household characteristics. The details of the estimation are described in the appendix.

Finally, the unit of analysis we use in this paper is the household. In both surveys a household is defined as including all individuals living together in the same dwelling, but sharing expenses is an additional requirement in the case of Spain. Moreover, since we are interested on the capacity families have to overcome times of economic crisis using accumulated wealth holdings, we take into account differences in needs across households. For doing so, we compute the equivalent values of both income and wealth variables using the modified OECD equivalence scale which weights the first adult by 1, by 0.5 the second and subsequent adults and by 0.3 every household member below 14 years of age.

The Asset portfolio

A central reason why households want to accumulate assets is because they are exposed to risk and uncertainty. Wealth contributes to household's welfare as it guarantees a floor of economic resources in times of economic hardship. Then, an important question households face is the decision about the type of assets they want to accumulate. Thus, non-liquid assets as owner occupied housing or consumer durables are usually acquired to provide direct consumption services and therefore are not likely to be depleted during bad times. Instead, more liquid assets like bank accounts or deposits, reflect better the resources available for times of economic stress as they are more easy to liquidate. Apart from household preferences and asset prices, the decision about assets depends is very influenced by institutional factors like the provision of social security or health, as they affect households' incentives to save for precautionary reasons (Banks et al., 2003). In fact, available evidence shows that the way households protect themselves against future risk varies significantly across countries (Sierminska et al. 2007).

We start our analysis by looking first at the asset portfolio composition of Spanish and British households. In particular, in Table 1 we show, for each wealth component, both the percentage of households owning the component and its share in total assets. For the case of Spain, two versions of the portfolio are presented: first, we consider every asset for which information in the EFF is provided; second, in order to make a comparison of the Spanish and the British portfolios we include only those assets for which information is reported in both the EFF and the BHPS.

As it has been already documented in the literature, Spain exhibits a large preference for less-liquid assets, especially for housing wealth (Bover 2004, Christensen et al. 2005). Thus, almost 82 percent of Spanish households own their main residence and more than 30 percent own another real state. These figures are rather high if compared with those of the United Kingdom, where the rates of ownership about 70 and 7 percent, respectively. Thus, real assets have a larger importance in Spain than in the United Kingdom. Indeed, their share in the Spanish portfolio it is above 88 percent whereas in the British one it is around 82 percent. Conversely, the figures reveal a larger preference of British households for more liquid assets. Indeed, for every financial asset for which information is reported in both surveys, the rate of ownership in the United Kingdom is larger than in Spain. This explains the larger weight these assets have on the British portfolio (above 17 versus 9 percent, respectively). Finally, for both mortgage and non-mortgage debt, the number of households with debt in the United Kingdom is larger than in Spain, which explains why the debt component represents about 19 percent of the British portfolio while in Spain its share is below 10 percent.

Table 1
The portfolio composition in Spain and the United Kingdom
(all variables in percentage, n.a.= not available)

| | Spain | | | United Kingdom | |
|-----------------------------|-------------|-------------------|----------------------------------|----------------|--------------------|
| | % of Owners | % of total assets | % of total assets ⁽¹⁾ | % of Owners | % of total assets |
| Real Assets | | 88.3 | 91.0 | | 82.3 |
| Principal residence | 81.9 | 52.2 | 64.4 | 69.1 | 71.3 |
| Other real estate | 30.1 | 18.6 | 23.0 | 7.5 | 8.2 |
| Vehicles | 73.7 | 3.3 | 3.6 | 69.6 | 2.9 |
| Business equities | 11.5 | 6.6 | | n.a. | |
| Other consumer durables | 100.0 | 7.6 | | n.a. | |
| Financial Assets | | 11.7 | 9.0 | | 17.7 |
| Saving and deposits | 16.8 | 2.1 | 2.6 | 73.6 | 8.3 |
| Shares | 12.5 | 3.2 | 4.0 | 25.0 | 9.4 ⁽³⁾ |
| Mutual and investment funds | 7.2 | 1.1 | 1.4 | 17.8 | |
| Fixed income securities | 1.9 | 0.2 | 0.3 | 28.5 | |
| Other financial assets | 4.5 | 0.6 | 0.7 | 5.1 | |
| Current accounts | 97.7 | 2.5 | | n.a. | |
| Private pension schemes | 23.1 | 1.7 | | n.a. | |
| Life insurance programs | 1.1 | 0.2 | | n.a. | |
| Total | 100 | 100 | 100 | 100 | 100 |
| Debts | | 7.6 | 9.4 | | 19.2 |
| Mortgage debt | 28.1 | 6.3 | 7.8 | 40.5 | 17.5 |
| Non-mortgage debt | 24.9 | 1.2 | 1.5 | 43.5 | 1.7 |

Source: Author's calculation using EFF 2002 and BHPS 2000

(1) Total assets adjusted for comparison with the United Kingdom. It includes the value of principal residence, other real state, net value of vehicles, savings and deposits, shares, mutual and investment funds, fixed income securities, and other financial assets.

(2) It is the share accounted by investments including shares, mutual and investment funds, fixed income securities, and other financial assets.

Asset Poverty in Spain and the United Kingdom

Definitions and Poverty rates

We want to identify vulnerable households that cannot rely on their wealth holdings to sustain them during a period of economic hardship. The wealth variable we use is the equivalent household net worth described above. Regarding the definition of a period of hardship, we follow previous works in the literature and we will consider as asset poor households those households that are not able to maintain themselves by running down their wealth during three months.¹⁷ More precisely, we will use three definitions of asset poverty already proposed in the literature. First, we consider as asset-poor every

¹⁷Caner and Wolff (2004) argue that the expected duration of an unemployment spell in the United States is around three months. In Spain and the United Kingdom the average unemployment period is about eight and ten months, respectively (Tatsiramos, 2006). Despite this difference, we keep the three months period to guarantee comparability with previous results in the literature.

household with net worth less or equal to zero. Clearly, these households will be unable to maintain any minimum welfare level in times of economic crisis, which is the main idea underlying the concept of asset poverty. Second, following Caner and Wolff (2004), we consider a household as asset-poor if its equivalent net worth is not sufficient for sustaining household members above the monthly income poverty line during more than three months.¹⁸ This definition differentiates from that used by these authors in that we use a relative poverty line instead of an absolute one.¹⁹ We argue this election is consistent with the relative criterion adopted in the official estimation method of income poverty in the European Union.²⁰ Thus, given our interest on the capacity of Spanish and British households to overcome periods of income poverty, we claim the relative approach is more suitable than the absolute one. The third definition of asset-poverty we use is related to that in Hubbard et al. (1995). According to this criterion a household is identified as asset-poor if its equivalent net worth is smaller than its quarterly household equivalent income.²¹ Recall, that these definitions only differ regarding the minimum welfare level required to maintain by means of wealth holdings, which allows us to check the sensibility of our results to the way poverty is measured: thus, in the first one this level is equal to zero, in the second it is equal to the monthly income poverty line, whereas in the last one the poverty line is set at the current quarterly household income.

Table 2 reports the poverty rates for both countries. In Spain, the incidence of asset poverty ranges between 0.4 and 2.5 depending on the definition of poverty considered. By wealth components, the incidence is larger for housing than for non-housing wealth. Indeed, about 15 percent of Spanish households are identified as poor in terms of housing wealth, whereas this percentage is between 1 and 7 percent in the case of non-housing wealth. As expected, asset poverty rates in Spain increase when wealth variables are adjusted for the comparison with the United Kingdom.²² This is especially true for non-housing wealth, as the poverty rate increases from 1 to 32 percent. The cause of this increment is that some of the items excluded for comparison, like current accounts or other consumer durables, have a large importance in the portfolio of Spanish households, especially for those at the bottom of the distribution (Azpitarte 2008, Bover 2007), which may explain the large increase in the poverty rate.

¹⁸The poverty line is set equal to 60 percent of the monthly household equivalent income.

¹⁹ In particular, Caner and Wolff (2004) identify as asset-poor those households that lack enough wealth resources to meet its basic needs during three months, where basic needs are measured using the family-size conditioned minimum consumption thresholds computed using the Consumer Expenditure Survey.

²⁰ We refer to the so-called Laeken poverty indicators, which are aimed to monitor the progress in fighting against poverty and social exclusion in European Union countries.

²¹ Hubbard et al. (1995) define "low-wealth" households as all households with net worth less than annual income.

²² However, this change is more quantitative than qualitative, as suggested by the slight variations we found in the asset poverty profile described in the next section.

Table 2
Asset Poverty in Spain and the United Kingdom
(percentage of households)

| | Spain ⁽¹⁾ | Spain vs. United Kingdom ⁽¹⁾ | |
|--|----------------------|---|----------------|
| | | Spain | United Kingdom |
| Net Worth | | | |
| % with nil or negative wealth | 0.4 | 6.9 | 14.3 |
| % with wealth \leq 3 x monthly income poverty line | 2.2 | 10.4 | 23.2 |
| % with wealth \leq quarter income | 2.5 | 11.4 | 24.7 |
| Housing wealth | | | |
| % with nil or negative wealth | 15.4 | 15.4 | 29.9 |
| % with wealth \leq 3 x monthly income poverty line | 15.7 | 15.7 | 30.5 |
| % with wealth \leq quarter income | 15.9 | 15.9 | 31.7 |
| Non-housing wealth | | | |
| % with nil or negative wealth | 1.1 | 32.1 | 29.4 |
| % with wealth \leq 3 x monthly income poverty line | 5.2 | 51.8 | 44.8 |
| % with wealth \leq quarter income | 7.7 | 62.3 | 52.8 |

Source: Author's calculation using EFF 2002 and BHPS 2000

(1) For Spain the wealth variables are computed using all information on assets and debts included in the EFF. Thus, net worth is the sum of housing and non-housing wealth. Housing wealth is the sum of the net value of the principal residence and other real state. Non-housing wealth is the sum of business equities, vehicles, other consumer durables, saving accounts, deposits, shares, investment funds, fixed income securities, current accounts, private pension schemes, life insurance programs, other financial assets minus the value of non-mortgage debt.

For comparing Spain with the United Kingdom we only consider the value of those assets and debts for which information is reported in both the EFF and the BHPS. Net worth is the sum of housing and non-housing wealth, where housing wealth is exactly defined as before and non-housing wealth includes the same wealth components described above but business equities, other consumer durables, current accounts, private pension schemes, and life insurance programs.

The comparison between Spain and the United Kingdom highlights important differences between these two countries. Thus, the asset poverty rate among British households is more than twice that of Spain, independently of the definition of poverty used. For instance, the share of households with nil or negative net worth in the United Kingdom is above 14 percent whereas in Spain less than 7 percent of all households are in this situation. If compared with other countries included in the Luxembourg Wealth Study (LWS), we find that the percentage in the United Kingdom is very similar to that in countries like United States and Canada, where the proportion of non-positive wealth holders is 23 percent in both countries.²³ Instead, results for Spain are closer to those found in Italy and Finland, where the share of households with zero or negative wealth holdings ranges from 10 to 17 percent. Clearly, the results suggest that the poverty differential between Spain and the United Kingdom is driven by the housing wealth component. Thus, share of British households that do not accumulate housing wealth is twice that of Spain (29.9 versus 15 percent). Conversely, the incidence of poverty in terms of non-housing wealth is larger among Spanish households. Indeed, the incidence in this country ranges between 32 and 62 percent, while in the United Kingdom the

²³ Sierminska et al. (2007) report some preliminary results using the LWS database for Canada, United States, Italy, Sweden, and Finland. In contrast with our common net worth variable, their net worth variable includes the value of transaction accounts, life insurance, and consumer durables other than vehicles.

poverty rate is between 29 and 52 percent. This result is consistent with the larger rate of ownership observed for these type of assets in the United Kingdom in comparison with Spain.

The Identification of Asset-Poor Households

As stated in the introductory section, the main aim of this paper is to identify the characteristics of asset-poor households in Spain. For this purpose, Table 3 presents the incidence and the distribution of poor households by socio-economic characteristics. Moreover, the results obtained when the housing wealth component is excluded are also presented. Interestingly, the figures suggest that the incidence of poverty in Spain is larger among households in early stages of the life cycle.²⁴ Thus, households below 45 years of age are over-represented among the poor, especially those below 25. The credit constraints typically faced by the youth (Jappelli, 1990) and the fact that most of these households have not started their wealth accumulation process yet, may help to explain this result. Also, there are households at middle and final stages of the life cycle that do not accumulate assets. Thus, despite the lower incidence, households above 45 years of age account for more than 50 percent of the poor population. Moreover, the vulnerability of old households increase importantly when the housing component is excluded: indeed, the incidence of poverty in this case describes a clear U-shape pattern, which highlights the problems of liquidity the elderly face. Data on education and labour status suggest that households headed by low educated and inactive but not retired individuals are the most exposed to asset-poverty. Regarding living arrangements, single households are more likely to be wealth constrained, especially those with children, with almost 10 percent of them being identified as poor. Besides the income problems usually urge this type of families, these households may have more difficulties for saving because of the absence of consumption economies of scale, but also because of the larger liquidity constraints they face (Jappelli, 1990). Also interesting, large households are likely to be below the poverty line, especially when the housing component is not considered, which reflects the difficulties these households have to accumulate other types of assets.

²⁴ We identify the age of the household with the age of the household head. In both the BHPS and the EFF the reference person is defined as the person responsible for the accommodation and household finances.

Table 3
Socio-economic characteristics of asset-poor households in Spain
(all variables in percentage)

| | Population | Net worth | | Non-housing wealth | |
|--|------------|-----------|-------|--------------------|-------|
| | | Incidence | Share | Incidence | Share |
| All households | 100 | 2.2 | 100 | 5.2 | 100 |
| Age and sex of the hh. head | | | | | |
| < 25 | 1.4 | 7.8 | 4.9 | 7.9 | 2.1 |
| 25-34 | 12.9 | 2.2 | 13.0 | 4.9 | 11.9 |
| 35-44 | 22.0 | 2.7 | 26.7 | 4.7 | 19.9 |
| 45-54 | 19.8 | 2.0 | 17.8 | 3.5 | 13.0 |
| 55-64 | 16.4 | 2.2 | 16.5 | 5.9 | 18.3 |
| 65-75 | 17.4 | 1.9 | 14.6 | 5.6 | 18.6 |
| >74 | 10.2 | 1.4 | 6.4 | 8.3 | 16.1 |
| Male | 66.1 | 2.2 | 66.7 | 4.8 | 61.1 |
| Female | 33.9 | 2.2 | 33.3 | 6.0 | 38.9 |
| Household size | | | | | |
| 1 person | 15.2 | 2.8 | 19.6 | 4.9 | 14.3 |
| 2 people | 25.7 | 2.1 | 23.9 | 5.2 | 25.2 |
| 3 people | 24.3 | 1.6 | 17.3 | 5.6 | 25.9 |
| 4 people | 24.3 | 1.4 | 15.7 | 3.2 | 14.7 |
| 5 or more people | 10.6 | 4.9 | 23.5 | 9.9 | 19.9 |
| Household type | | | | | |
| One adult, without children ⁽²⁾ | 15.2 | 2.8 | 19.6 | 4.9 | 14.3 |
| One adult, with children | 0.8 | 9.5 | 3.5 | 9.7 | 1.5 |
| More than one adult, without children | 57.0 | 1.8 | 45.7 | 5.3 | 57.4 |
| More than one adult, with children | 27.0 | 2.6 | 31.2 | 5.2 | 26.8 |
| Civil status of the hh. head | | | | | |
| Never married | 11.1 | 3.0 | 15.2 | 5.9 | 12.6 |
| Married | 71.2 | 1.9 | 61.6 | 4.9 | 66.1 |
| Divorced | 5.1 | 4.0 | 9.3 | 5.8 | 5.7 |
| Widow | 12.6 | 2.4 | 13.8 | 6.6 | 15.7 |
| Education of the hh head.⁽³⁾ | | | | | |
| Low | 59.2 | 2.8 | 76.2 | 7.1 | 79.8 |
| Medium | 25.7 | 1.8 | 20.5 | 3.5 | 17.0 |
| High | 15.1 | 0.5 | 3.4 | 1.1 | 3.2 |
| Labour status of the hh. head | | | | | |
| Employee | 45.7 | 1.9 | 38.6 | 4.0 | 34.6 |
| Self-employed | 11.4 | 2.1 | 11.0 | 1.8 | 3.9 |
| Retired | 25.4 | 1.7 | 19.2 | 5.9 | 28.8 |
| Other Inactive | 12.5 | 4.7 | 26.5 | 10.5 | 24.9 |
| Unemployed | 5.1 | 2.0 | 4.6 | 8.1 | 7.8 |

Source: Author's calculation using EFF 2002 and BHPS 2000

- (1) Asset-poor households are defined as those households with wealth less or equal three times the monthly income poverty line. Non-housing wealth includes all the elements in net worth but the net value of principal residence and other real state properties. The results do not change when the alternative poverty definitions are employed.
- (2) We consider children every household member below 14 years of age.
- (3) Educational levels are defined according to the International Standard Classification of Education designed by the UNESCO. For a more detailed description see the appendix.

Importantly, as Table 4 shows, the Spanish poverty profile does not change when the net worth measure is adjusted to compare Spain with the United Kingdom. Moreover, the comparison reveals that, independently of the group considered, the incidence of poverty in the United Kingdom is larger than in Spain. However, despite the larger

incidence, the results suggest a poverty-profile very similar to that of Spain,²⁵ with only some slight differences regarding the composition of the poor: for instance, the presence of young and old, as well as, the number of single households among the poor population is larger in the United Kingdom than in Spain. This feature may be due either to a larger vulnerability of these groups in this country or simply because this type of households is more frequent in the United Kingdom. We will discuss this point more in detail in the next section.

Table 4
Socio-economic characteristics of asset-poor households in Spain and the United Kingdom
(all variables in percentage)

| | Spain | | | United Kingdom | | |
|--|------------|-----------|-------|----------------|-----------|-------|
| | Population | Incidence | Share | Population | Incidence | Share |
| All | 100 | 10.4 | 100 | 100 | 23.2 | 100 |
| Age and sex of the hh. head | | | | | | |
| < 25 | 1.4 | 47.7 | 6.4 | 5.0 | 67.8 | 11.6 |
| 25-34 | 12.9 | 16.5 | 20.4 | 15.0 | 37.0 | 21.0 |
| 35-44 | 22.0 | 10.5 | 22.3 | 18.6 | 20.9 | 17.1 |
| 45-54 | 19.8 | 9.7 | 18.4 | 16.1 | 13.7 | 10.4 |
| 55-64 | 16.4 | 6.5 | 10.3 | 13.3 | 16.0 | 10.4 |
| 65-75 | 17.4 | 7.4 | 12.5 | 14.9 | 17.5 | 11.3 |
| >74 | 10.2 | 10.0 | 9.8 | 17.1 | 26.1 | 18.2 |
| Male | 66.1 | 9.2 | 58.4 | 55.5 | 16.9 | 41.9 |
| Female | 33.9 | 12.8 | 41.6 | 44.5 | 31.7 | 58.1 |
| Household size | | | | | | |
| 1 person | 15.2 | 19.8 | 28.9 | 36.4 | 34.3 | 46.7 |
| 2 people | 25.7 | 8.9 | 22.1 | 32.0 | 14.8 | 22.2 |
| 3 people | 24.3 | 7.5 | 17.5 | 14.2 | 21.7 | 13.9 |
| 4 people | 24.3 | 8.1 | 18.8 | 11.7 | 18.3 | 10.2 |
| 5 or more people | 10.6 | 12.5 | 12.7 | 5.7 | 27.8 | 7.1 |
| Household type | | | | | | |
| One adult, without children ⁽³⁾ | 15.2 | 19.8 | 28.9 | 36.4 | 34.3 | 46.7 |
| One adult, with children | 0.8 | 19.1 | 1.5 | 4.4 | 59.7 | 8.5 |
| More than one adult, without | 57.0 | 7.7 | 42.1 | 39.9 | 13.0 | 25.0 |
| More than one adult, with children | 27.0 | 10.6 | 27.5 | 19.4 | 22.6 | 19.8 |
| Civil status of the hh. head | | | | | | |
| Never married | 11.1 | 18.2 | 19.4 | 16.2 | 42.6 | 25.0 |
| Married | 71.2 | 8.1 | 55.7 | 52.6 | 13.6 | 34.2 |
| Divorced | 5.1 | 21.6 | 10.6 | 14.2 | 39.0 | 21.4 |
| Widow | 12.6 | 11.8 | 14.3 | 17.0 | 29.4 | 19.5 |
| Education of the hh head.⁽⁴⁾ | | | | | | |
| Low | 59.2 | 11.4 | 64.7 | 55.1 | 30.0 | 67.2 |
| Medium | 25.7 | 11.2 | 27.8 | 33.7 | 17.7 | 26.3 |
| High | 15.1 | 5.2 | 7.5 | 11.2 | 13.3 | 6.5 |
| Labour status of the hh. head | | | | | | |
| Employee | 45.7 | 10.7 | 46.8 | 42.8 | 18.3 | 34.7 |
| Self-employed | 11.4 | 6.1 | 6.7 | 6.4 | 8.6 | 2.9 |
| Retired | 25.4 | 6.5 | 16.0 | 34.6 | 22.0 | 31.1 |
| Other Inactive | 12.5 | 16.8 | 20.1 | 12.9 | 50.5 | 25.3 |
| Unemployed | 5.1 | 21.4 | 10.4 | 3.2 | 56.2 | 6.0 |

Source: Author's calculation using EFF 2002 and BHPS 2000

- (1) Asset-poor households are defined as those households with net worth less or equal three times the monthly income poverty line, where the common net worth measure is employed in order to allow comparability. The results do not change when the alternative poverty definitions are employed.
- (2) We consider children every household member below 14 years of age.
- (3) Educational levels are defined according to the International Standard Classification of Education designed by the UNESCO. For a more detailed description see the appendix.

Besides the description of the asset-poverty profile, it is also interesting to identify more precisely the socio-economic characteristics that have a larger impact on the

²⁵ In contrast with the first results derived for Spain, the results from the comparison suggest that the incidence of poverty increases slightly among those households above 75 years of age. However, this result may be caused by the net-worth adjustment as the importance of the assets that are not included is larger for this type of households than for middle-age households.

probability of being asset-poor. For doing so, we estimate a logit model where characteristics of the household head like sex, age, educational level, and labour status, as well as other variables regarding living arrangements are introduced as covariates by means of dummy variables. As Table 5 shows, the results are rather similar for both countries. Thus, in Spain, young households, especially those below 25 years old, are the most vulnerable to asset-poverty, being the probability of poverty for this group more than three times the average for all the groups. Moreover, the likelihood of poverty reduces for groups above 55 years of age, especially for those whose head is above 75 years old, even though this effect disappears when the housing component is excluded. Importantly, households with low expected lifetime income face a higher risk of asset poverty. Thus, households whose head is low educated or inactive but not retired are more likely to be asset-poor than the others. Interestingly, living arrangements come out to be also an important factor that affects the possibility of poverty. Thus, households with only one adult have more chances of being poor, especially when there are children.

Table 5
Logit regression on the probability of asset poverty in Spain and the United Kingdom

| | Spain | | | | Spain vs. United Kingdom ⁽¹⁾ | | | |
|--|-----------|---------|--------------------|---------|---|---------|----------------|---------|
| | Net Worth | | Non-housing wealth | | Spain | | United Kingdom | |
| | Coeff. | t-ratio | Coeff. | t-ratio | Coeff. | t-ratio | Coeff. | t-ratio |
| Intercept | -4.5 | -8.5 | -4.8 | -10.0 | -3.2 | -9.8 | -3.2 | -15.7 |
| Sex and Age of the hh. head | | | | | | | | |
| Female | -0.5 | -1.4 | 0.0 | -0.2 | 0.1 | 0.7 | 0.2 | 2.7 |
| < 25 | 1.6 | 2.3 | 1.0 | 1.4 | 2.1 | 5.6 | 2.4 | 10.6 |
| 25-34 | 0.4 | 0.8 | 0.6 | 1.6 | 0.7 | 3.2 | 1.3 | 8.7 |
| 35-44 | 0.4 | 0.9 | 0.4 | 1.1 | 0.2 | 0.8 | 0.6 | 3.9 |
| 55-64 | -0.2 | -0.4 | 0.3 | 0.9 | -0.7 | -2.8 | -0.1 | -0.6 |
| 65-75 | -0.8 | -1.6 | -0.1 | -0.2 | -1.0 | -3.5 | -0.5 | -2.0 |
| >74 | -1.3 | -2.4 | 0.4 | 0.9 | -1.1 | -3.7 | -0.3 | -1.3 |
| Household type | | | | | | | | |
| One adult, without children ⁽²⁾ | 0.6 | 1.5 | -0.4 | -1.4 | 1.1 | 6.5 | 1.0 | 9.1 |
| One adult, with children | 1.7 | 2.4 | 0.5 | 0.8 | 0.2 | 0.3 | 1.2 | 5.8 |
| More than one adult, with children | 0.3 | 0.8 | 0.3 | 1.1 | 0.1 | 0.5 | 0.3 | 2.0 |
| Education ⁽³⁾ and labour status of hh head | | | | | | | | |
| Low | 0.7 | 2.1 | 0.7 | 2.9 | 0.3 | 2.2 | 0.9 | 8.5 |
| High | -1.2 | -1.5 | -1.1 | -2.1 | -0.9 | -3.4 | -0.4 | -2.7 |
| Employee | -0.1 | -0.2 | 0.9 | 2.1 | 0.6 | 2.2 | 0.3 | 1.5 |
| Retired | 0.6 | 1.2 | 1.4 | 2.9 | 0.9 | 2.6 | 0.9 | 3.7 |
| Other Inactive | 1.3 | 2.4 | 2.0 | 4.0 | 1.2 | 3.7 | 1.6 | 7.7 |
| Unemployed | -0.3 | -0.4 | 1.5 | 2.9 | 1.4 | 4.0 | 1.7 | 6.1 |
| Sample | | 5,143 | | 5,143 | | 5,143 | | 5,321 |
| Poor | | 84 | | 213 | | 406 | | 1880 |
| Non poor | | 5,059 | | 4930 | | 4,737 | | 3,441 |
| Pseudo R ² | | 0.07 | | 0.06 | | 0.09 | | 0.18 |
| Log likelihood | | -508.2 | | -992.9 | | -1558.7 | | -2264.8 |

Source: Author's calculation using EFF 2002 and BHPS 2000

- (1) Asset-poor households are defined as those households with wealth less or equal three times the monthly income poverty line. The results do not change when the alternative poverty definitions are employed. For comparing Spain and the United Kingdom the common net worth measure is employed.
- (2) We consider children every household member below 14 years of age.
- (3) Educational levels are defined according to the International Standard Classification of Education designed by the UNESCO. For a more detailed description see the appendix.
- (4) The reference household is a household with a male household head aged between 45 and 54 years who lives with more adults and without children, and where the head is a self-employed with medium educational level.

Accounting for poverty differences between Spain and the United Kingdom

The previous results suggest that the poverty-relevant characteristics are very similar in Spain and the United Kingdom. However, despite this similarity, the incidence of asset poverty among British households is more than twice than of Spain. Moreover, as we have seen before, this differential is mainly driven by the housing wealth component. Our purpose of this section is to shed some light on this difference.

As suggested by Biewen and Jenkins (2002),²⁶ to understand differences in poverty rates across countries it is necessary to separate the influence of the distribution of poverty-relevant characteristics from the influence of the conditional poverty functions. In our case, the comparison of the distribution of poverty-relevant characteristics reveals that the household distribution by sex, employment, and education of the household head do not differ significantly across countries.²⁷ However, as shown in Table 6, important differences emerge regarding age and living arrangements. Thus, the proportion of households whose head is either below 30 years or above 65 years old is larger in the United Kingdom, whereas the share of households between 30 and 65 is larger in Spain. Moreover, for all the age groups considered, the proportion of single households in the United Kingdom is larger than in Spain. These differences clearly contribute to explain the asset poverty gap caused by housing wealth: thus, young and single households have more difficulties for saving and especially to become homeowners, because of the credit constraints they face and also because of the absence of consumption economies scale.

The differences in the household structure have been already documented in the literature. In particular, the sociology literature (see Reher, 1998) points out the existence of two family models: one with strong family ties, observed in Spain and other Mediterranean countries; and a second one with weak family ties, observed mainly in Northern Europe and in the United States. A key distinction between these two models is that in a country with strong family ties, the share of young people living with their parents and the proportion of elderly coresiding with an adult sibling is larger than in a country with weak family ties, which would explain the results presented in Table 6. Moreover, the propensity of young adults to coreside with their parents in Spain has been already documented in the literature (Granado and Ruiz Castillo 2002, Del Rio and Ruiz Castillo 2002). Thus, labor market conditions like high unemployment rate and the frequency of temporary and not well paid jobs among the young in Spain, as well as, the large enrolment rate in higher education contribute importantly to delay the decision of leaving parental home.²⁸

²⁶ These authors decompose differences in income poverty rates in Germany, the United States and the United Kingdom using a shift-share counterfactual approach.

²⁷ A detailed comparison of the distribution of households by different characteristics in these two countries is presented in the appendix.

²⁸ Indeed, both the unemployment and enrolment rates in higher education are among the highest in the EU (Toharia et al. 1998).

Table 6
Distribution of households by age and family type in Spain and the United Kingdom
(percentage of households)

| | Spain | | United Kingdom | |
|------------------------------|-------------|--------------|----------------|--------------|
| | % | N | % | N |
| Age of household head | | | | |
| < 30 | 5.7 | | 11 | |
| Single | 1.1 | 54 | 4.6 | 241 |
| Non- single without child | 2.9 | 149 | 2.9 | 153 |
| Non- single with child | 1.7 | 89 | 3.4 | 179 |
| 30-44 | 30.6 | | 27.6 | |
| Single | 2.8 | 145 | 5.7 | 297 |
| Non- single without child | 8.4 | 433 | 5.9 | 307 |
| Non- single with child | 19.4 | 995 | 16 | 836 |
| 45-54 | 19.8 | | 16.1 | |
| Single | 1.6 | 81 | 3.9 | 205 |
| Non- single without child | 13.1 | 675 | 8.3 | 432 |
| No single, child | 5.1 | 260 | 3.9 | 202 |
| 55-64 | 16.4 | | 13.3 | |
| Single | 1.5 | 75 | 3.8 | 201 |
| Non- single without child | 14.1 | 726 | 9.2 | 480 |
| Non- single with child | 0.8 | 41 | 0.3 | 15 |
| >64 | 27.6 | | 32.1 | |
| Single | 8.3 | 427 | 18.3 | 956 |
| Non- single without child | 18.4 | 946 | 13.6 | 710 |
| Non- single with child | 0.9 | 45 | 0.2 | 8 |
| Total | 100 | 5,143 | 100 | 5,222 |

Source: Author's calculation using EFF 2002 and BHPS 2000

Given the results obtained in the previous section, the larger share of young and single households observed in the United Kingdom makes, other things being equal, the household structure of this country more vulnerable to asset poverty than the Spanish one. Then, what is the contribution of the household structure to the difference in asset poverty rates? To answer this question we use counterfactual analysis. In particular, we estimate the counterfactual wealth distribution for Spain non-parametrically assuming the characteristics of the British household structure. Following Bover (2007)²⁹ we proceed first by estimating the Spanish wealth empirical distribution as follows

$$F_{SP}(r) = \Pr_{SP}(w \leq r) = \sum_{j=1}^J \Pr_{SP}(w \leq r | z = j) \times \Pr_{SP}(z = j) , \quad [1]$$

where j ($j=1, \dots, J$) denotes the different household types considered. We group households attending at the age of the head and the type of living arrangement, since, as

²⁹ This author analyses the contribution of household demographics to explain differences in the wealth distribution between Spain and the United States.

discussed above, these are the characteristics for which a clear divergence between the two countries is observed. The Spanish counterfactual wealth distribution can be easily derived as

$$F_{SP}^{UK}(r) = \Pr_{SP}^{UK}(w \leq r) = \sum_{j=1}^J \Pr_{SP}(w \leq r | z = j) \times \Pr_{UK}(z = j) , \quad [2]$$

where the only difference with (1) is that the marginal probabilities of the different household types in Spain have been replaced by the British ones. Finally, using this distribution we can compute the counterfactual poverty rate in Spain relying on the British household structure in the following way

$$P_{SP}^{UK}(t_{SP}) = \Pr_{SP}^{UK}(w \leq t_{SP}) = \sum_{j=1}^J \Pr_{SP}(w \leq t_{SP} | z = j) \times \Pr_{UK}(z = j) , \quad [3]$$

where t represents the asset poverty line. To measure the impact of the household structure on the poverty rate we can decompose the difference in asset poverty rates between Spain and the United Kingdom as follows

$$P_{SP}(t_{SP}) - P_{UK}(t_{UK}) = P_{SP}(t_{SP}) - P_{SP}^{UK}(t_{SP}) + P_{SP}^{UK}(t_{SP}) - P_{UK}(t_{UK}) \quad [4]$$

where the first term represents the share of the poverty gap explained by cross-national differences in household characteristics, while the second term indicates the contribution due to differences in the conditional poverty function. Table 7 shows the results of the decomposition analysis. The first set of results correspond to the classification of households used in Table 5, which differentiates 15 types of households attending at the age of the head and the type of living arrangement. Furthermore, in order to check the robustness of the results we replicate the analysis using an alternative classification that defines 12 groups using these same variables.

As shown in Table 7, the incidence of asset poverty in Spain always increases when its actual household structure is replaced by the British one. Thus, the Spanish counterfactual poverty rate is larger than the real one in any of the specifications considered. Indeed, the increment is quite significant in all the cases. For instance, the share of households with non-positive net worth or with net worth below the term income threshold increases by more than 40 percent when the household composition is modified. Moreover, the results of the decompositions highlight the importance that differences in the age distribution and in living arrangements have for explaining the difference in poverty rates. Thus, in most of the cases, the joint contribution of these factors accounts for more than 20 percent of the poverty gap between Spain and the United Kingdom.

Table 7

Decomposition of the poverty rate difference between Spain and the United Kingdom⁽¹⁾
(all variables in percentage)

| | Spain | | | Decomposition | | Total |
|--|----------|---------------|--------------|--------------------------|--------------------------|-------|
| | P_{SP} | P_{SP}^{UK} | Δ (%) | $(P_{SP} - P_{SP}^{UK})$ | $(P_{SP}^{UK} - P_{UK})$ | |
| Classification⁽²⁾ : 15 groups | | | | | | |
| % with nil or negative wealth | 6.9 | 9.8 | 41.6 | 22.8 | 77.2 | 100 |
| % with wealth \leq 3 x monthly income poverty line | 10.4 | 14.5 | 39.2 | 21.1 | 78.9 | 100 |
| % with wealth \leq quarterly income | 11.4 | 13.9 | 21.7 | 12.3 | 87.7 | 100 |
| Classification⁽³⁾ : 12 groups | | | | | | |
| % with nil or negative wealth | 6.9 | 10.1 | 45.8 | 25.1 | 74.9 | 100 |
| % with wealth \leq 3 x monthly income poverty line | 10.4 | 14.8 | 42.7 | 23.0 | 77.0 | 100 |
| % with wealth \leq quarterly income | 11.4 | 15.6 | 37.1 | 21.0 | 79.0 | 100 |

Source: Author's calculation using EFF 2002 and BHPS 2000

(1) Poverty rates are computed using the common net worth measure.

(2) The groups are defined according to the age of the household head and the type of living arrangement. We consider five age groups: below 30, 30-44, 45-54, 55-64, and above 65. The household types considered are single, non-single with children, and non-single without children.

(3) In this case we consider four age groups: below 25, 25-44, 45-64, and above 65. The household types considered are single, non-single with children, and non-single without children.

Conclusions

One of the main reasons why individuals save is to build up a reserve of resources against future contingencies. Thus, wealth is central to the economic security of households as it is the principal instrument households have to insure themselves against risk. Indeed, wealth is the main source of liquidity households have to overcome periods of economic hardship, since assets can be converted in cash or can be used as collateral in order to cover immediate consumption needs.

The main aim of this paper is to quantify and to identify asset-poor households in Spain, that is, households that lack enough wealth to maintain a minimum welfare level during a period a time. For this purpose, we have used data in the first wave of the Spanish Survey of Household Finances conducted by the Bank of Spain in 2002. Our results reveals that households headed by a young person are the most vulnerable group. Indeed, the chances of being asset-poor reduces as the age of the head increases, especially for those that are above 55 years old. However, this result changes considerably when the housing wealth component is excluded. In this case, the incidence of poverty presents a clear U-shape pattern which indicates the problems households at the end of the life cycle have to accumulate other types of wealth holdings. Also, households with low expected lifetime income are more vulnerable to asset poverty. Thus, households with a low educated or inactive (but non-retired) face a higher risk of being asset-poor than others. Interestingly, living arrangements appear also as an important factor that affects the possibility of asset poverty. Thus, single households with only one adult have more chances of being poor, especially those with children. Besides the income problems usually urge this type of families, these households may have more difficulties for saving because of the absence of consumption economies of

scale, but also because of the larger liquidity constraints they face, which will explain their larger vulnerability.

Moreover we use information in the British Household Panel Survey 2000 to compare Spain with the United Kingdom. The results suggest that the characteristics of asset-poor households in the United Kingdom are very similar to those observed in Spain. However, regarding the extent of poverty, we find that British households are more vulnerable in terms of accumulated wealth than Spanish ones. Thus, the incidence of poverty in the United Kingdom is twice that of Spain and this difference is due to the housing wealth component. We investigate what are the reasons underlying this feature. In particular, we find that the proportion of young and single households is larger in the United Kingdom than in Spain, which implies that wealth poverty is, other things equal, more likely among British households. We use counterfactual distribution analysis to determine to what extent the distribution of households characteristics may explain the difference in poverty rates. Our results indicate that the household structure accounts for about 20 percent of the wealth poverty gap, which suggests that the household formation process is a factor that must be taken into account when explaining the wealth accumulation process of individuals.

Finally, we study the link between income and asset poverty. We find that in Spain most of the income poor are insured with wealth holdings: thus, only 6 percent of the income-poor are identified as wealth poor, and this percentage increases to 12 percent when only non-housing wealth is considered. On the contrary, about 60 percent of the wealth-poor are also income poor, which suggest that the income and wealth poverty processes are especially linked when there is lack of assets. We finish the paper with a description of the characteristics of three groups of households defined attending at their wealth and income status: income non-poor and wealth poor, income poor and wealth non-poor and, income poor and wealth poor.

Appendix

Information in the EFF and the BHPS

Table A.1
Information reported in the BHPS 2000 and the EFF 2002
(A=available, NA= not available)

| | BHPS 2000 | | EFF 2002 | |
|----------------------------------|-----------|------------------|-----------|-------|
| | Ownership | Value | Ownership | Value |
| Real assets | | | | |
| Principal residence | A | A | A | A |
| Other real state properties | A | A | A | A |
| Vehicles | A | A ⁽¹⁾ | A | A |
| Business equities | NA | NA | A | A |
| Collectibles | NA | NA | A | A |
| Other Consumer durables | NA | NA | A | A |
| Financial assets | | | | |
| Saving and deposits | A | | A | A |
| Fixed income securities | A | A ⁽²⁾ | A | A |
| Mutual funds | A | | A | A |
| Shares | A | | A | A |
| Other financial assets | A | | A | A |
| Current accounts | NA | NA | A | A |
| Private pension schemes | NA | NA | A | A |
| Life Insurance | NA | NA | A | A |
| Debts | | | | |
| Mortgage debt ⁽³⁾ | A | A | A | A |
| Non mortgage debt ⁽⁴⁾ | A | A | A | A |

Source: EFF 2002 and BHPS 2000

(1) In the BHPS households are asked to report the value of vehicles net of debts.

(2) The British survey does not report the value of each individual financial asset. Instead it collects the value of these assets in two broad categories that are savings and investments: the first one compress the value of saving accounts and deposits, like for instance, the TESSA and ISA accounts or the money in the National Savings Bank; investments includes the value of fixed income securities, investment funds, shares, and other financial assets. In particular, this category includes the value of national savings certificates, premium bonds, NS/BS insurance bonds, unit trusts, personal equity plans, shares (United Kingdom or foreign), and other investments/securities

(4) It refers to every outstanding loan on the properties owned by the household.

(5) It includes other financial commitments held by the household with non-mortgage guarantee.

Accounting for differences in the probability of reporting a full questionnaire in the BHPS

As we mention in the text, not all the households initially interviewed in the tenth wave of the BHPS report all the information required about wealth holdings. If the probability of full-response varies across households, our sample will suffer a problem of representativeness. Therefore, to control for this potential bias we need to construct appropriate weights that preserve the representativeness of our final sample. Let us define S_i to be a random variable that equals 1 if a household is selected in the original sample (of size S) and, R_i an indicator function that takes value 1 if the household belongs to the sub-sample (of size R) of households that report a full questionnaire. Then, the probability of full-response is given by:

$$P_i(R_i = 1) = P_i(R_i = 1 | S_i = 1) \times P_i(S_i = 1), \quad i = 1, \dots, S,$$

where the probability of being selected in the original sample, $P(S_i = 1)$, is known because the cross-sectional weights provided in the BHPS are proportional to the inverse of this probability. Then, to determine $P_i(R_i = 1)$ we only need to compute the probability of providing a full-questionnaire conditioned to having been selected in the original sample, $P_i(R_i = 1 | S_i = 1)$. We estimate this probability using a logit regression on a set of households characteristics, whose results are available upon request. Then, the weight attached to a household i that reports all the information is defined to be proportional to the inverse of the estimated probability of belonging to this group, re-scaled using a scaling factor k to sum up the sub-sample size (R):

$$w_i = \frac{k}{\hat{P}_i(R_i = 1)}, \quad \text{s.t.} \quad \sum_{i=1}^R w_i = R$$

Education Coding

To group households according the educational level of the head we follow the International Standard Classification of Education (ISCED) provided by the UNESCO:

- LOW includes no education, pre-primary, primary, lower secondary, compulsory and initial vocational education.
- MEDIUM includes upper secondary general education, basic vocational education, and post-secondary education.
- HIGH includes specialized vocational education, university/college education and (post)-doctorate and equivalent degrees.

Household Structure in Spain and the United Kingdom

The distribution of poverty-relevant characteristics is a factor that contributes to explain differences in the incidence of poverty across countries (Biewen and Jenkins, 2002). Thus, a poverty gap may be explained simply because of a larger presence of more vulnerable groups. Table A.3 shows the distribution by socio-economic characteristics of British and Spanish households. In the case of Spain, given the bias that the over-representation of wealthy households in the EFF could introduce, we also describe the household structure using the information from the 2004 Survey of Living

Conditions (Encuesta de Condiciones de Vida, ECV) and the 2001 European Community Household Panel (ECHP).

As the Table A.3 shows the distribution of households regarding the educational level and labour status of the household head is very similar in the two countries. This result is also obtained when we look at the presence of children: thus in both countries in more than 70 percent of households there are not children. As noted already in the text, the main differences between the two populations are observed regarding the age distribution and the type of living arrangement. Thus, young and old, households have large presence in the British population. Also, the number of single households in the United Kingdom is more than twice that of Spain (36 versus 15 percent), whereas the presence of households with three or more members in Spain is twofold that in the United Kingdom (60 percent versus 31 percent). Moreover, the larger presence of single households among British households is related with the civil status of the head. Thus, the proportion of households whose head is divorced or has never married is larger among British households which clearly contributes to explain the larger presence of single households observed in this country.

Table A.2
Socio-economic characteristics of Spanish and British households
(all variables in percentage)

| | Spain | | | United Kingdom |
|--------------------------------------|----------|----------|-----------|----------------|
| | EFF 2002 | ECV 2004 | ECHP 2001 | BHPS 2000 |
| Sex of hh. head | | | | |
| Male | 66.1 | 67.0 | 74.5 | 55.5 |
| Female | 33.9 | 33.0 | 25.5 | 44.5 |
| Age of hh. head | | | | |
| Age <35 | 14.3 | 12.3 | 18.5 | 20.0 |
| Age 35-44 | 22.0 | 20.6 | 25.22 | 18.6 |
| Age 45-54 | 19.8 | 19.4 | 20.57 | 16.1 |
| Age 55-64 | 16.4 | 17.1 | 13.91 | 13.3 |
| Age 65-74 | 17.4 | 15.7 | 11.69 | 14.9 |
| Age >74 | 10.2 | 14.9 | 10.11 | 17.1 |
| Civil status of hh. head | | | | |
| Never married | 11.1 | 13.7 | 23.1 | 16.2 |
| Married | 71.2 | 66.0 | 62.4 | 52.6 |
| Divorced | 5.1 | 5.6 | 3.8 | 14.2 |
| Widow | 12.6 | 14.8 | 10.7 | 17.0 |
| Education of hh. head | | | | |
| Low educated | 59.2 | 63.2 | 60.6 | 55.1 |
| Medium educated | 25.7 | 15.9 | 15.4 | 33.7 |
| High educated | 15.1 | 20.9 | 23.9 | 11.2 |
| Labour status of hh. head | | | | |
| Employed | 45.7 | 42.0 | 53.0 | 42.8 |
| Self-employed | 11.4 | 9.4 | 16.6 | 6.4 |
| Retired | 25.4 | 26.2 | 15.5 | 34.6 |
| Other Inactive | 12.5 | 16.5 | 9.1 | 12.9 |
| Unemployed | 5.1 | 6.0 | 5.9 | 3.2 |
| Household size | | | | |
| One | 15.2 | 15.6 | 17.1 | 36.4 |
| Two | 25.7 | 27.2 | 25.2 | 32.0 |
| Three | 24.3 | 23.8 | 14.5 | 14.2 |
| Four | 24.3 | 24.7 | 21.6 | 11.7 |
| Five or more | 10.6 | 8.9 | 21.7 | 5.7 |
| Number of children | | | | |
| None | 72.2 | 74.8 | 72.7 | 76.2 |
| One | 16.9 | 15.5 | 15.3 | 10.7 |
| Two | 9.6 | 8.8 | 9.8 | 9.5 |
| Three or more | 1.3 | 1.0 | 2.2 | 3.6 |
| Principal residence ownership | | | | |
| No | 18.1 | 18.0 | 15.3 | 30.9 |
| Yes | 81.9 | 82.0 | 84.7 | 69.1 |

Source: Author's calculation using EFF 2002, ECV 2004, ECHP 2001, and BHPS 2000

References

- Atkinson, A. B, and Bourguignon, F. (1982). "The Comparison of Multi-Dimensioned Distributions of Economic Status". *Review of Economic Studies*, Vol. 49, pp. 183-201.
- Ayala, L., and Juan I. P. (2000). "Hogares de baja renta en España: Caracterización y determinantes". *Revista de Economía Aplicada*, Vol. 8, No. 23, pp. 35-70.
- Azpitarte, F. (2008). "The Household Wealth Distribution in Spain: The Role of Housing and Financial Wealth". *ECINEQ Working Papers* No. 83.
- Banks, J., Blundell, R., and Smith, J. P. (2003). "Understanding Differences in Household Financial Wealth between the United States and Great Britain". *The Journal of Human Resources*, Vol. 38, No. 2, Special Issue on Cross-National Comparative Research Using Panel Surveys, pp. 241-279.
- Bárcena, E., and Cowell, F., A. (2006). "Static and Dynamic Poverty in Spain, 1993-2000," *Hacienda Pública Española, IEF*, Vol. 127, No.4, pp. 51-77.
- Barret, B. and McPeack, J.G. (2006). "Poverty traps and safety nets" in *Poverty, Inequality and Development: Essays in Honor of Erick Thorbecke* A. de Janvry and R. Kanbur (eds.) Springer (2006).
- Biewen, M., and Jenkins, S. P. (2002). "Accounting for Poverty Differences between the United States, Great Britain and Germany". *ISER Working Papers*, No. 2002-14.
- Bourguignon, F. and Chakravarty, S.R., (1998). "The Measurement of Multidimensional Poverty". *Journal of Economic Inequality*, Vol. 1, No 1, pp. 25-49.
- Bover, O. (2004). "Spanish Survey of Household Finances (EFF): Description and Methods of the 2002 wave". *Occasional paper No.0409*, Bank of Spain.
- Bover, O. (2007). "Wealth Inequality and household structure: U.S. vs. Spain". Paper presented at the LWS Workshop: "Enhancing Comparative Research on Household Finance", Banca de Italia, Roma, Italy, 5-7 July, 2007.
- Browning, M., and Lusardi, A. (1996). "Household Saving: Micro Theories and Micro Facts". *Journal of Economic Literature*, Vol. 34, No. 4, pp. 1797-1855.
- Caner, A., and Wolff, E. N. (2004). "Asset Poverty in the United States, 1984-1999: Evidence from the Panel Study of Income Dynamics". *Review of Income and Wealth, Series 50*, Vol. 4, pp. 493-518.
- Cantó, O., Del Río, C., Gradín, C. (2007). "What helps households with children in leaving poverty?: Evidence from Spain". *Research on Economic Inequality*, Vol. 14 , pp. 1-29.
- Cantó, O., Del Río, C., Gradín, C. (2006). "Poverty Statics and Dynamics: Does the accounting period matter?". *International Journal of Social Welfare*, Vol. 15, No. 3, pp. 209-218.

- Chaudhuri, S. (2001). 'Empirical methods for assessing household vulnerability to poverty'. Columbia University working paper.
- Christensen, A.-K., Dupont J., and Schreyer P. (2005). "International Comparability of the Consumer Price Index: Owner-Occupied Housing". Paper prepared for the OECD Seminar, Inflation Measures: Too High---Too Low---Internationally Comparable? Paris, June 21-22.
- Del R o, C. and Ruiz-Castillo, J. (2002). "Demographic Trends and Living Standards during the 1980s". *Revista de Econom a Aplicada*, Vol. 30, No. 10, pp. 5-24.
- Duclos, J.-Y. and Mercader-Prats, M. (1999). "Household Needs and Poverty: With Application to Spain and the U.K". *Review of Income and Wealth*, Vol. 45, No.1, pp. 77-98.
- Gourinchas, P.-O. and Parker, J. A. (2002). "Consumption Over the Life Cycle", *Econometrica*, Vol. 70, No. 1, pp. 47-89.
- Hubbard, R. G., Skinner, J., Zeldes, P. (1995). "Precautionary Saving and Social Insurance". *The Journal of Political Economy*, Vol. 103, No. 2, pp. 360-399.
- Jappelli, T. (1990). "Who is Credit Constrained in the U.S. Economy?. *Quarterly Journal of Economics*, Vol. 105, No. 1, pp. 219-34.
- Kennickell, A. (1998). Multiple Imputation in the Survey of Consumer Finances.
- Kennickell, A. (2000). Wealth Measurement in the Survey of Consumer Finances: Methodology and Directions for Future Research.
- Kolm, S.-Ch. (1977). "Multi-dimensional Egalitarianism". *Quarterly Journal of Economics*, Vol. 91, pp. 1-13.
- Mart nez-Granado, M. and Ruiz-Castillo, J. (2002). "The decisions of Spanish youth: A cross-section study". *Journal of Population Economics*, Vol. 15, No. 2, pp. 305-330.
- Pritchett, L., Suryahadi, A., Sumarto, S. (2000). "Quantifying Vulnerability to Poverty A Proposed Measure, with Application to Indonesia". *Development Economics Working Papers 83*, East Asian Bureau of Economic Research.
- Reher, D. S. (1998). "Family ties in Western Europe: persistent contrasts". *Population and Development Review*, Vol. 24, No. 2, pp. 203--234.
- Ruggles, P. and R. Williams (1989). "Longitudinal Measures of Poverty: Accounting for Income and Assets over Time". *Review of Income and Wealth*, Vol. 35, No. 3, pp. 225--244.
- Short, K. and Ruggles, P. (2006). "Experimental Measures of Poverty and Net Worth: 1996". *Journal of Income Distribution*, Special issue on assets and poverty, pp. 8-21.
- Sierminska, E., Brandolini, A. and Smeeding, T. (2007). "The Luxembourg Wealth Study: A Cross Country Comparable Database for Household Wealth Research", *Journal of Economic Inequality*, Vol. 4, pp. 375-383.

- Tatsiramos, K. (2006). "Unemployment Insurance in Europe: Unemployment Duration and Subsequent Employment Stability". IZA Discussion Papers Series, No. 2280.
- Taylor M. F., Brice J., Buck N., and Prentice-Lane, E. (2007). British Household Panel Survey User Manual Volume A: Introduction, Technical Report and Appendices. Colchester: University of Essex.
- Toharia L., Albert C., Cebrián I., García Serrano C., García Serrano I., Malo M.A., Moreno G., Villagómez E., (1998). "El mercado de trabajo en España". Madrid, McGraw-Hill.
- Tsui, K. Y., (2002). "Multidimensional Poverty Indices". Social Choice and Welfare, Vol. 19, No. 1, pp. 69-93.
- Weisbrod, B. and Hansen W.L. (1968). "An Income-Net Worth Approach to Measuring Economic Welfare". American Economic Review, Vol. 58, pp. 1315--1329.
- Zagorsky, J. L.(2006). "Measuring Poverty Using both Income and Wealth". Journal of Income Distribution, Special issue on assets and poverty, pp. 22-40.