What helps households with children in leaving poverty?: Evidence from Spain in contrast with other EU countries.

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Abstract

Recent results on poverty in Europe show that households with children have a higher incidence of poverty than households without children. This incidence is not only higher but increasing. The literature on poverty has noted that the events that are most effective in pushing households out of deprivation should largely determine the design of poverty-alleviating social policy. Using longitudinal data for Spain for the 80's and 90's we account for the importance of relevant demographic and labour market events in helping households with and without children in leaving a poverty situation decomposing the relevance of each event in that generated by labour market policies and fertility or marriage institutions and welfare state policies implications. Similarly to results for other countries, the events that most help Spanish households in leaving poverty are related to the labour status and changes in employment of household members more than to demographic events. However, we should note that the transitions out of poverty of households with children are most strongly linked to the economic cycle in the economy mainly through labour market events while non-labour income changes appear as more important in determining a potential transition out of poverty of households without children, implying that their transitions are more linked to the social protection system.

JEL Classification: D1, D31, I32.

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Introduction

In most industrialised countries the rise in unemployment, as well as the rise in new types of short-term or temporary employment, is one of the most visible causes of the new forms of poverty. In particular, a direct result of this rise is the increase in the incidence of poverty on young childbearing households, making children a largely vulnerable group among the poor given their dependence on adult labour market outcomes. For example, analysing the EU15 countries, Micklewright and Stewart (1999) find that in 1993 the proportion of children (aged 0-15) living in households with incomes below 50 per cent of the national average was around 20 per cent.

According to evidence offered by Machin (1998), the consequences of the experience of poverty in childhood are likely to persist longer since the earnings of parents also play an important role in the determination of both the cognitive achievement of children and economic mobility across generations. A large amount of questions regarding the persistence of child poverty are important to the debate on both the extent of child poverty and the public policies needed to alleviate it. Understanding the stability of income flows to households and the reasons for significant stable upward mobility which imply long periods out of poverty will help in designing efficient social policy. In general, researchers are interested in analysing poverty dynamics also because relying on poverty statics for a deep study of the poverty phenomenon may miss much of what is happening to the poor. Already Bane and Ellwood (1986) underlined the need for an analysis of the flows into and out of poverty to be able to describe most adequately the poverty experience.

In the Spanish case, Cantó and Mercader-Prats (1998) show that during the 70s and 80s, a period in which the Spanish society experienced a major socioeconomic and political transformation, no significant improvements occurred in the extent of child economic poverty in relative terms. In fact, the position of children worsened with respect to the elderly over the 80s, while the poverty rate decreased in the population as a whole. Following Micklewright and Stewart (1999)'s results, in 1993 the 25 per cent of the Spanish children lived in poor households (a 25 per cent higher than EU15 average). Furthermore, in comparison with adults, children in Spain were less likely to leave poverty. EUROSTAT (2000a) finds that Spanish youngest age group (below 18 years-old) has a higher persistent poverty risk index, a 31 per cent more than the whole population.

Unfortunately, even if there was a large improvement in the provision of in-kind benefits to children such as education and health services, two important indicators of child well-being, public policies in Spain do not seem to be trying to modify the former trend in child poverty. Indeed, during the last 30 years the increase in expenditure on education programs placed the percentage of education enrolment at age 16 around 90 per cent.[1] Also, the increase in public expenditure has extended health services to all the population during the eighties and, as a result, child mortality was reduced exceptionally quickly. However, other children-related policies are underdeveloped. In fact, in 1998 the direct expenditure on social protection was not only one of the lowest in the EU15 (21.6 per cent against 27.7 per cent in the EU, as a percentage of GDP), but also the share of this expenditure going to family support programs was almost negligible. For example, related to education, there has been a very slow progress in the provision of maternal schools. Thus, the family/children function in 1998 accounted for 2.1 per cent of total expenditure on social benefits (only 0.4 per cent of Spanish GDP), which was by far the lowest rate in the European Union (see EUROSTAT (2000b)) and remained almost unchanged during the decade of the 1990's[2]. In this line of argument Inmervoll *et al.* (2000) situated Spain in the group of EU countries with high child poverty rates and low and ineffective child benefits. This is not a surprise given that according to the same authors' calculations, using ECHP data, direct family related benefits in Spain accounted for a negligible 0.2 per cent of the mean income of all households, quite far from the largest levels in Belgium and Austria (above 6 per cent), and only comparable with the low levels of Italy (0.4 per cent) and Greece (0.5 per cent). Even in a poorer country like Portugal they accounted for a higher 1.7 per cent. This expenditure levels in Spain cannot clearly be expected to have a significant effect on poverty alleviation.

In contrast with most EU countries *social safety nets*, the Spanish *social safety net* does not include any universal[3] direct benefit paid at households with children. The only child benefit[4] in Spain is the so-called *Prestaciones por hijo a cargo* which is addressed at households with dependant children under 18 years old and is means-tested[5]. This benefit has its origins in the Franco's era and the amount was barely updated through time. From 1971 to 1990 it was universal but on a contributory basis and the amount of the benefit was never updated to price increases thus making it become insignificant (around 20 Euros per household, per year and child). In 1990 there

[1] Expenditure on education as a percentage of the GDP increased from 2.9 per cent in 1970 to 3.8 per cent in 1980 and 5.7 per cent at the end of nineties, a level similar to the other EU countries.

[2] In fact, total expenditure on social benefits amounted to 0.3 per cent of Spanish GDP in 1990.

[3] We will use the term *universal* as opposed to means-tested, even if the beneficiaries are only working population.

[4] Understood as in Inmervoll *et al.* (2000): *Regular cash payments made to parents or other carers on behalf of children who are dependent on them*.

was a reform of this scheme (Law 26/1990) that updated the amount of the benefit (216 annual Euros per household) and created a new non-contributory benefit of the same amount. Indeed, this reform implied some increase in the amount of the benefit but, most importantly, a move from an universal type of benefit to a means-tested type of benefit. A first strong limitation of this child benefit scheme reform in Spain is that despite the benefit amount increase, the benefit is still very low to be effective in combating poverty and was never updated again until 1999[6]. Secondly, the household earnings limit to become eligible was quite restrictive: around 1.5 times the minimum wage in 1990 in the case of one dependent child while the limit increases in a 15 per cent per additional dependent child. This limit is regularly updated but in a lower proportion than earnings increase which implies that in 2000 the limit amounts to 1.3 times the minimum wage. This meant that while in 1993 around a 27 per cent of children were covered by this benefit, the coverage has decreased to 20 per cent in 2000. This is in clear contrast with the 100 per cent coverage of universal child benefits in other EU countries. Finally, as Inmervoll *et al*. (2000) have already stressed, a third negative implication of means-tested benefits is that they prioritise short-term income maintenance without regarding the adverse consequences of this form of targeting like work incentives (they impose a high and unfair effective marginal tax on labour) and social stigmas.

Making some international comparisons of the coverage of the Spanish child benefit scheme we have that a household with one child in Spain receives (if poor enough) around 20 per cent of the amount it would receive in countries like Sweden, France, UK or Germany, and a third of the new Dutch system for children above 12 years old (this percentage increases to 45 per cent if the child is under 5). The Spanish scheme only performs better than the Greek and is similar to the Portuguese regarding households with children over 1 year of age and slightly worse in the case of babies. Differently to what happens in the rest of EU countries, the amount of the child benefit in Spain does not vary with the number of children or their age.[7]

In fact, the way successive governments have chosen to implement their policies to support families in Spain has mainly considered tax concessions in the personal income tax[8] for households with children with middle and high incomes levels who are not eligible for means-tested child

[5] Note the exception of disabled children who can receive the benefit when older of 18 years of age.

[6] The current annual earnings limit for a household with a single child is 7,954 Euros, this limit increases a 15 per cent for each additional child. The annual benefit for the household is 291 Euros (less than 5 per cent of the corresponding annual minimum wage) due to the Royal Decree 1/2000 (with retroactive effects since 1999) and is non-taxable. Royal Decree 1368/2000 has recently created two additional benefits on unique payments in the case of third and successive births or in the case of multiple deliveries (two or more children).

[7] For a description of child benefits in the EU see MISSOC system at the European Commission web page. For a recent description of family policies in Spain see, for instance, Flaquer (2000).

[8] Note that these concessions are not reported in the EUROSTAT - EESPROS statistics on social expenditure.

benefits. These policies can do little to reduce poverty because poor families with children are below the tax threshold. Between the creation of the Spanish income tax system in 1979 and its most important reform in 1999, the concession was in the form of *tax credits*. For instance, after the 1991 reform, there was a tax credit of 120 Euros for families with dependent children until 30 years of age[9]. This amount experienced several reforms and updates since that date. The largest reform of the income tax conducted by the conservative party in1999 changed tax credits for children into a *tax allowance* (called *mínimo familiar*) depending on the number and age of children in the household.[10] This reform generated a large political debate about the inequity of these benefits in a progressive tax because the final amount that a household saves depends on the marginal tax rate that applies, which means that the discount, if any, is increasing with income[11]. Finally, we should include here that given the decentralization of income tax regulation that started in 1996, some Spanish autonomous regions (*Comunidades Autónomas*) created additional, even if small and restrictive, tax credits for births or for childcare expenses in their territories.

We are concious, however, that other social benefits in the Spanish Social Security System which are not directly addressed at children could have an important effect on their well-being. This is the case of Income Support and the Minimum Guaranteed Income Scheme in Spain. Unemployed individuals with dependants (children below 25 and/or the spouse) are eligible for the means-tested non-contributory subsidy (Income Support) after having exhausted the contributory benefits. However, this benefit is limited to a number of months and does not exceed two years of benefit duration. The Minimum Guaranteed Income Scheme has been implemented by Spanish regions during the last decade[12]. These benefits provide protection to poor children through increases in the amount of the benefit due to the number of members in the household. However, these benefits have important shortcomings given their narrow elegibility requirements, the fact that they tend to strongly penalise large households because of the presumed economies of scale and the existence of a maximum benefit[13]. Thus they only give coverage to a small percentage of the poor households with children in need, failing to provide an effective safety net to households with children.

[9] The same 1991 law created a very restrictive means-tested tax credit for childcare expenses with an amount of up to 150 Euros in 1991.

[10] 1,202 Euros for the first and second dependent child under 25 years, 1,803 for additional children and other 300 for each child under 3 years old or 150 for those between 3 and 16.

[11] Thus, the discount for a child (under 3) varies between zero for non tax-payers and 721 Euros if the maximum marginal tax rate of 48 per cent applies, which is more than twice the amount of the child-benefit (*prestación por hijo a cargo*).

[12] Various regions started to offer these benefits at the beginning of the 1990s. During the decade all Spanish regions have decided to offer them.

[13] In some regions this maximum is around the minimum wage.

In sum, the limited amount of the child benefit in Spain, the largely ineffective in reducing child poverty tax allowances and the short number and inadequacy of other available social benefits, places Spain within the EU countries where welfare state policies are expected to be most weak in pulling children out of poverty.

In this social policy context, the understanding of the *reasons* that push poor households with children out of poverty is crucial in order to have an idea of what is determining a higher persistence of poverty for children and thus being able to propose a thorough benefit reform. Precisely, Leisering and Voges (1993) assert "*... poverty can be fully explained by investigating the causes of the beginning and end of a poverty spell*". Moreover, the recent literature as in Jenkins (1999) indicates that it should be a central aim of current research on poverty to try to find out the *nature* of the characteristics and events that help households in leaving poverty. This is: Is it the labour status of household members or the demographic structure of the household what has a major effect on a household's transition probability? Are labour market related events (i.e. *changes in employment status of household members* such as more hours of work, job gain, unemployment benefit begins, etc...) more likely to induce transitions out of poverty than demographic events (i.e. *changes in the household composition* such as child birth, marriage, youth departure, etc..)?

With respect to both matters, the Spanish case also shows interesting features. On the one hand, Spain is one of the European countries with the highest proportion of individuals in the working-age population not at work because of either unemployment or inactivity. It is also the country with the highest rate of 'precarious' employment, in the sense of jobs with temporary contracts. In 1994, the unemployment rate among 16-29 years-olds was high as 39 per cent, and temporary contracts were held by more than 60 per cent of all people of this age with jobs. On the other hand, changes in the household composition due to divorces or breaking-offs are lower than in other European countries. However, the demographic structure of Spanish society changed radically in the last 30 years. There was a gradual decline in the population of children (and youngest age group) in line with a drop in the fertility rate, which reached 1.18 children per fertile woman in 1995 (one of the lower rates in the EU). In parallel, there has been a growing proportion of young people still living with their parents (nearly 90 per cent of 20-24 years-old and more than half of 25-29 years-olds live in the parental home). It seems that adverse labour and household market conditions are important variables in reducing youth departure. Thus, Ahn and Mira (2001) conclude that the lack of stable jobs is an important factor forcing many young people to delay marriage and childbearing, while Martínez and Ruiz-Castillo (2002) confirm that age, possesion of

a job and the cost of housing are clearly related to the decision to leave the parental home. In any case, public policies have also tended to reinforce this trend. A reliance on social insurance within the Spanish system of social protection, with benefit entitlements linked to employment history, has meant that cash benefits for the young unemployed are often not avaliable. It is not a surprise that Del Río and Ruiz-Castillo (1997) find that the young unemployed who live as dependants in the parental home are better off than any other unemployed subgroup.

In this paper we aim to analyse the characteristics and events that either help or deter a transition out of poverty of *households with children* in Spain. In particular, we are interested in finding out if for this particular group of households the *labour market events* play a more significant role than in other household types or if the *demographic events* are relevant issues as in another European countries. Further, the decomposition of the two components of effective transitions, first the occurrence of an event and second, the income changes among those experiencing a particular event, will help us in discovering the importance of the various factors that could be acting in each transition. More precisely, *labour market institutions and policies* together with *demographic structural dynamics* (fertility and marriage market) will most likely resume the factors that influence the occurrence of events while the income changes among those experiencing any particular event are most likely to be related to the *opportunities of individuals to promote* their households out of poverty. Finally the occurrence of events such as the beginning of social assistance and social insurance benefits is largely related to the capacity of the *welfare state* to promote the poor through poverty alleviating cash transfers (see Ravallion, 1996)[14].

Following the approach adopted in most poverty research in the context of industrialised countries, this paper focuses on relative economic poverty, that is, the poverty line adopted is not fixed over the period analysed, but it is taken to be a function of the median welfare level as measured by (adjusted) household income during the period. Thus, a household is taken to be poor if his economic welfare falls below 60 per cent of the median welfare for the population as a whole. This is obviously a restrictive perspective, because it focuses on an economic and a relative poverty approach and it misses the other dimensions of welfare. To examine the persistence over time of poverty of Spanish households with and without children and the events that are more effective in their departure from poverty, the paper explores the longitudinal evidence from the Spanish household panel survey, Encuesta Continua de Presupuestos Familiares.

[14] This author underlines the importance in distinguishing within poverty-alleviating social policies those mostly related to the promotion of the poor (pulling households out of poverty) from those mostly related to the protection the vulnerable (protecting households from a fall into poverty).

In the first section, we present the particular characteristics of our dataset and we detail the main methodological choices made in the definition of poverty. To situate the reader in a wider perspective, section 2 describes the evolution of poverty an its persistence in Spain during the period 1985-1995 for different demographic groups. In section 3, we detail our approach to the analysis of leaving poverty trigger events and their effects on poverty outflow, while in Section 4 we include our results on the relevance of trigger events on making households step out of poverty. Section 5 includes our main conclusions.

1. The particular structure of the Spanish dataset and some definitions

1.1 The Spanish *Encuesta Continua de Presupuestos Familiares*

The sample is obtained from the Spanish Household Expenditure Survey (Encuesta Continua de Presupuestos Familiares, ECPF). The ECPF is a rotating panel survey which interviews 3,200 households every quarter and substitutes 1/8 if its sample at each wave. Households are kept in the panel for a maximum of two years. The structure of the panel is similar to that of the American Survey of Income and Program Participation (SIPP). A pooled sample of our data consists of 27,735 households observed between one and eight times between the first quarter of 1985 and the last quarter of 1995, both inclusive[15]. The ECPF survey has the advantage of providing up to date income and family composition information at short time intervals. Thus, helping to identify, more precisely, the specific point in time at which demographic or socio-economic events take place. In this sense, it becomes particularly useful in the study of poverty dynamics because it improves the expected correlation between these events and changes in household income. Being interested as we are, in a comparative approach, it is feasible to compare results with those obtained for other countries who use annual panels. In this context, the advantage of using quarterly data is that of measuring more accurately than annual panels the income during a certain time period (and thus decreasing the expected measurement error in the income variable). This comes about given that household income in annual panels is inferred from weekly or monthly income while we have total quarterly income.

However, a clear drawback of this sub-annual interview structure is that household fatigue imposes short household tracing periods. This results in a substantive attrition rate and in short

[15] See Cantó (1998) for a thorough description of the ECPF and discussion of its advantages and drawbacks in the study of poverty dynamics.

household tracing periods. For the study of poverty dynamics this implies losing information on long spells of poverty. All our calculations are based in the comparison of the household situation at first interview (moment *t-1*) and the household situation a year later, at fifth interview, or 21 months later, at eighth interview (moment *t*). In this context, and given the importance of attrition in the ECPF (approx. a 45 percent of households leave the panel between *t-1* and *t*, fifth interview), we apply longitudinal weights to the data in order to take account of possible bias arising from this unplanned sample attrition. Non-random attrition is a potentially serious problem which is recurrently noted in the literature (see Bradbury *et al*., 2001 or Luttmer, 2000) but rarely taken into account. The procedure to obtain the relevant attrition weights consists in a probit regression of the probability of staying in the panel for a year (fifth interview) on household characteristics (age, level of education, civil status, sex and labour status of household head together with the number of household members and household residence township). Weights were constructed by predicting the inverse of the probability of being a "stayer" and constraining the sum of weights to be the total number of households in the sample at first interview. This strategy of constructing attrition weights is one of the options proposed by Kalton and Brick (2000) who indicate that recent research obtains similar results on the value of weights using this methodology than using any of the other two proposed in the literature. We actually find that households with better economic positions living in urban areas whose head is young and highly educated are more likely to drop out of the sample.[16]

1.2 Some important definitions

The choice of the household as unit of study is based on the fact that an individual's well being is believed to strongly depend on total household welfare (if income is equally distributed within the household). Also, the shortage of demographic and socio-economic information (apart from age and sex) of individuals other than the head of household and the spouse in the data makes this choice advantageous. Following, to some extent, the terminology in Jenkins (1999), a clear way to write our economic measure of well being is to use the household income-equivalent or *HIE*. HIE_q is the needs-adjusted household gross income at quarter *q*. Thus:

[16] Winkels and Davies (2000) indicate that in analysing panel data attrition in a Dutch dataset they found that it is residential mobility, couples marital separation and the departure of children from the household more than household characteristics what determined an individual's probability of attrition in the panel. Clearly, the difficulty in collecting information on these transitions leaves us with the only option of using household characteristics at first interview in order to predict the likelihood of non-response and thus obtain attrition weights.

$$HIE_q = \frac{\sum_{l=1}^{L}\sum_{k=1}^{K} x_{lkq}}{m(a, L)}$$

where l indicates the number of individuals in the household (l=1,2..., L) and k is each money income source.[17] The denominator is an equivalence scale factor, which depends on household size n and on a vector of household composition variables a (ages of individuals, etc.). Our welfare measure *HIE* is therefore the sum of all household members monetary income before housing costs adjusted by household needs using an OECD equivalence scale.[18]

A household is counted as poor if its HIE_q is below 60 per cent of the median equivalent household income at the corresponding quarter.

Our definition of *household with children* follows UNICEF recommendations on classifying as "children" all household members below 18 year of age. Thus, we divide our initial sample of 27,735 households into two fairly similar size samples: 13,383 households with children and 14,352 households without children. In some of our calculations we furtherly distinguish some specific characteristics for the group of households with children. Namely, lone and single parenthood[19], couples with one or two children and couples with three or more children. Each of the first two groups include approximately 40-45 percent of households with children while the third group accounts for 13 percent of the households with children sample.

2. Poverty and persistence of poverty in Spanish households: 1985-1995.

In this paper we construct a sample from which we can obtain comparable results on various aspects of static and dynamic poverty to those presented by Duncan *et al*. (1993) and Jenkins and Schluter (2001). To establish the broad patterns of poverty for households with children in Spain we first briefly analyse how the income distribution among households with and without children changed in Spain between the mid-eighties and mid-nineties. The income distribution in Spain has

[17] Monetary individual disposable income includes employment and self-employment income, income from regular transfers (including pensions and unemployment benefits), investment income and income from other sources. It excludes social insurance contributions and it is net of pay-as-you-earn taxes.

[18] The OECD scale weights by 1 the first adult in the household, by 0.7 the second and subsequent adults and by 0.5 all children in the household (children are all individuals below 14 years of age). See Mercader-Prats (1998) for the effects of the choice of equivalence scale on poverty measurement in Spain.

[19] Lone parent households are households with children (individuals below 18 years of age) and only one adult who is the household head. Single parent households are households with children with an adult head, no spouse and some other adult member.

experienced a substantial improvement towards equalisation during the second half of the seventies, the eighties and the nineties (see Oliver *et al.*, 2001). As a result, the number of relative poor households in Spain between 1980 and 1990 has clearly declined under all methodological choices (see Del Río and Ruiz-Castillo, 2001). However, Cantó *et al*. (2001) finds that the first part of the nineties appears to register not only a stabilisation in the decline of the number of households in poverty but also a change to a slight increase. This result is specially visible when looking at the increase in the distance between the incomes of households situated in the tails of the income distribution: the incomes of those in the highest and the lowest part of the income distribution are more distant in 1995 than they were in 1985.

Breaking the population into two demographic groups: households with and without children we first note that both their demographic and labour status characteristics differ - see Table 1. Households with children are large in the number of members, have a younger, more educated head compared to the population as a whole and their head is most often active in the labour market. More than half of the households without children are, instead, headed by a retired individual receiving a pension. We should note, however, that the group of households without children includes some young and highly educated individuals living in large townships.

(insert Table 1 around here)

In order to study the evolution of the income distribution for these demographic groups along the period under study, we first estimate separate densities for the logarithm of equivalent monetary income in both groups of households (first quarter of the respective year), such that the overall density is just the weighted sum of both of them, and we then inspect how the whole sub-distributions changed over time, rather than concentrating on particular points. However, given that we are more concerned about the poor, we also represent the poverty line for the entire population at each year.

The densities are estimated with the non-parametric technique known as *kernels*, with no assumption about the shape of the distribution, smoothing the densities avoiding the noise induced by the use of a sample instead of the whole population. We estimate a function $\hat{f}(y)$ over the logarithm of incomes $\mathbf{y}=(y_1, \ldots, y_n)$ in each sample assuming that there exists an original density $f(y)$ from which the sample was extracted. The estimator we use is:

$$\hat{f}(y_j) = \frac{1}{h}\sum_{i=1}^{n} K\left(\frac{y_j - y_i}{h}\right) \forall j ,$$

where *h* is the optimal bandwidth obtained through the minimisation of the *mean integrated square error*, and *K(.)* is the *kernel* function, which is Gaussian in our case.[20]

(insert Figures 1a, 1b and 1c around here)

We can observe in Figures 1a to 1c that in 1985 the density for households with children compared to the other group allocates a higher share of population at the bottom tail (until the 51 per cent of the median) and is also characterized by having middle incomes more concentrated around a prominent mode (the share of population is larger between the median and twice the median). These differences seem to be diminishing during the second half of the eighties. Again, during the first half of the nineties, the distribution for households with children displays again a larger share of population in the lower tail, now over the entire interval defining the poor (until 60 per cent of the median), while the middle-income group is still more concentrated around its mode than that of households without children. This is in line with what D'Ambrosio and Gradín (2000) obtain by comparing densities for population sub-groups in Spain (1980-90) and Italy (1980-95). These authors show that in both countries there was an increasing social distance between children and the rest of age groups, specially contrasting with the improvements in social position of the elderly. Among children, those showing the most worrying trend were children living in households with a large number of children and one income earner at the most.

Table 2 summarises the main income distribution statistics for both demographic groups, as well as for the overall sample between 1985 and 1995. The demographic trend in Spain is clear: a progressive reduction in the percentage of households with children (from 53.3 to 42.2) and at the same time a fall in the average number of children in child-bearing households (from 2 to 1.7).

(insert Table 2 around here)

Regarding the economic position of households with children, we can see that their average income lies around 82 per cent of the mean for those without children at the beginning and at the end of the period, but in intermediate years, like 1990, it slightly improved until the 86 per cent. The degree of inequality in 1985 and in 1995 is larger in the case of households with children, for instance according to Gini index inequality was 5 and 6 per cent larger respectively. The table

[20] For details regarding this technique, see Silverman (1986) and subsequent literature.

presents also results for Theil indices, highlighting the fact that, as was presumed through the direct observation of the densities, inequality in the former group is larger when we use an index more sensitive to both tails in 1985, and to the bottom one in 1995. Differences in inequality levels became shorter in intermediate years and in some cases, Theil(1) and Theil(2), inequality is lower in households with children.

The two groups experience a reduction in both absolute and relative poverty indicators during the period of analysis. According to the threshold of the 60 per cent of the median, in 1985 a 15.9 per cent of households without children were in poverty while 24.6 of households with children were below the poverty line (20.6 of the total sample was classified as poor). Keeping the poverty line fixed in real terms yields a large net population shift out of poverty in both cases, clearer for the former group. Thus, while in 1995 there was only a 3.4 per cent of households without children still below that *absolute* poverty line, the share was more than three times that amount in the case of households with children, 11.1 per cent (in comparison with 6.7 for the total sample of households). This shows that poverty is more severe in the latter group. This shrinkage in absolute poverty in both groups coincides with a period of growth in average incomes (see Figure 2). Note, however, that between 1991 and 1995 the incidence of absolute poverty increases for households with children, but continues to decrease for households without children.

(insert Figure 2 around here)

When the poverty line is constructed relative to the contemporary median (60 per cent of the sample median income) differences in the incidence of poverty between both groups are considerably larger. The incidence of poverty in 1995 is more than double for households with children (9.9 per cent for households without children and 23 per cent for households with children) while the reduction of poverty between 1985 and 1995 amounts to almost 40 per cent for the first group but barely a 6 per cent for the latter.

The limited progress in reducing relative poverty in households with children for the whole period hides the fact that incidence in poverty (see Figure 3) is effectively reduced during the years with growth in average incomes, achieving 17.6 per cent in 1991. In fact, *FGT* indices of poverty indicate larger reductions in poverty when the severity of the poverty gaps and inequality among the poor are introduced, reductions being larger in the case where the index is more sensitive to the poor. From 1991 onwards, poverty increases for households with children coincide with the stagnation of average incomes, unlike what happens in households without children where poverty

still continues to decline, thus substantially increasing the gap between both demographic groups in the period.[21]

(insert Figure 3 around here)

3. The determination of the trigger events.

In order to identify the relevant event that determines a household's departure from poverty we have initially followed Bane and Ellwood (1986) and Jenkins (1998) methodology which classifies events into mutually exclusive categories by a hierarchical classification system. The main family structure change is a change in the identity of the head of household, thus if a head of household change took place we identify the transition trigger event as being *demographic*. If the household is maintained then we check if the increase or decrease in the income/needs ratio was more influenced by the numerator or the denominator. If the sift in the numerator is proportionally larger than that of the denominator (in the relevant equivalence scale) then we classified the trigger event as income event and detail the income source that increased the most. This will be directly linked to *labour status events* (i.e. change in some members labour earnings, change in some members contributory pension earnings). If, instead, it is the change in needs which is larger than the change in income then we classified the trigger event as *demographic* (i.e. death of member, child leaving home, partnership split, other members leaving).

The previous approach is clearly too rigid to give us information in the most detailed reasons for transiting out of poverty. First, it classifies all headship changes as demographic when, precisely given the structure of Spanish Household surveys, a headship change may be due to labour market changes for household members given that the head is defined as the household member whose income is the highest or that to whom the main bills are headed to. Also it avoids the consideration of joint events in providing most significant routes out of poverty. In order to eliminate much of the rigidity from the previous methodology we present a large list of potentially important events in determining an exit from poverty and analyse their correlation with poverty exits. In doing this we put in relation the results obtained using the previous more restrictive definition of events and the actual changes that we find taking place in the household. Further, following Jenkins and Schluter

[21] It is well known that the incidence of poverty among households with children is quite sensitive to the choice of the equivalent scale used in adjusting incomes. Indeed, the poverty rate substantially falls for this group when we use a scale weighting less the necessities of larger households, for instance the square root of household size. But in that case, we still find in Spain a worrying

(2001) we decompose the differences in the effects of trigger events in differences in the prevalence of events and differences in the chances of making a transition conditional on experiencing a trigger event. This is particularly relevant if we expect that the prevalence of events may differ between the poor and the non-poor and in being able to assign the reason for the poverty exit to the realisation of a given event or to the implications on income changes of such an event taking place in Spain, differently from other countries. More precisely, suppose that we have a set of mutually exclusive events $j = 1, \ldots, J$, which trigger exits from poverty. Then, among households at risk of leaving poverty (the poor) between one year and the next, the probability of exit is given by the sum of the probabilities for households that exit by each of these different events:

$$\Pr(exit\ \ poverty) = P_{it} = \sum_{j=1}^{J} \Pr(exit\ \ poverty \,|\, event\ \ j) \times \Pr(event\ \ j)$$

Our method avoids the use of a direct approach to measurement followed by Muffels (1999) which specifies that a household i exit hazard depends on household characteristics at $t-1$ and on the events that occur to household members between $t-1$ and t:

$$P_{it} = F\left(a + bX_{it-1} + gE_{i;t-1,t}\right)$$

where t refers to the particular calendar moment for each i (quarter and year), X_{it-1} is a list of labour and demographic status of members evaluated at $t-1$ and $E_{i;t-1,t}$ are the events that take place in the household between two moments in time ($t-1$ and t). The problem here is, clearly, that the static characteristics at $t-1$ could be determinants not only of the transition out poverty but could be important determinants of the changes in household composition or of the changes in the employment status of household members. This means that static explanatory variables in this model have two different effects on transition rates: a *direct effect* which is picked up by the estimated coefficient associated to each of them and an *indirect effect* which goes through the dynamic explanatory variables or *events*. Estimation problems here would arise if the unexplained part (error) of the transition probability regression is correlated with the unexplained part of a model for the probability of experiencing an event on similar static explanatory variables. This is, if there are unobservables that, for example, may be determining both the household head's likelihood of finding an acceptable job and the household's probability of stepping out of poverty. In this case the model would suffer from endogeneity and the regressors would be contemporaneously correlated

increasing gap between incidence in poverty in households with and without children: 16.6 and 15.6 per cent respectively in 1993 in contrast with 20.3 and 16.3 in 1995.

with the error term. However, various researchers have used this previous method and, for example, Stevens (1994) finds that, for the US, the inclusion of age and sex control variables reduces greatly the significance of event variables. Muffels (1999) finds that even if household demographic and socioeconomic characteristics turn out to be the most important determinants of a transition out of poverty, changes in employment status of the household head are also significant indicators of this transition (mainly job gain).

Even if we centre our discussion in the effects of events on transitions out of poverty we are conscious that in the determination of a household chances to leave poverty, household characteristics at moment *t* are most probably within the roots of event occurrence. This is, for example, the level of education of the household head decisively determines the household chances to leave poverty by affecting the chances of experiencing some event. Thus in order to predict the different probabilities of leaving poverty for different type of households, we run multivariate regressions of the probability of experiencing an exit. We use a very simple model of transition probabilities in order to be able to compare our results with those elsewhere. Taking all households who are poor at first interview, moment t-1, we estimate the probability that a household moves out of poverty a during the following year, i.e. is not poor at moment t (fifth household interview). This is a first order Markov chain. We estimate the household's characteristics that most determine a household's probability of leaving poverty by maximising

$$\log L = \sum_{i=1}^{n} C_i(\log P_{it}) + D_i(\log(1 - P_{it}))$$

$$P_{it} = F\left(a_2 + b_2 X_{it-1}\right)$$

where C_i indicates than an exit took place between *t-1* and *t* and D_i indicates no exit at all. Assuming F to follow a logistic distribution, one can estimate the values of P_{tk} for each household type given its characteristics by maximising this likelihood function - see Table 3. These results will inform us on the demographic and socio-economic characteristics of households that are able to leave poverty and thus, the characteristics of the households most likely to experience any of the following trigger events.

(insert Table 3 around here)

Interestingly we find that labour status household characteristics at the initial moment are not specially important in determining a household's chances to leave poverty. We discover that the

level of education of the household head is the most important variable in helping or deterring any household's transition out of poverty for both household types: the higher the education level of the head the higher the household's chances to leave poverty. Also, the economic environment where the household lives appears to be important: urban poor households are more likely to leave poverty than rural ones. We also find some significant and interesting differences between the household characteristics that help households with and without children in leaving poverty. The age of the household head has a negative effect (slightly quadratic) on transition probabilities for households with children while this variable is completely insignificant in determining the chances to leave poverty for households without children. Households with children have a lower probability of leaving poverty the older their household head. Thus, the life cycle effect is clearly relevant for these households linking their transition chances to the labour market opportunities of parents. Further, the existence of a large number of dependants in the household *reduces* the chances of a transition for households with children while it *increases* the chances of a transition for households without children. This result indicates the different nature of dependency in each demographic group: households with children have dependants whose possibilities of obtaining incomes in the labour market or the welfare state are insignificant while households without children have dependants who are either active in the labour market or may be elegible for receiving social transfers.

These results seem to guide us to the reasoning that it is probably the opportunities to improve the labour market attachment of household members that education and the economic environment provide, those that are key issues pushing a household out of poverty. More precisely, in the case of households with children, it is most likely that the life cycle situation of parents is determinant in the labour market opportunities of parents. Further, as indicated previously, it is probably the case that young and educated urban households are more likely than others to experience certain demographic events (children leave the household, re-marriage of the head, etc.) or labour market events (gain a job, offer more hours of work, etc.) which push them out of poverty.

4. Are the events that determine spell endings similar for households with and without children?

A clear determinant of a household's probability of escaping from deprivation are the events experienced by household members. These changes are expected to be strongly correlated to the actual transition out of poverty and, in many cases, may be regarded as the most direct reasons for

an exit. *Labour market events* are finding a job or increasing working hours by any household member. *Demographic events* are a reduction in household members due to the departure of siblings from parental home or death and remarriage. Other events that surely should help households in leaving poverty are the beginning of a benefit scheme. Bane and Ellwood (1986) identified the events associated with the endings of spells ranking them by their effect on household income changes. Here, we first follow this approach and then we detail more carefully what actually happened to the household by selecting the most important events within the former.

(insert Table 4 around here)

Using Bane and Ellwood's definition of transition types we have that demographic events occur to approximately one out of ten households transiting out of poverty (8.4 percent) while income events occur the to the nine other remaining cases. The same calculation for the US in Bane and Ellwood (1986) showed that 13 percent of spell endings took place with a demographic event while 87 percent of spell endings took place with income events. Further, for the UK in Jenkins (1998) two out of ten (17.7 percent) transitions out of poverty took place together with demographic events. In sum, demographic events do not appear to help households in leaving poverty in neither of these countries. Moreover, in Spain it appears that demographic events are even less important in helping poor households step out of poverty. This may not come as a surprise if we are concious that both fertility rates and departure of youth from parents households are largely lower in Spain than in the UK or the US. Within income events changes in head's earnings were the main reason for transition both in the US (50.2 percent of total) and in the UK (33.6 percent of total) while in Spain, even if head of household labour earnings changes are highly correlated with transitions out of poverty, changes in non-labour income are the main reason for a household transition out of poverty.

We find here some very important differences between the transition out of poverty trigger events for households with and without children. As it would probably be expected, households with children are much more stable in their demographic structure: they seldom change household head and there are few departures of members. Income events, instead, are very important for these households, specially if they are related to changes in their household head labour earnings. In fact, almost half (45 per cent) of the transitions experienced by households with children are classified as related to their head of household labour income change. This result is in line with that obtained by Duncan *et al*. (1993) for a large list of OECD countries where for households with children employment is by far the most frequent cause of exits. Households without children have a

completely different set of relevant trigger events. These households experience more demographic events than the former and most significantly their transitions out of poverty are highly correlated with changes in non labour income. Probably, these non-labour income changes are the beginning of pension benefits, unemployment benefits or other social transfers. All these results continue to underline the strong relation of the life cycle and labour market opportunities of parents of the chances of leaving poverty for households with children likely to result from *labour market institutions and policies* in Spain. In contrast, households without children seem to find in the *welfare state*, mainly represented by a contributory and non-contributory pension system, the most important source of trigger events providing an exit from poverty.

(insert Table 5 around here)

Looking for more detail within the group of households with children we find that it is lone and single parent households those who are experiencing most demographic trigger events while households formed by a couple and children are remarkably stable in their demographic structure. Also, lone and single parent households have a more diverse source of income events than households formed by a couple and children where most trigger events come from the head of household labour earnings change. Namely, 35 per cent of trigger events occurred in lone and single parent households that transit out of poverty are related to changes in the labour earnings of *other members* different from the head.

As noted in section 3 the previous approach is clearly too rigid to give us information in the most detailed reasons for transiting out of poverty also because following Jenkins and Schluter (2001) we are able to decompose the differences in the effects of trigger events in differences in the prevalence of events and differences in the chances of making a transition conditional on experiencing a trigger event. This decomposition of the two components of effective transitions, will help us in discovering the importance of *labour market institutions and policies* together with *demographic structural dynamics* (fertility and marriage market) in constrast with the relevance of the *opportunities of individuals* in promoting their household out of poverty and the action of the *welfare state* in promoting poor households out of poverty.

(insert Table 6, 7 around here)

In Table 6 we present some results on the importance of our new list of detailed events within the previous Bane and Ellwood's classification. Results indicate that head changes are mostly related to the departure or death of an elderly, the gain of a worker in the household, a transition

from unemployment to some employment and the beginning of a pension benefit. Needs changes are mostly related to the departure or death of a non-elderly adult (only 9 per cent of needs changes in the sample can be identified with separations of couples). Labour income changes are mostly related to labour earnings increases in the case of heads and to gains in labour income receivers in the cases of spouses and other members and to gains of a full-time job by an unemployed. Finally, non-labour income changes are mostly related to increases or beginnings of pension benefit schemes.

Calculating the two components of effective transitions for each Bane and Ellwood's event (head changes, needs change, etc.) and for all detailed events - see bottom lines in Table 6 and Table 7- we find that the most frequent trigger events occurring to all the sample of households and to poor households in particular are those related to non-labour income changes and head of household labour income changes. However, the income change implied by the occurrence of some event is highest for the former of these events and for two rather seldom events "head changes" which take place in 4 per cent of poor households and "other members labour income changes" which take place in 13.4 per cent of poor households.

If we go into detail on the actual events occurring to poor households, we find that the gain of a worker is specially common (26.4 per cent of poor households experience this event) and the income change it implies is also quite high. This result contrasts with that offered by Jenkins and Schluter (2001) where the relevance of this event in the UK and Germany is clearly below that of a labour earnings increase. However, the income change implications of these events differ in the UK and Germany. Germany shows similar effects of both events (slightly higher for the gain in a full-time worker in lone parent households) while the UK registers a significantly lower income changes when labour earnings increase. Spain shows high income changes in both but a higher income change in the gaining of a worker within the household.

As noted earlier, non-labour income changes are of special importance in Spain. In detailing the actual events of this type that occur to poor households we find that events related to the pension system are those most important in terms of occurrence while even if their effect on household income changes is important, a more seldom event such as the beginning of an unemployment benefit of a household member (which only occurs in 1.5 per cent of poor households) is more effective in increasing household income.

(insert Table 8 around here)

Finally, given the differences found in the relevance of income trigger events on a poor household exit probability when the household has children or not, we have decomposed all relevant detailed events in their two components for each household demographic group. Results appear in Table 8. A general result of this demographic distinction is that, even if the occurrence of many events is not particularly different between both groups of households, the income changes implied by the events are significantly different. Note, however that, as it would be expected, an exception to this are labour market events which occur significantly more to households with children than to households without children. In any case, almost all demographic and labour market events considered have a larger household income change implication if they take place in a household without children than if they take place in a household with children. Somehow it appears that the individuals inserted in households with children have special difficulties in promoting their households out of poverty through either demographic or labour status events. Also, *welfare state* action is much more relevant in modifying the outcomes associated with various events regarding households without children than households with children probably using cash transfers (social assistance or social insurance benefits).

Within households with children only the gain of a worker, the beginning of an unemployment benefit, the increase in pension income and some important reduction in members (the departure of more than one member) implies an income change that pulls more than 50 per cent of the households out of poverty. Within households without children many events pull more than 60 per cent of the households out of poverty. For these households, the transition from unemployment to full-time employment of the household head strongly increases a poor household's chances to leave poverty. Also, the beginning of an unemployment benefit and the increase in total pension income are events that pull these households out of poverty.

Recalling all possible comparisons of Spanish results with recent international evidence on poverty dynamics we can conclude that, in line with the UK and the US, income events are the most important in pulling households out of poverty. However, we find some relevant differences between Spain and those two countries. First, as expected, demographic events are less relevant for Spanish poor households than they are for American or British poor households. Secondly, it is not head labour income increases the most important reason to leave poverty but it is the increase of non-labour income of some household member what most often pushes them out of poverty. In sum, fertility decisions and the marriage market in Spain make less of a difference in the household chances to leave poverty. Also, even if the labour market attachment of households members is

important in increasing the chances to leave deprivation, the welfare state has a predominant role in providing cash transfers to low income households in need. Interestingly, this general result for Spain is leaded by the weight of households without children in the sample because for households with children results indicate that, similarly to results for other OECD countries, employment of members is the most frequent cause of exits from poverty. Moreover, the type of employment event that pushes households with children out of poverty in Spain is most often the gain of a worker while in the UK and Germany it appears that it is most often related to the increase of already existing labour market earnings.

5. Conclusions

In this paper we have been able to offer some insights on the statics and dynamics of poverty for households with children in Spain while comparing a limited number of results with those of other European countries.

The static analysis shows that households with children not only face higher more severe poverty rates than the rest of households but also that poverty appears to be more persistent. This is due to the fact that despite the reduction in their poverty rates during periods characterized by fast growth in disposable incomes, the stagnation of income growth dramatically reversed poverty trends, increasing the gap with respect to other households.

In fact, the previous result is quite consistent with results obtained looking at child poverty from a dynamic perspective. When a household has children, the main way of escaping poverty is through labour income increases of the household head, especially in the case of couples, or when they happen to have other adult members in the case of lone or single parents. So poverty transitions in the case of households with children are most strongly linked to the economic cycle in an economy, like the Spanish, with high rates of unemployment and temporary jobs relative to the rest of EU countries. In contrast, in the rest of households, non-labour income changes appear as more important in determining a potential transition out of poverty, implying that their transitions are more linked to the social protection system. This does not come as a surprise, given that in these households heads are older, and the Social Protection System in Spain is more designed to combat poverty in this demographic group than in younger households and with children. Given the demographic structure in Spain, and given their trends, our results show that the hope of households with children of escaping poverty through events of this kind is even lower than in other countries.

In sum, it appears that labour market events occurring to household members are the usual reason for escaping poverty for Spanish households with children. It is not difficult to suspect that stagnation of poverty among children, especially during periods characterized by increasing unemployment, may be the direct result of the precariousness and other structural deficiencies of the Spanish labour market. This contrasts with the situation in most EU countries where we find a strong safety net for households with children, mainly working through universal cash transfers that are effective in preventing poverty risk and in reducing child poverty persistence. As we have already emphasised, benefits addressed at households with children in Spain (through direct cash payments or through tax concessions) are clearly ineffective in alleviating poverty. They have failed in helping children step out of poverty and we can presume that they have also failed in preventing them from a fall into deprivation.

If we were asked to derive policy recommendations from our results, we would underline that our analysis shows that the challenge for policies aimed at combating child poverty in Spain in order to converge to European standards is to put larger efforts on increasing the safety net for households with children so as to avoid their extremely current vulnerability in the Spanish labour market. On the one hand, results indicate that children will benefit the most from a virtual reduction in the severe level of precariousness in this labour market. Thus, active policies to improve their parents' performance in that market will be effective in helping households generate their own earnings. Further, regarding family policies, the increasing concern about the risk of social exclusion among children does not seem to make it a political priority in a country where most reforms insist in using tax concession for this purpose, usually in a regressive way and clearly more oriented to increase fertility rates than to protect children from the risk of social exclusion. Thus, it is clear that little can be done if Spanish authorities insist in avoiding the implementation of a universal cash benefit guaranteeing a sufficient minimum income for all children regardless of the insertion of their households in the labour market. Moreover, the decentralisation of social assistance and tax design in Spain can make things even more complicated in the future if coordination between central and regional governments does not improve. Probably, integrating all cash transfers now dispersed in the social protection system in a unique scheme addressed at households with children could be a straightforwardly effective policy decision.

Finally, a new big challenge related to children is expected to focus future attention of the Spanish society. Spain was a country with a large tradition of migration to EU and Latin-American countries during the past two centuries. However, the end of the nineties has witnessed the

reversion of this trend with Spain hosting an increasing wave of immigrants coming from several non-EU countries who are most often at child-bearing age and who usually experience legal and social difficulties to become integrated. Thus, if both the labour market and social protection system were not effective enough to help households with children escaping from poverty, in the future we should expect much greater difficulties given that these newcomers will most likely increase the number of households with children below the poverty line, especially in periods of recession and increasing unemployment.

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Figure 1a. Denstities for income distribution in Spain, 1985

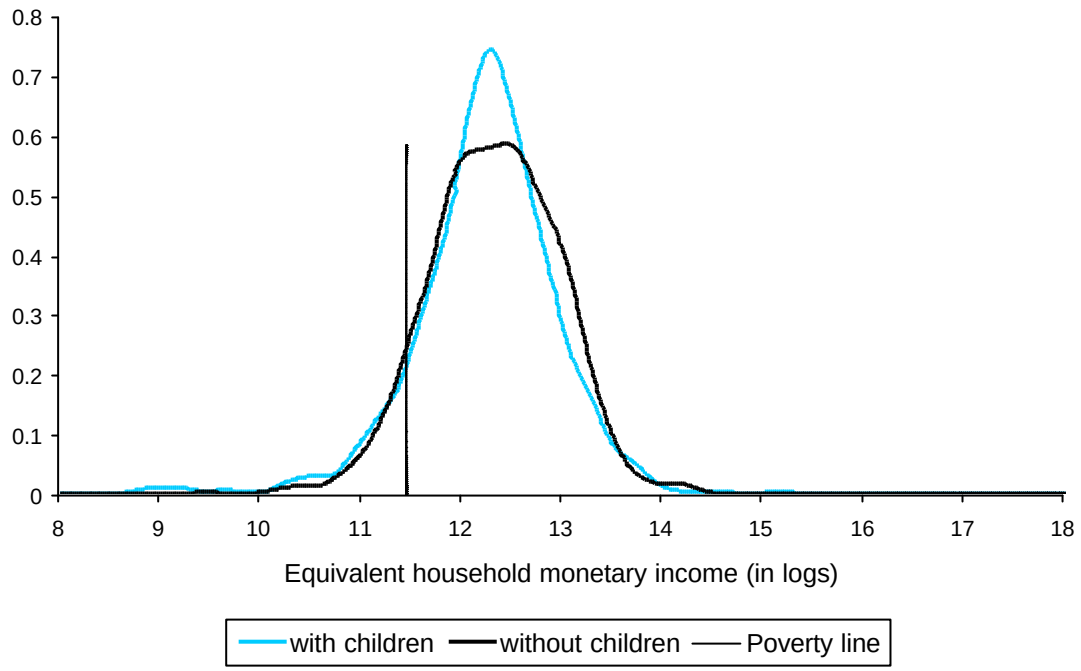

Figure 1b. Denstities for income distribution in Spain, 1990

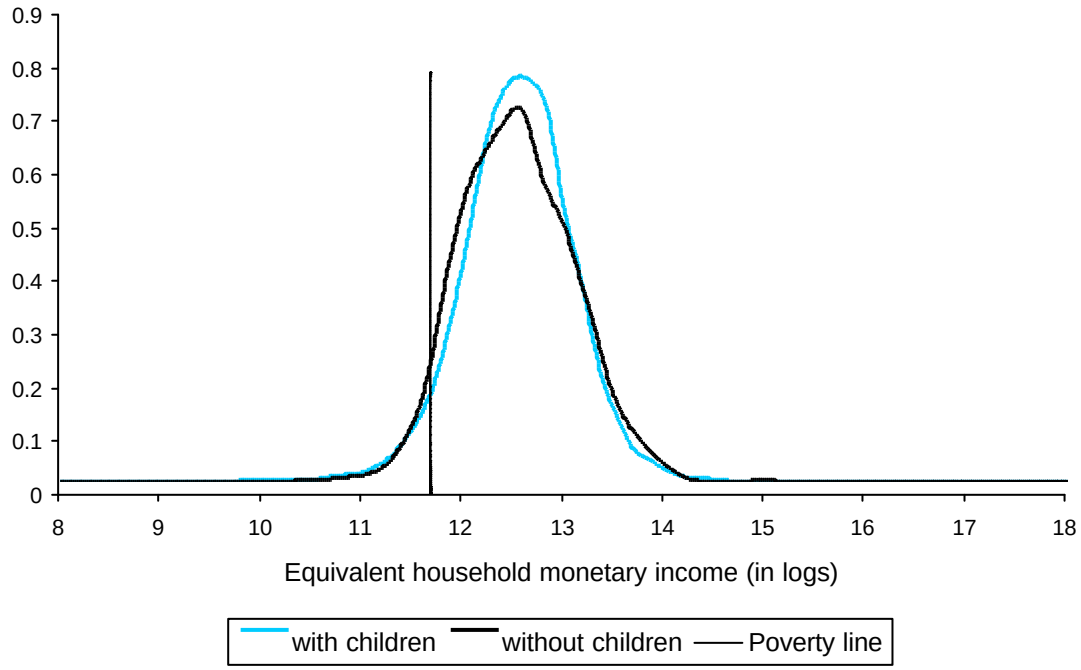

Figure 1c. Densities for income distribution in Spain, 1995

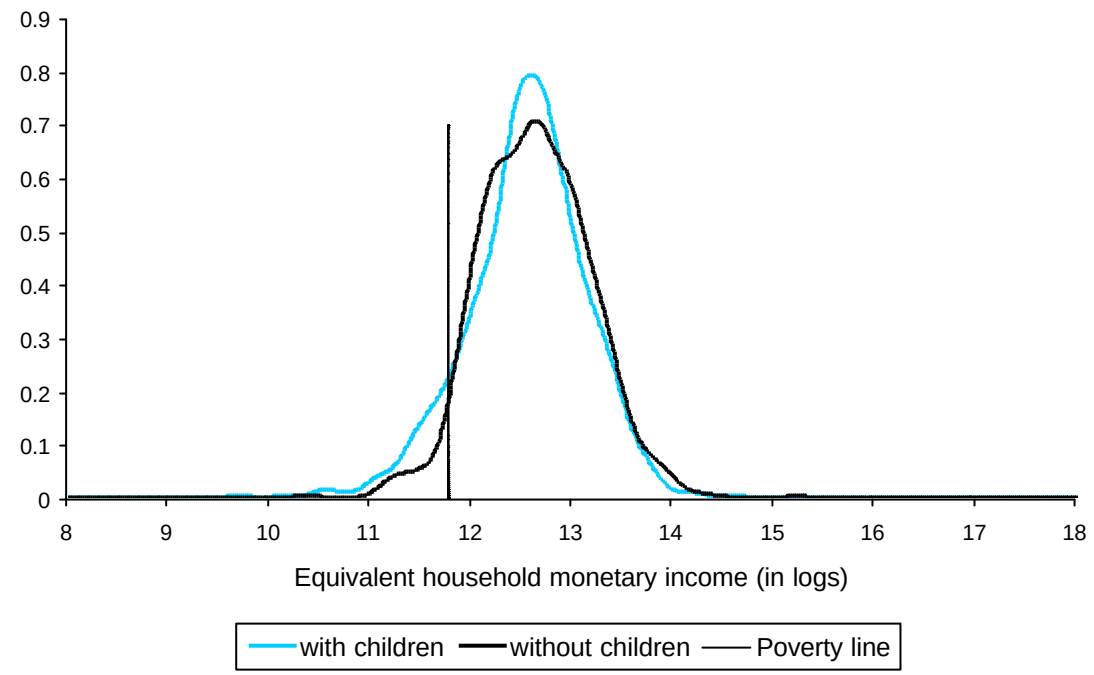

Figure 2. Average adjusted household income in Spain: 1985-1995 (1st quarter)

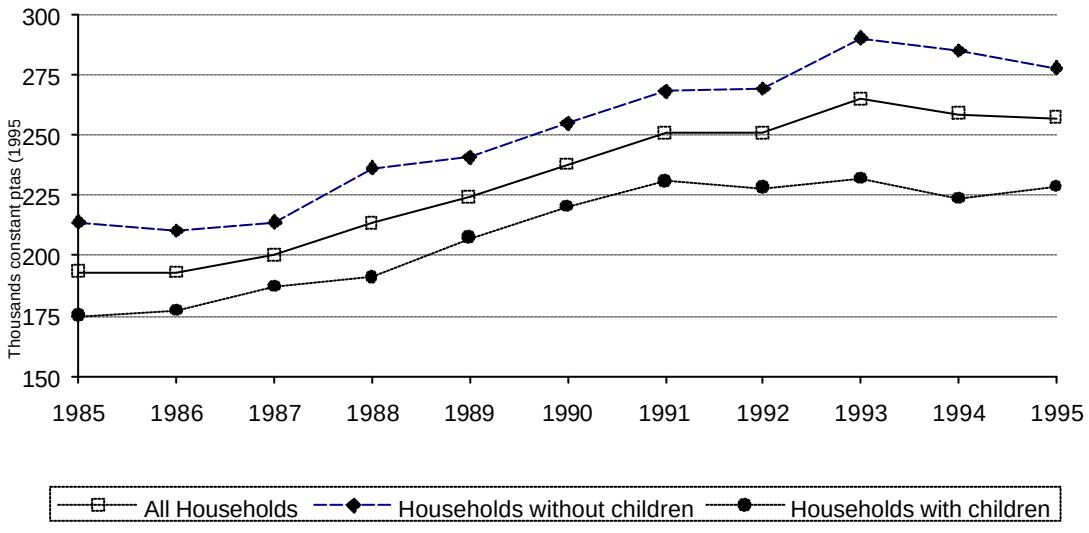

Figure 3. Relative poverty incidence for adjusted household income in Spain 1985-95 (1st quarter)

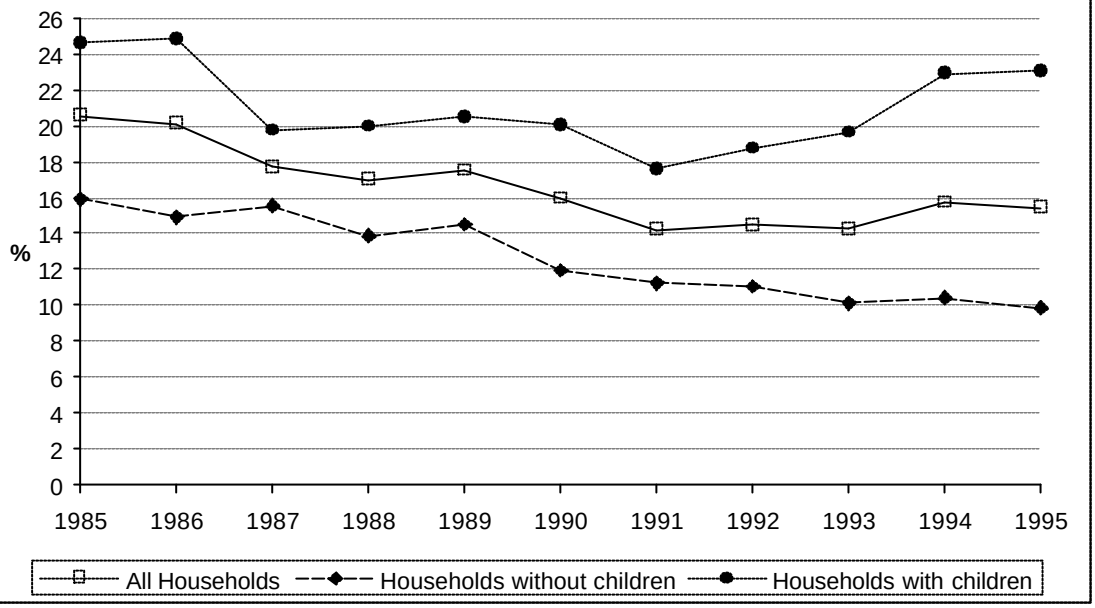

Table 1.Household main descriptive statistics by demographic groups.

	All households	Households with children	Households without children
age of household head	52.1	42.7	60.9
Sex of household head			
male head	82.5	92.0	73.6
Female head	17.5	8.0	26.4
Education household head			
illiterate	4.3	2.1	6.3
no studies	22.3	14.7	29.5
primary school	43.4	44.2	42.7
secondary (1st cycle)	11.2	16.0	6.6
secondary (2nd cycle)	10.0	12.9	7.4
university (3 years)	4.5	5.2	3.8
university (5 years)	4.2	4.9	3.6
Household dependants, number and age			
Number of household members	3.4	4.5	2.5
Number of income receivers	1.02	1.09	0.95
dependency index	0.68	0.75	0.62
Size of municipality of residence			
<5,000 inh.	17.3	13.4	20.8
5,000-10,000 inh.	9.0	9.5	8.6
10,000-20,000 inh.	10.1	10.5	9.8
20,000-50,000 inh.	10.7	11.8	9.6
50,000-100,000 inh.	12.4	14.4	10.6
100,000-500,000 inh.	24.1	25.6	22.6
>500,000 inh.	16.4	14.7	17.9
Type of housing			
owner-occupied	76.1	74.2	77.8
subsidised	1.5	2.1	0.9
rented	16.4	16.7	16.2
rent-free	6.0	7.0	5.0
Head labour market status			
employed - f-t, qualified	34.1	49.9	19.3
employed - f-t, non qual, agric	1.7	2.3	1.2
employed - f-t, other non qualified	7.9	11.1	4.8
employed - self employment	13.2	16.7	9.9
employed - less than 13hrs	1.1	1.2	1.0
unemployed - some UI or IS	0.2	0.2	0.2
unemployed - no UI or IS	5.5	7.6	3.6
retired - some pension benefit	32.8	9.4	54.6
retired - no pension benefit	1.6	0.5	2.7
working at home	0.9	0.8	1.0
other status	1.0	0.3	1.6
Spouse labour market status			
No spouse	21.8	7.8	34.8
Spouse employed	15.5	22.3	9.1
Spouse not employed	62.8	69.9	56.1

Note: UI is unemployment insurance and IS is income support.

Table 2. Statistics for equivalent households income distribution in Spain, 1985-95

	All			*Without children*			*With children*		
	1985	**1990**	**1995**	**1985**	**1990**	**1995**	**1985**	**1990**	**1995**
population (%)	100	100	100	46.7	50.3	57.8	53.3	49.7	42.2
average number of children							2.03	1.85	1.71
mean (Ptas)	193,188	237,782	257,023	213,924	254,956	277,845	174,995	220,387	228,561
median (Ptas)	157,974	202,400	219,550	177,544	215,546	236,388	143,246	192,932	197,581
Inequality									
Gini	0.364	0.305	0.306	0.351	0.305	0.296	0.369	0.300	0.313
Theil (-1)	0.338	0.183	0.206	0.260	0.172	0.176	0.379	0.187	0.226
Theil (0)	0.225	0.154	0.160	0.200	0.151	0.145	0.237	0.151	0.169
Theil (1)	0.229	0.163	0.164	0.208	0.168	0.157	0.241	0.152	0.164
Theil (2)	0.348	0.248	0.228	0.308	0.287	0.234	0.381	0.187	0.197
Ratio 90/10	5.57	3.77	3.90	4.85	3.73	3.54	5.66	3.84	4.64
Ratio 75/25	2.35	1.89	1.93	2.18	1.84	1.79	2.39	1.96	2.17
Relative poverty									
H	20.57	15.96	15.43	15.93	11.93	9.86	24.63	20.04	23.05
I	36.25	24.67	29.17	32.81	23.47	26.36	38.20	25.39	30.80
FGT (1)	7.45	3.94	4.50	5.23	2.80	2.60	9.41	5.09	7.10
FGT (2)	4.23	1.76	2.13	2.96	1.35	1.22	5.34	2.17	3.38
FGT (3)	3.01	1.09	1.28	2.19	0.92	0.77	3.72	1.25	1.97
FGT (4)	2.43	0.81	0.88	1.86	0.75	0.57	2.93	0.86	1.31
FGT (5)	2.12	0.67	0.68	1.70	0.67	0.48	2.48	0.67	0.95
Absolute poverty									
H	20.57	6.99	6.69	15.93	4.76	3.43	24.63	9.25	11.14
I	36.25	27.92	31.90	32.81	30.65	34.03	38.20	26.50	31.00
FGT (1)	7.45	1.95	2.13	5.23	1.46	1.17	9.41	2.45	3.45
FGT (2)	4.23	1.04	1.07	2.96	0.89	0.65	5.34	1.20	1.64
FGT (3)	3.01	0.75	0.70	2.19	0.71	0.48	3.72	0.78	1.00
FGT (4)	2.43	0.62	0.54	1.86	0.64	0.41	2.93	0.60	0.71
FGT (5)	2.12	0.55	0.46	1.70	0.60	0.38	2.48	0.50	0.56

Table 3. Logit regression for the Poverty Exit Probability.

	Probability of leaving poverty			
	Households with children		Households without children	
	Coef	*t-ratio*	*Coef*	*t-ratio*
age of household head x 10	-5.91	-2.0	-0.65	-0.2
age of household head^2 x 100	0.07	2.4	-0.005	-0.2
male head	-0.65	-2.2	0.47	1.5
Education hh head				
no studies	0.45	1.7	0.17	0.8
primary school	0.67	2.6	0.25	1.1
secondary (1st cycle)	0.86	2.8	0.98	2.3
secondary (2nd cycle)	1.16	3.2	1.51	2.6
university (3 years)	1.73	2.2	0.36	0.5
university (5 years)	2.54	2.2	0.95	1.1
Household dependants, number and age				
dependency index	-1.47	-2.7	0.78	2.1
Size of municipality of residence				
5,000-10,000 inh.	0.04	0.2	0.29	1.4
10,000-20,000 inh.	0.26	1.4	0.10	0.5
20,000-50,000 inh.	0.41	2.1	0.46	2.1
50,000-100,000 inh.	0.37	1.8	0.34	1.4
100,000-500,000 inh.	0.37	2.1	0.39	2.0
>500,000 inh.	0.60	2.8	0.14	0.6
Type of housing				
subsidised	-0.15	-0.3	-1.8	-1.8
rented	-0.27	-1.8	-0.09	-0.5
rent-free	-0.05	-0.3	-0.87	-2.6
Head labour market status				
employed - less than 13hrs	-0.65	-1.8	-0.83	-1.2
employed - ft, qualified	0.03	0.2	0.06	0.1
employed - ft, non qual, agric	-0.18	-0.7	-0.83	-1.2
employed - self employment	0.31	1.6	-0.44	-0.8
unemployed - no UI or IS	0.03	0.2	-0.34	-0.6
unemployed - some UI or IS	--		0.53	0.4
retired -no pension benefit	0.51	0.9	-0.79	-1.3
retired - some pension ben.	-0.44	-1.9	-0.62	-1.1
working at home	0.67	1.0	-0.39	-0.5
other status	-1.37	-1.2	-1.27	-1.9
Spouse labour market status				
No spouse	-0.38	-1.2	0.08	0.2
Spouse not employed	-0.05	-0.3	-0.07	-0.3
Seasonal effects				
2nd quarter/10	0.09	0.6	-0.33	-1.8
3rd quarter/10	0.14	0.9	-0.13	-0.7
4th quarter/10	0.06	0.4	-0.15	-0.8
Yearly effects				
1986	0.07	0.3	-0.11	-0.4
1987	0.33	1.4	0.11	0.4
1988	0.21	0.9	0.06	0.2
1989	-0.009	-0.04	0.11	0.4
1990	0.14	0.6	-0.23	-0.8
1991	0.05	0.2	-0.61	-2.0
1992	-0.24	-0.9	0.12	0.4
1993	-0.33	-1.3	-0.41	-1.4
1994	-0.27	-1.1	-0.42	-1.4
constant	1.57	1.6	-0.06	-0.04
number of obs. (weighted for attrition)	2,729		2,121	
Pseudo R^2	0.04		0.05	
Log Likelihood	-1053.8		-786.8	
mean predicted prob.	0.39		0.43	
standard dev. prob.	0.11		0.13	

well-classified clases (cut-off P>=0.5)	63.7	61.4

Notes:

(a) The dependent variables for the exit regression is: household transits out of poverty between 1st and 5th interview conditional on being poor at first interview.

(b) The reference household is a female-headed household with an employed spouse, where the head is illiterate, owns housing, is employed full-time non-qualified, observed in 1st quarter 1985.

Table 4. Movements out of poverty by event occurred and type of household: Bane and Ellwood's Methodology

Main trigger event (hierarchical classification)	Transitions out of poverty (one year)		
	All households	Households with children	Households without children
Demographic event	8.4	6.1	10.9
Income event	91.6	93.9	89.1
Demographic events			
Head of household changes	5.2	3.7	6.9
Changes in household needs	3.2	2.5	4.0
Income events			
Household head labour earnings change	32.1	45.5	16.4
Household spouse labour earnings change	1.5	2.6	0.2
Other member labour earnings change	20.2	22.7	17.2
Non-labour income change	35.8	20.5	53.8
Non-classifiable*	2.0	2.6	1.3
All	100.0	100.0	100.0
Households leaving poverty (weighted)	1,980	1,066	914

Note: (1) An event ocurred in one year is classified as demographic if it supposes a change in the household head between 1st and 5th interview or the change in household needs (equivalence scale) is greater in percentage points than the change in household income. The event is an income event otherwise. Within income events those non-classifiable are those situations in which the income change of some two types is identical.

Table 5. Movements out of poverty by event occurred for households with children: Bane and Ellwood's Methodology

Main trigger event (hierarchical classification)	Transitions out of poverty (one year)			
	All households with children	Lone and single parent households	Couple with 1 or 2 children	Couple with 3 or more children
Demographic event	6.1	9.4	3.6	0.0
Income event	93.9	90.6	96.4	100.0
Demographic events				
Head of household changes	3.7	4.8	3.6	0.0
Changes in household needs	2.5	4.6	0.0	0.0
Income events				
Household head labour earnings change	45.5	29.1	67.6	55.6
Household spouse labour earnings change	2.6	0.0	5.4	2.2
Other member labour earnings change	22.7	34.8	4.0	20.8
Non-labour income change	20.5	24.0	16.7	16.8
Non-classifiable*	2.6	2.7	2.7	5.3
All	100.0	100.0	100.0	100.0
Households leaving poverty (weighted)	1,066	565	351	150

Note: (1) An event ocurred in one year is classified as demographic if it supposes a change in the household head between 1st and 5th interview or the change in household needs (equivalence scale) is greater in percentage points than the change in household income. The event is an income event otherwise. Within income events those non-classifiable are those situations in which the income change of some two types is identical.

Table 6. More detail on leaving poverty trigger events (All households who leave poverty).

Event occurred between t-1 and t	Head changes	Needs change	Head labour income changes	Spouse labour income changes	Other members labour income changes	Non-labour income changes	Non-clas.
Demographic events							
Stable number members	61.1	0.0	89.1	92.8	84.5	86.6	96.2
Child-ren born	3.8	0.0	2.8	0.0	1.9	1.7	0.0
Adult-s arrive	3.8	0.0	0.8	7.2	3.3	2.7	0.0
Elderly arrives	3.6	0.0	0.2	0.0	0.4	1.4	0.0
Child-ren leaves	1.5	4.9	0.8	0.0	2.1	1.2	0.0
Adult leaves or dies	9.7	61.4	4.9	0.0	4.8	3.0	3.8
Elderly leaves or dies	13.3	12.7	1.0	0.0	0.4	0.5	0.0
Other reduction in members	3.1	21.0	0.5	0.0	1.2	2.1	0.0
Other increase in members	0.0	0.0	0.0	0.0	1.3	0.8	0.0
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Labour market events							
Gain 1+ worker	44.2	10.1	40.1	57.6	85.2	22.1	84.9
Labour earnings increased >=20%	11.2	15.3	52.7	42.3	12.0	7.6	11.5
No event	44.5	74.6	7.2	0.0	2.8	70.3	3.6
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Labour status events (head)							
Stable in labour market	56.8	97.0	72.4	77.0	89.5	86.9	70.1
Less hours work (f-t to p-t)	0.0	0.0	0.8	0.0	0.4	0.5	0.0
Lose job (f-t to unemployment)	3.9	0.0	0.5	5.0	0.9	2.5	0.0
Retirement (f-t to retirement)	4.6	0.0	0.2	0.0	1.2	3.3	0.0
More hours work (p-t to f-t)	1.9	0.0	1.4	0.0	1.3	0.5	5.9
Gain job (unemployment to f-t)	5.5	3.0	21.0	18.0	4.3	3.1	24.0
Gain job (retirement to f-t)	1.7	0.0	0.3	0.0	0.0	0.2	0.0
Gain job (unemployment to p-t)	15.5	0.0	2.8	0.0	1.7	0.5	0.0
Gain job (retirement to p-t)	1.5	0.0	0.3	0.0	0.5	0.3	0.0
Gain job (housework to f-t)	5.3	0.0	0.3	0.0	0.0	0.6	0.0
Retirement (housework to ret)	3.4	0.0	0.0	0.0	0.4	0.8	0.0
Retirement (other to ret)	0.0	0.0	0.0	0.0	0.0	0.8	0.0
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Non.labour income change							
Begin pension benefit	21.2	2.5	1.3	0.0	4.1	20.0	0.0
Begin unemployment benefit	5.0	5.1	1.4	0.0	0.4	4.3	5.0
Begin other regular transfers	3.1	0.0	2.8	0.0	3.7	9.5	3.6
							0.0
Increase capital income	0.0	0.0	0.0	0.0	0.0	0.7	0.0
Increase pension income	11.7	5.7	2.5	0.0	8.8	22.4	0.0
Increase unemployment income	0.0	2.5	1.0	0.0	2.4	1.6	0.0
Increase regular transfers	4.7	2.7	0.3	0.0	0.0	3.6	0.0
Other non-labour income change	0.0	3.0	3.9	0.0	0.8	1.6	0.0
No change in non-labour income	54.3	78.4	86.5	100.0	79.8	36.3	91.4
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Probability of event (all sample)	3.2	7.1	24.7	3.2	12.1	41.6	8.1
Probability (event | poor at t)	4.0	4.8	25.2	1.6	13.4	45.2	5.8
Probability (exit poverty | event)	53.4	27.1	51.8	36.5	61.7	32.3	14.1

Note: (1) Events refer to changes between moment t-1 and t (a year later). Demographic transitions refer to changes in the number of household members of the type referred while all other number of members is constant. Other reduction (increase) in members includes those cases in which more than one type of members changes (this may mean only that children transit to adults or adults to elderly). Head labour status events are selected on the basis of an estimation of the effect of each possible event (out of 30) on the probability of a household transiting out of poverty. The events presented are those which have a larger effect on this probability, all other events are considered as "stability in the labour market". (2) Poverty exits refer to changes in poverty status of the household between t-1 and t. Sample is restricted to households observed at t-1 and t weighted for attrition between these two moments in time. Total weighted sample of households exiting poverty is 1,980 observations.

The total sample of households found por at t-1 amounts to 4,855 observations and when we analyse the whose sample of households the sample amounts to 27,709 households, Poverty is defined as household income below 60% median household income each quarter.

Table 7. Ocurrence of trigger events and their effect on household chances to leave poverty. (All households)

Event occurred between t-1 and t	Probability of event (all sample)	Probability (event | poor at t)	Probability (exit poverty | event)
Demographic events			
Child-ren leaves	0.8	1.3	43.0
Adult leaves or dies	4.9	4.7	53.5
Elderly leaves or dies	1.4	1.3	51.0
Other reduction in members	1.1	1.4	56.1
Labour market events			
Gain 1+ worker	14.1	26.4	66.8
Labour earnings increased >=20%	14.7	16.8	58.2
Labour status events (head)			
Retirement (f-t to retirement)	1.6	1.3	55.1
More hours work (p-t to f-t)	0.5	1.3	33.4
Gain job (unemployment to f-t)	2.2	7.0	57.3
Gain job (unemployment to p-t)	0.8	1.3	67.0
Non-labour income change			
Begin pension benefit	5.3	7.1	55.4
Begin unemployment benefit	2.0	1.5	71.3
Begin other regular transfers	2.4	4.4	48.9
Increase pension income	4.5	6.6	70.9
Increase unemployment income	0.6	1.4	43.9
Increase regular transfers	0.4	1.0	69.7
Households (weighted)	27,735	4,855	1,980

Note: (1) Events refer to changes between moment t-1 and t (a year later). Demographic transitions refer to changes in the number of household members of the type referred while all other number of members is constant. Other reduction (increase) in members includes those cases in which more than one type of members changes (this may mean only that children transit to adults or adults to elderly). Head labour status events are selected on the basis of an estimation of the effect of each possible event (out of 30) on the probability of a household transiting out of poverty. The events presented are those which have a larger effect on this probability, all other events are considered as "stability in the labour market".
(2) Poverty exits refer to changes in poverty status of the household between t-1 and t. Sample is restricted to households observed at t-1 and t weighted for attrition between these two moments in time. Poverty is defined as household income below 60% median household income each quarter.
(3) When labour earnings increase more than 20% the number of workers in the household remains unchanged.
(4) Increases in pension, unemployment and regular transfers incomes include increases over 35 percent between t-1 and t in order to eleminate all short term unimportant income fluctuations.

Table 8. Ocurrence of trigger events and their effect on household chances to leave poverty. Households with and without children.

	Households with children			Households without children		
Event occurred between t-1 and t	Prob. event (all sample)	P(event | poor at t)	P(exit poverty | event)	Prob.event (all sample)	P(event | poor at t)	P(exit poverty | event)
Demographic events						
Child-ren leaves	1.7	2.2	43.0	--	--	--
Adult leaves or dies	3.5	4.5	47.9	6.2	4.9	60.1
Elderly leaves or dies	1.0	1.1	33.7	1.9	1.7	65.2
Other reduction in members	1.6	1.9	52.6	0.6	0.8	67.9
Labour market events						
Gain 1+ worker	17.5	31.7	61.7	11.1	19.5	77.4
Labour earnings increased >=20%	19.0	22.7	56.3	10.8	9.1	64.3
Labour status events (head)						
Retirement (f-t to retirement)	1.0	0.9	32.3	2.2	1.8	69.0
More hours work (p-t to f-t)	0.7	1.7	26.5	0.4	0.9	50.7
Gain job (unemployment to f-t)	3.6	10.7	52.0	0.9	2.3	89.4
Gain job (unemployment to p-t)	0.7	0.9	60.2	0.9	1.9	71.4
Non-labour income change						
Begin pension benefit	3.6	5.2	45.7	6.8	9.4	62.3
Begin unemployment benefit	1.3	1.0	59.5	2.6	2.1	78.9
Begin other regular transfers	2.5	4.9	40.8	2.2	3.7	62.7
Increase pension income	2.2	3.4	58.6	6.6	2.2	75.9
Increase unemployment income	0.8	1.6	41.2	0.5	0.8	49.9
Increase regular transfers	0.1	0.1	100	0.6	0.1	68.2
Households (weighted)	13,384	2,735	1,066	14,352	2,121	914

Note: (1) Events refer to changes between moment t-1 and t (a year later). Demographic transitions refer to changes in the number of household members of the type referred while all other number of members is constant. Other reduction (increase) in members includes those cases in which more than one type of members changes (this may mean only that children transit to adults or adults to elderly). Head labour status events are selected on the basis of an estimation of the effect of each possible event (out of 30) on the probability of a household transiting out of poverty. The events presented are those which have a larger effect on this probability, all other events are considered as "stability in the labour market".
(2) Poverty exits refer to changes in poverty status of the household between t-1 and t. Sample is restricted to households observed at t-1 and t weighted for attrition between these two moments in time. Poverty is defined as household income below 60% median household income each quarter.
(3) When labour earnings increase more than 20% the number of workers in the household remains unchanged.
(4) Increases in pension, unemployment and regular transfers incomes include increases over 35 percent between t-1 and t in order to eleminate all short term unimportant income fluctuations.