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Abstract

In this paper we analyse the distinct effectiveness of demographic, labour market and welfare state transfers events in promoting exits from deprivation for childbearing households in Spain, a Southern European Country with high and persistent child poverty and a familial welfare regime. We undertake a thorough analysis of outflow rates and of the effect of events on them by household types using a detailed descriptive approach and a multivariate analysis to control for household heterogeneity. We find that, contrary to the descriptive results, a multivariate approach to the estimation of the outflow rate shows that the presence of children robustly reduces household's chances to step out of poverty. In turn, both methodologies show that the effectiveness of labour market events is somewhat lower for childbearing households while their prevalence is particularly high. Also, both the prevalence and the effectiveness of events related to the beginning of state transfers are high for households without children.

Keywords: children, poverty dynamics, outflow rate, Spain, trigger events.
JEL Classification: J16, J31, J71.

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Introduction

In most industrialised countries, the high levels of youth unemployment as well as the rise in low wages and temporary employment appear to be the most visible causes of the new forms of poverty. A direct result of this has been the increase in the incidence of poverty on young childbearing households, making children a largely vulnerable group among the poor in rich countries. In fact, recent studies on child poverty such as UNICEF (2005) or Matsaganis *et al.* (2005) show that child poverty is significantly higher than adult poverty in many OECD countries. According to evidence offered by Machin (1998), the consequences of the experience of poverty in childhood are likely to persist for long since the earnings of parents play an important role in the determination of the cognitive achievement of children and this seems to have an impact on economic mobility across generations and thus in the intergenerational transmission of poverty.

The recent literature on income distribution underlines the importance of analysing the routes out or into poverty - see Stevens (1999), Muffels (2000), Jenkins (2000), Jenkins and Rigg (2001), Layte and Whelan (2002), Cantó (2002, 2003), Jenkins and Schluter (2003) or Cappellari and Jenkins (2002, 2004). A first aim of the paper is to contribute to initial results in the literature on child poverty outflow rates in Spain appeared in Bradbury, Jenkins and Micklewright (2001) or Cantó and Mercader-Prats (2002).

The analysis of outflow rates by household types is particularly interesting. In fact, Jenkins and Rigg (2001) note that the differences observed in poverty outflow rates across household types indicate the importance of looking at associations between transitions and trigger events separately for different groups. Indeed, recent research in Cantó (2003) seems to point out the existence of relevant differences in the type of events that help chilbearing households step out of poverty compared to the rest of the population. In this paper we aim to assess to what extent the welfare system and the socio-economic context in which households live make some trigger events more successful than others in promoting childbearing households out of poverty. In sum, our analysis aims to provide answers for questions such as: Does the departure of youths help poor households

with children in order to leave deprivation or does it have the opposite effect due to the loss of some income flow? Is it the members' gain of a job more effective in providing exits from poverty for childbearing households than for the rest of the population? Does the beginning of unemployment benefit perception significantly help poor households with children in order to leave deprivation or is it the beginning of pension benefits from co-habiting senior members what is most important in pulling them out of poverty?

Spain is a country where child poverty is relatively high and persistent: INE (2004b) reports that the child poverty rate in Spain in 2001 is ten points higher than that of adults and is also significantly more persistent. In comparison with other European countries, Nolan and Maitre (2001) indicate that the child poverty rate in Spain in 1995 was one of the highest in the European Union (EU) just after Italy and the UK while Micklewright and Stewart (1999) report that in the late nineties it was 25 percent higher than the EU15 average. With respect to the evolution of the demographic trend in terms of fertility and new household formation, the Spanish case appears to show particularly interesting features. In comparison to other EU countries Spain presents an extremely low fertility rate since 1988: 1.17 children per fertile woman in 1996 (Eurostat, 2005), a relatively low occurrence of divorces and breaking-offs: 12.5 divorces per 100 marriages in 1991 (INE, 2004a), and a very low rate of youth departure from the parental household: in 1995 more than half of those below 30 live in the parental home. With respect to the situation of the Spanish labour market, one of its main features in the last eighties and first half of the nineties is the high and persistent level of unemployment (the highest in the OECD countries) and the large number of fixed-term contracts. In this setting, it is most likely that labour market events of any member of the household become particularly important for the increase of the chances to leave.

The welfare regime in Spain is the so-called *familial* or *Residual*, which, in essence, presents strong unemployment protection for breadwinners, a large coverage of the old-age pension system and a relatively small proportion of state transfers available to families with children – see Esping-Andersen (1990) and Iavocou and Berthoud (2001). The most outstanding characteristic of this

regime in the last decades has been the large improvement in the number and quantity of old-age pensions resulting in a consistent and significant reduction of poverty rates for households whose head is over 65 years of age. At the same time, cash benefits for children in low-income families have been seldom available. Indeed, Immervoll *et al.* (2000) situated Spain in the group of EU countries with low and ineffective child benefits. The only existing child benefit in Spain before 2003 is the means-tested *Prestaciones por hijo a cargo* which is addressed at households with dependant children under 18 years old. Matsaganis et al. (2005) calculate that approximately 13 per cent of all children received this benefit in 2001. 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). Thus, within the EU, Spain is a country where social welfare policies are expected to be particularly weak towards pulling households with children out of poverty.

Surely, a large amount of questions regarding dynamics are important for the debate on how to design public policies to reduce child poverty. In particular, we believe that understanding the reasons for stable upward mobility of household incomes is likely to help in designing efficient poverty alleviating policies. We are conscious of the existence of an underlying structural model of poverty transitions that includes adults decisions on labour market participation, fertility and marriage together with country-specific labour market rewards to occupation reflected in the structure of earnings equations (see Burgess and Propper, 1998). Within that framework our approach focuses on observed outcomes and avoids modelling each household member individual decision affecting household income dynamics. The advantage of our approach is its simplicity and the possibility of considering a large number of processes and outcomes. Further, we centre the analysis on events that *promote* exits from poverty (outflow) as different from those that *protect* households from falling in it (inflow) - see Ravallion (1996). This prevents us from trying to

explain the poverty prevalence rate in Spain through the entry and exit rates and centres the discussion in the characterisation of the events that allow poor households to jump over the poverty threshold.

The paper is organised as follows. In section 2 we present the two complementary frameworks of analysis, a short description of the dataset and our main methodological choices in the definition of poverty. In section 3 we present a descriptive analysis of the poverty outflow and the effect of events by household type. Section 4 checks our descriptive results using a multivariate approach to the estimation of the outflow rates distinguishing childbearing households from the rest. Section 5 concludes.

2. Two complementary frameworks for analysing differences in poverty outflow by household type

As Jenkins and Schluter (2003) indicate, it is rather difficult to compile an exhaustive set of mutually exclusive trigger events expected to affect poverty transitions because a number of events occur simultaneously and defining each of these as a different event has obvious practical limits. In the descriptive part of the paper we decide to follow Jenkins and Rigg (2001) proposal that combines two inevitably related selection methods, a classical one that allows us to compare our results with those in previous works for the US, the UK and Germany and one that avoids its debatable assumptions. The first methodology was proposed by Bane and Ellwood (1986) and classifies events into an exhaustive set of mutually-exclusive categories by a hierarchical classification system identifying those associated with the endings of spells and ranking them by their effect on household income changes. The second methodology considers a subset of the most important events allowing for their joint occurrence. The *ad-hoc* list of major non-mutually-

exclusive events that we use includes, in practice, most of those examined by Jenkins and Schluter (2003).[1]

In order to deepen our understanding of the income dynamics process, we decompose the effectiveness of transitions in the prevalence of events and the impact of the event on poverty outflow rates once it takes place, a framework of analysis developed by Jenkins and Schluter (2003) for examining differences in child poverty transition rates in the UK and Germany.[2] This methodology allows us to deepen the understanding of what justifies a certain poverty outflow for some household type by linking it to the lack of occurrence of certain relevant events[3] or to the limited income increase it implies for them.[4] This distinction attempts to isolate the two main reasons for the empirical observation of different outflow rates by population groups.

A factor that complicates the analysis is the fact that poverty transition probabilities not only depend on the size of the income change related to a certain event but also on the distance of the household's equivalent income from the poverty line: the further the household equivalent income is from the poverty line, the less likely an exit from poverty is observed. Jenkins and Schluter (2003) tried to control for this through a basic sensitivity analysis. However, if the correlation of the

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[1] Bane and Ellwood's approach is too rigid in order to undertake a deep analysis of the varied routes out of poverty in Spain. First, it avoids the consideration of joint events in providing a plausible route out of poverty and it classifies all headship changes as demographic. In fact, the structure of the Spanish ECPF surveys makes it possible that 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. Second, it assumes that there is no correlation whatsoever between demographic and labour market events and it is not straightforward that a change in one member labour status does not depend on household fertility decisions or changes in other members earnings. In fact if we analyse the correlations between events we find that events most often occur simultaneously.

[2] Most 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, the probability of exit is given by the sum of the probabilities that exit occurs contemporaneously with each different event: $\Pr(\textit{exit poverty}) = P_{it} = \sum_{j=1}^{J} \Pr(\textit{exit poverty} \mid \textit{event } j) \times \Pr(\textit{event } j)$.

[3] In addition to unequal chances of employment for adult individuals or to the bias of the poverty alleviating public transfers towards some particular individuals in the population, the observation of different rates of occurrence of certain events for a household type, will reflect, at the household level, a variety of fertility and cohabitation decisions undertaken by individuals. Clearly not all households are subject to experiencing all events given that, for example, households with few adults will have fewer chances to have a job gain or lone parent households may find in re-marrying a route out of poverty while couples with children will not.

[4] This second reason is to be related to the differential *distribution of wages* (more likely to receive low pay or to work fewer hours, etc.) by household types, *stability of the needs/income ratio* when arrival or departure of members occurs (fewer needs but also fewer incomes) or the *quantities* of existing poverty alleviating public transfers (they mostly have access to low pensions, low unemployment benefits, low child benefits etc.)

size of the poverty gap and the presence of children in the household is high and household types significantly differ in other relevant characteristics such as the level of education of household members, type of municipality of residence, etc., it may be a good idea to check our main descriptive results using a complementary framework that takes household heterogeneity into consideration.

Our data come from the Spanish Household Expenditure Survey (Encuesta Continua de Presupuestos Familiares, ECPF), a quarterly rotating panel survey which includes both household demographic information and individual data on household members' incomes and labour status.[5] The quarterly interview survey design is an advantage for our study because it provides us with a consistent panel of data on incomes and socio-demographic information at short time intervals. This helps us identify, most precisely, the specific point in time at which events take place and income changes occur. In this sense, the data structure is useful in the study of the association of events and income changes.

However, as noted in Cantó (2003), household fatigue imposed by short household tracing periods results in a short follow-up of households in the panel (a maximum of two years) and a substantive attrition rate (approx. a 45 percent of households leave the panel between the first and the fifth interview, *t-1* and *t*). Thus, for the descriptive part of the paper we use attrition weights constructed using a *propensity score* method as in Cantó *et. al* (2002) [6] while in our multivariate approach we take into account the bias arising from unplanned sample attrition by a Heckman

[5] 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 *Consumer Expenditure Survey* (CES). 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 (moment *t*).

[6] 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. Note that these weights are combined with sample weights provided by the Spanish Statistical Office (INE).

endogenous selection model.[7]. More precisely we estimate the poverty outflow using a bivariate probit on all relevant household characteristics and events that considers the endogenous selection bias due to attrition for which we can find adequate and plausible instruments. [8]

Our sample consists of 27,735 households observed between one and eight times (a maximum of two years) between the first quarter of 1985 and the last quarter of 1995, both inclusive.[9] Breaking the total population into the two demographic groups of interest the sample divides into two of a fairly similar size: 13,383 households with children and 14,352 households without children. A household's poverty status is measured at each quarter and a household is classified as poor if the sum of all household members' post-tax post-transfer income[10] adjusted for differences in needs is below 60 per cent of the median equivalent household income. As a approximation to absolute poverty we maintain a constant real poverty line at the first quarter of 1985. Needs are adjusted using an equivalence scale according to which each household income is deflated by a household equivalent factor *m* (where *children* are all household members under 18 years of age):[11]

$$m = [(adults) + 0.7(children)]^{0.75}$$

[7] No doubt, however, that it would be interesting to contrast if our results change due to the endogenous selection at first interview that classifies a household as poor or not poor. To our knowledge there are no data sources available for Spain for which we could estimate a trivariate probit that would consider the two sources of sample selection: that due to initial conditions (i.e. being poor at *t*) and that due to attrition as Cappelari and Jenkins (2004) propose and estimate using UK data.

[8] In these models estimation problems can arise if some regressors are contemporaneously correlated with the error term. This would happen if there are unobservables that explain the outflow rate and which are important determinants of some explanatory variables (e.g. the poverty gap). If this is the case, our estimations would suffer from endogeneity and OLS estimators would be asymptotically biased.

[9] See Cantó (1998) for a thorough description of the ECPF and discussion of its advantages and drawbacks in the study of poverty dynamics. Note also that we would like to extend our analysis to the late nineties and after 2000 but the new version of the ECPF survey from 1997 onwards does not allow us to do so because of the incomplete information on household incomes due to changes in the questionnaire.

[10] Income is the sum across all household members of cash income from all sources minus direct taxes in the previous three months.

[11] In the definition of children we follow UNICEF recommendations.

This equivalence scale is used by Jenkins and Schluter (2003) and is recommended by the U.S. National Research Council Panel on Poverty and Family Assistance (see Citro and Michael, 1995).[12]

3. A descriptive analysis of the effects of events on child poverty outflow

3.1 The position of childbearing households in Spain: the 1985-1995 period

During the eighties and nineties there has been a progressive reduction in the percentage of households with children in the total Spanish household population (from 53.3 to 42.2) and a fall in the average number of children within each childbearing household (from 2 to 1.7) – see Table 1.[13] The economic position of households with children is below that of the rest: their average income lies between 82 and 86 per cent of the mean for those without children while their degree of income inequality is significantly larger. In fact, during all the ten-year period, childbearing households registered a much higher incidence of poverty than the rest of households (20.6 per cent of households with children versus 13.6 per cent of the rest are poor in 1995).

[12] We have also calculated our results using the Buhmann *et al* (1988) equivalence scale where s=0.5 and using the OECD scale which weights by 1 the first adult in the household, by 0.7 the second and subsequent adults and children by 0.5. Our main results did not change using these other scales. See Citro and Michael (1995) for further discussion on the effects of the use of different equivalence scales and Mercader-Prats (1998) for the effects of this choice on poverty measurement in Spain.

[13] For households characteristics by type see Table 1A in the Appendix.

Table 1. Statistics for equivalent households income distribution in Spain, 1985-95

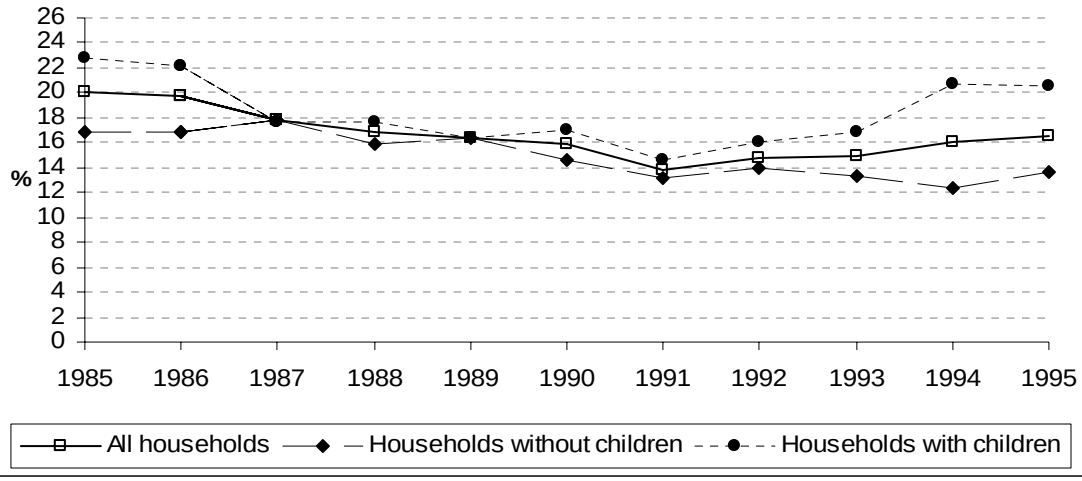
	All			*Without children*			*With children*		
	1985	**1990**	**1995**	**1985**	**1990**	**1995**	**1985**	**1990**	**1995**
population (%)	100	100	100	46.7	50.3	57.8	53.3	49.7	42.2
average number children	1.08	0.92	0.72	-	-	-	2.03	1.85	1.71
mean (Ptas)	208,037	256,375	274,075	221,210	264,392	287,920	196,479	248,254	255,148
median (Ptas)	171,213	220,080	237,401	183,804	223,989	243,568	163,352	216,314	223,088
Inequality									
Gini	0.357	0.301	0.301	0.350	0.307	0.296	0.361	0.293	0.306
Ratio 90/10	5.189	3.673	3.876	4.910	3.778	3.582	5.368	3.655	4.386
Ratio 75/25	2.217	1.987	1.979	2.284	2.001	1.946	2.161	1.981	2.019
Relative poverty									
H	20.0	15.8	16.6	16.9	14.6	13.6	22.8	17.1	20.6
I	35.7	24.2	26.6	34.1	23.1	21.9	36.8	25.1	30.8
HI	7.2	3.8	4.4	5.8	3.4	3.0	8.4	4.3	6.4
Absolute poverty									
H	20.0	6.6	6.6	16.9	5.6	3.9	22.8	7.6	10.1
I	35.7	28.9	30.6	34.1	29.3	31.6	36.8	28.6	30.1
HI	7.2	1.9	2.0	5.8	1.6	1.2	8.4	2.2	3.1

Note: A household is poor if its equivalent income is below 60 per cent median household income. *H* is the *Headcount ratio*, *I* is the *Income gap ratio* index which measures the relative mean poverty gap and *HI* equals the product of the *Headcount ratio* and the *Income gap ratio*, often referred to as *Poverty Gap Ratio*.

In terms of the evolution of poverty between 1985 and 1995 for the total population, we can see that there was a consistent reduction in absolute and relative poverty which was significantly smaller for childbearing households than for the rest of the population, particularly in the early years and from 1991 onwards.[14] Indeed, from 1991 onwards, as depicted in Figure 1, an increase in relative poverty using the *Headcount ratio* is observable for households with children along with the stagnation of average incomes. In contrast, the poverty rate of households without children continues to decline thus substantially increasing the gap between both demographic groups.

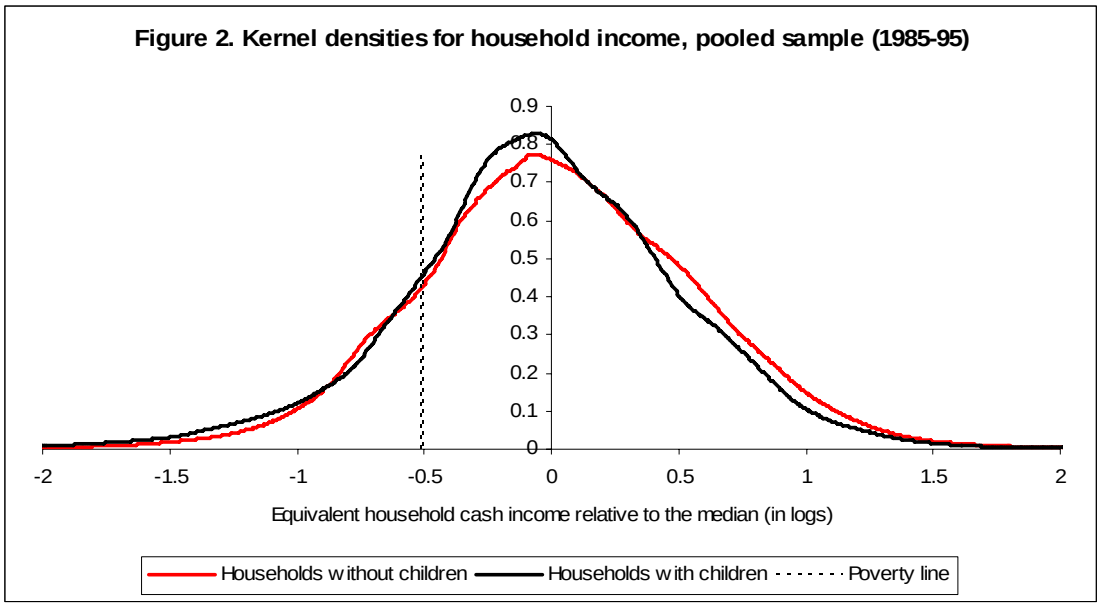
[14] This is consistent with results elsewhere on the evolution of poverty in Spain in this ten-year period. The distribution of incomes experienced a substantial improvement towards equalisation during the second half of the seventies and the eighties with some stabilisation during the nineties (see Oliver *et al.*, 2001). As a result, as Del Río and Ruiz-Castillo (2001) indicate, the number of relative poor households in Spain between 1980 and 1990 fell under all methodological choices. Our results, using the ECPF, are largely consistent with this description and show a large decrease in inequality and poverty between 1980 and 1990 for the total household population. From then onwards, however, both inequality and poverty remain stable while decile ratios suggest that the incomes of those in the highest and the lowest part of the income distribution are slightly more distant in 1995 than they were in 1990. In fact, Cantó *et al*. (2001) find some slight increase in the population poverty rate during the first part of the nineties.

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



In addition, as *I* and *HI* indexes show, poverty is consistently deeper for households with children than for the rest. In line with these results, if we estimate separate income densities for both household types using an adaptative non-parametric *kernel* for the logarithm of equivalent income at all households first interview (pooled sample), we obtain that the density for households with children allocates a higher share of population at the bottom tail (until the 45 per cent of the median) and is characterized by having middle incomes more concentrated around a prominent mode (the share of population is larger between the median and twice the median) - see Figure 2. These differences, if calculated for a quarter of each year of observation, seem to be have diminished during the second half of the eighties and increased back again during the first half of the nineties – see Figure 1A in Appendix.[15] Even if Cantó (2002), using the same dataset, finds that it is the size of the income change and not the poverty gap what is a strong determinant of the household's exit probability, it is likely that results on poverty outflow for childbearing households could be affected by their larger distance to the poverty line.

[15] This is in line with D'Ambrosio and Gradín (2000) and Cantó and Mercader-Prats (2002) results on the increasing social distance between children and the rest of age groups in contrast with the social position improvements of the elderly. Moreover, according to Cantó and Mercader-Prats (1998), even if the Spanish society experienced a major socioeconomic and political transformation during the seventies and eighties, no significant improvements occurred in the extent of child economic poverty.



3.2 Poverty outflow rates by household type

Regarding the estimation of the child poverty outflow, the existing evidence for Spain in the literature is still very limited. Some results, precisely for the period we aim to study here and using this same dataset, appear in Bradbury, Jenkins and Micklewright (2001) in their analysis of child poverty dynamics in seven industrialised nations. These authors obtain that almost half of the Spanish children observed poor at moment *t-1* (44.8 percent to be more exact) will exit poverty at *t* (a year later) and this situates the country within the high child poverty outflow group near Ireland and Germany and relatively far over the UK or the US child poverty outflow rates.

Table 2. Cross-sectional poverty risk and poverty outflow rates by household type

Household type					
	Poverty		**Outflow rates**		
	Risk	**Composition**	(1)	(2)	(3)
Single, >=65 years	11.1	3.9	35.3	32.2	27.0
Single, <65 years	21.6	4.8	30.2	22.1	21.8
Couple, no children, >=65	21.1	15.7	33.9	32.2	21.7
Couple no children, <65	13.9	16.6	48.3	43.5	36.6
Two or more adults without children	17.1	8.3	47.3	43.8	34.6
All households without children	**16.4**	**49.5**	**40.7**	**36.9**	**29.3**
Lone parent	33.4	2.5	46.3	34.0	29.7
Single parent	26.1	3.6	49.6	45.9	34.0
Couple with one child	13.4	13.5	50.7	46.3	38.5
Couple with two children	15.1	15.7	46.2	41.1	30.7
Couple with three or more children	29.3	15.2	33.8	28.9	19.7
All households with children	**18.2**	**50.5**	**43.9**	**38.8**	**29.6**
All households	**17.3**	**100**	**42.3**	**37.9**	**29.5**

Note: 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. Outflow rate (1) is obtained using an unrestricted definition of exit, (2) restricts the definition of exits to those households that experience a change in income larger than 25%, (3) restricts the definition of an exit to cases in which households jump over 70% of the median equivalent household income.

Table 2 presents our estimations of poverty outflow rates by household type. The average unrestricted exit rate is 42 percent: thus more than two fifths of those households who are poor one year are not poor the next. Interestingly, our results seem to show that the estimated poverty exit probability is similar or slightly higher for households with children than for the rest. However, Table 2 indicates that we can find large discrepancies in outflow rates using a more detailed household grouping. These differences do not exactly match the results one would obtain analysing the child poverty stock. Some household types with high poverty incidence show high outflow rates and other show low ones. Similarly, some household types with high outflow rates show low poverty incidence rates while others show high ones. In this context, we confirm that avoiding the consideration of the dynamic analysis of poverty tells us a very limited story of the deprivation phenomenon. Thus, it appears reasonable to think that given the diversity of outflow rates by household type, some trigger events will be a potential route out of poverty for some household types but not for others, underlining the interest in discovering if this is effectively the case and why.

Most precisely, within households without children, young couples or groups of two or more cohabiting adults register a low poverty risk and a particularly high chance to leave poverty if ever in it. In a different situation we find young childless singles and old-age couples that present high poverty risks and very low outflow rates. Within the group of households with children, couples with three or more siblings are those who register the lowest chances to leave poverty. In fact, their chances to leave poverty are one of the lowest of the whole population. These households have a particularly high poverty risk and represent a third part of the childbearing households whose incomes are below the poverty line. This result underlines that the accumulation of children in a household not only increases the poverty risk but it significantly increases the chances of experiencing long poverty spells. In contrast, other household types who also share a high poverty incidence such as lone and single parent households, register particularly high outflow rates which are similar to those registered by couples without children. This result appears to indicate that these household types experience shorter poverty spells even if they could be repeated in time.

3.3 The effect of events on poverty outflow by household type

Using Bane and Ellwood's (1986) methodology, our results for Spain in Table 3 confirm those reported in Cantó (2003) and indicate that few households transiting out of poverty (only 7.9 percent) experience a demographic event at the time.[16] The interesting result here is that this is not the case for all household types. As it could be expected, households with children are particularly stable in their demographic structure both in household head changes and in the reduction of *needs*: they seldom change household head and they experience few departures of members. Besides, households without children have a completely different set of relevant income events. The results

[16] Some differences are observable here due to the use of a different poverty lines and equivalence scales. In Cantó (2003) the author compares her results for Spain with those for the US in Bane and Ellwood (1986) and the UK in Jenkins and Rigg (2001). The former found that 13 percent of spell endings in the US took place with a demographic event while the latter obtained a somewhat higher impact of demographic events on poverty transitions: 18 percent. In sum, demographic events do not seem to be determinant in providing a way to step out of poverty and in a country like Spain, with low fertility rates and low youth departure from the parental home, this is even less so.

for childbearing households show large similarities with those of the total sample of households in the UK and the US: almost half of their transitions are related to a head of household labour income change (45 per cent to be exact). This is consistent with the results in Duncan *et al*. (1993) for list of OECD countries where parents' employment was by far the most frequent cause of child poverty exits.[17]

Table 3. 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	7.9	5.4	10.5
Income event	92.1	94.6	89.5
Demographic events			
Head of household changes	5.6	3.9	7.4
Changes in household needs	2.3	1.5	3.1
Income events			
Household head labour earnings change	31.1	45.8	14.9
Household spouse labour earnings change	1.6	2.8	0.3
Other member labour earnings change	19.4	20.5	18.2
Non-labour income change	37.6	22.2	54.4
Non-classifiable*	2.5	3.2	1.6
All	100.0	100.0	100.0
Households in poverty (unweighted)	2,774	1,438	1,336
Households leaving poverty (unweighted)	1,160	620	540

Note: (1) An event occurred 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.

In order to allow for more flexibility in our results, we consider a list of major events that can take place simultaneously. In addition, as indicated in section 2, in Table 4 we decompose the risk of a transition out of poverty into two dimensions (using non-mutually-exclusive trigger events): the prevalence of trigger events and the chance of transiting out of poverty conditional on experiencing one of them. We find some interesting differences by household type in the reasons for observing divergences in their outflow rates.

[17] Deepening the investigation of the different routes out of poverty within childbearing households we can detect that lone and single parent households experience more demographic events than other households and have a more varied list of trigger events related to the labour market than couples with children. Namely, up to 41 per cent of the events associated with their exits out of poverty are related to changes in the labour earnings of *other members* different from the head or spouse while only 17 per cent of exits of couples with children are of this kind.

Table 4. Events and their effect on household chances to leave poverty.

	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 born	3.5	3.1	26.2	2.3	1.4	52.4
Child-ren leaves or dies	1.6	2.5	45.3	--	--	--
Adult leaves or dies	3.5	3.9	42.8	6.1	4.1	60.1
Elderly leaves or dies	1.0	1.0	43.0	1.9	1.9	58.3
Labour market events (wages)						
Labour earnings increased >=20%	19.1	23.5	62.7	10.9	8.7	60.4
Labour status events (head)						
More hours work (from p-t to f-t work)	0.7	1.7	41.5	0.4	0.9	43.9
Gain job (enters full time work)	4.7	13.9	57.1	1.9	4.4	77.7
Gain job (enters part time work)	0.3	0.9	20.4	0.4	1.0	19.8
Retirement (full time to retirement)	0.9	0.9	55.7	2.2	1.7	65.3
Labour status events (spouse)						
More hours work (from p-t to f-t work)	1.2	1.3	73.4	0.4	0.2	43.7
Gain job (enters full time work)	3.5	4.0	67.0	0.9	0.8	78.8
Gain job (enters full time work)	2.0	3.5	52.1	0.6	1.3	53.2
Retirement (full time to retirement)	0.1	0.0	--	0.3	0.4	62.3
Labour status events (others)						
Gain job (some start to receive employment income from f-t or p-t work)	8.7	15.8	72.7	7.5	10.8	87.1
Non-labour income change						
Begin pension benefit	3.4	4.9	46.2	6.6	8.7	61.5
Begin unemployment benefit	1.2	1.0	61.1	2.5	2.2	78.0
Begin other regular transfers	2.6	5.1	48.2	2.2	4.0	58.9
Increase pension income >35%	2.1	3.4	62.3	6.8	11.5	74.7
Increase unemployment income >35%	0.9	2.0	46.8	0.4	0.9	48.0
Increase regular transfers >35%	0.1	0.1	100	0.6	1.9	60.3
Samples of households	7,503	1,438	620	7,733	1,336	540

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 transfer income include increases over 35 percent between t-1 and t in order to eliminate all short term unimportant income fluctuations.

Table 4 shows that the gain of a job is particularly common and significantly effective in pulling any household out of poverty in Spain between 1985 and 1995. Also, and as it would be consistent with a situation of high unemployment during this period, poor households experienced some members' job gain much more often than increases in the earnings of those members already

employed. [18] In contrast, we can see that, as expected from the demographic statistics, decreases in household size are rare independent of the presence of children. Also the occurrence of trigger events related to the reception of any state transfers is rather low, even if it is significantly more frequent in poor households without children than in the rest. In contrast, job gains experienced by the head or the spouse occur significantly more in poor households with children. In fact, given all the results in Table 4, this is what justifies the higher poverty outflow rates of childbearing households compared to the rest in Table 2.

Indeed, a general result from this table is that the impact of any event on a household's transition probability is lower for households with children than for the rest: almost all demographic and labour market events considered are more effective if they take place in a household without children than otherwise. This result could be driven by the fact that households with children are often situated at a further distance from the poverty line than households without children but could also be due to some other reasons related to other household characteristics that imply a higher incidence of low wages, a lower increase in the income to needs ratio when individuals leave the household or a higher incidence of public transfers of a low quantity. In any case, we should always bear in mind that the impact of the same increase in household employment income after a member's job gain will be smaller for childbearing households than for the rest if childbearing households usually contain more members than households without children. This is simply due to the smaller effect of that increase on total equivalised household income.[19]

[18] 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 households register a significantly lower income change when labour earnings increase. Spain shows high income changes in both but slightly higher when gaining a worker.

[19] Other reasons could be linked to the larger number of possibilities that households with more members have of experiencing some other events that, in contrast, imply a reduction of total household income between both interviews under analysis.

4. A multivariate approach to the effect of events on exit

In order to be able to assess the role of the distance to the poverty line and other household characteristics on our previous results on poverty outflow we need to control for household heterogeneity in a multivariate approach. Various types of models have been used to estimate poverty entry, exit and re-entry rates in the literature. Lillard and Willis (1978) fit a stochastic time-series structure for individual earnings assuming the same income dynamics process for all individuals in a covariance structure model. From then onwards two other types of models have been popular in the analysis of poverty transitions. A first type of models uses and develops event history analysis (Allison, 1982) and estimates hazard regressions for poverty exit and re-entry rates along the different durations of poverty and non-poverty spells including, at each discrete moment, all the previous information. In sum they model transitions as Markov chains of various orders aiming to provide estimates of the transition rate and the time spent in poverty. Examples of these are Stevens (1999) or Devicenti (2001) where single and multiple-spells frameworks are considered and there are controls for unobserved heterogeneity. A second type of models avoid incorporating spell information and centre the problem of the estimation of unbiased poverty transitions rates in modelling the initial poverty status (see Heckman, 1981) and non-random attrition. Thus modelling endogenous non-random selection between *t-1* and *t*. Examples of these are Stewart and Swaffield (1999) who model transitions into and out of low pay using a bivariate probit model with endogenous selection due to initial low pay status. In this line of work, Cappellari and Jenkins (2004) have proposed the use of a trivariate probit which can account for both sources of endogeneity: the individual initial status in *t-1* and panel retention between *t-1* and *t*.

All these approaches have advantages and disadvantages. Most precisely, covariance structure models assume that the same income dynamics process applies to all persons, rich and poor, which is implausible (as Stevens, 1999 and Cappellari and Jenkins, 2004 note). Hazard models can easily account for multiple spells and duration dependence but generally avoid the

consideration of any endogenous selection bias due to initial conditions or attrition.[20] Models that consider the initial poverty status and take attrition into account face identification problems when estimating a bivariate or a trivariate probit due to the difficulty of finding adequate instruments that affect the probability of being within the poor at moment *t*, but do not affect the transition between period *t-1* and *t*: explaining the *level* of household equivalent income but not its *change*.

Our main aim here is to provide some multivariate contrast of our previous descriptive results on the relevance of different events in helping households with children in leaving poverty. Taking all households who are poor at first interview, moment *t-1*, we estimate the probability that a household moves out of poverty during the following year, i.e. is not poor at moment *t* (fifth household interview), by estimating a maximum likelihood probit model with sample selection with different specifications in which the regression equation for the probability of leaving poverty on the household's characteristics and events can be written as:

$$P_{it} = \alpha + \beta X_{it-1} + \gamma E_{i;t-1,t} + \eta C_{i,t-1} + u_1$$

where P_{it} is the probability of leaving poverty between *t-1* and *t*, X_{it-1} are household characteristics at the initial moment *t-1* while $E_{i;t-1,t}$ are the events taking place between both moments in time and $C_{i,t-1}$ is the quarterly unemployment rate that tries to capture the evolution of the economic cycle. The selection equation (i.e. the probability of not suffering from attrition between *t-1* and *t*) is estimated as the probability of retention in the sample at moment *t*, $R_{i,t}$:

$$R_{i,t} = \alpha + \beta X_{it-1} + \gamma Y_{i,t-1} + u_2$$

where $Y_{i,t-1}$ are dummies for the year of household interview that we use as instruments[21] due to the special characteristics of the sampling method in the survey. The peculiarities of the sampling method assure a very high household response to the panel from first interview in 1985 up to the

[20] An exception to this is Devicienti (2001) who considers the potential initial condition problem.

[21] Note that the instruments used in the retention equation (household ownership situation and year of observation) have significant and plausible coefficients.

end of 1986. From then onwards, households are allowed to leave the sample at any interview and the attrition rate is high but follows a decreasing trend that should be captured by these dummies. [22] The bivariate estimation is possible assuming that error terms follow Normal distributions (0,1) but may covariate such that $Cov(u_1, u_2) = \delta$. In order to contrast the hypothesis of zero covariance between the errors we use a simple Wald test.[23] The inclusion of change variables (events) may raise questions of endogeneity. This is because these variables may be simultaneously a cause and a consequence of changes in poverty status. However, we felt, as Justino and Litchfield (2003), that the possibility of checking the important results of the descriptive analysis by including these variables outweighs the possible endogeneity problems. Due to these problems, however, we will always consider specifications of the model where events are not included.

Results appear in Tables 6 and 7. In Table 6 we present the effects of the presence of children and the number of them on the household's probability of leaving poverty.[24] Results indicate that, whatever the model we choose, the presence of children reduces the household's chances to leave poverty. This is in line with results in Cantó (2002) on the effects of dependants on the probability of leaving poverty[25] but contrasts with our descriptive results on poverty outflow rates, putting forward the importance of considering household heterogeneity. Including the household demographic group in more detail in our regressions is also interest. First, we confirm the relatively low chances to leave poverty of households with three or more children and, second, we discover that when household characteristics are taken into account the presence of just two

[22] Cantó (1998) details the ECPF sampling method. In essence, households were permanently kept in the panel unless they left it voluntarily and the substitution process only began in the first quarter of 1986. Non-response is minimum when no rotation is taking place and households have already answered a first interview. As waves evolve, households' non-response decreases until it reaches the value of 10% of the theoretical sample in 1995.

[23] The errors of both equations covariate significantly for the regressions undertaken with the sub-sample of households with children while δ is not significantly different from zero for regressions undertaken with the sub-sample of households without children.

[24] We here run three different regressions. The first one includes all household characteristics and a dummy for presence of children. The second one uses the sub-sample of households with children and includes a variable indicating the number of children in the household. Finally, the third regression is run on the total sample and substitutes the dummy for the presence of children by a variable that indicates the household type.

[25] This is slightly over the average exit rate reported by Jenkins and Rigg (2001) for individuals (not households) in the UK (37 percent).

children in the household significantly reduces the outflow rate pushing it below that of similar households without children.

Our main interest, however, was to check all previous descriptive results on the effects of events on the probability of leaving poverty when we condition on household demographic and socio-economic characteristics and the poverty gap. Results appear in Table 7 and underline the differential effect of some events on the outflow probability of households with or without children.

Table 6. The effect of children on the household's Poverty Outflow rate.

Estimation strategy: Probit with sample selection	Coefficients when estimating the probability of leaving poverty			
	Basic model	Basic + poverty gap	Basic + events	Basic + events + poverty gap
Presence of children in hh. (0-17)	-0.20**	-0.23**	-0.19**	-0.24**
Number of children in hh. (0-17) (only for households with children)	-0.19**	-0.19**	-0.14**	-0.13**
By household type				
Households without children				
Single, >=65 years	*ref*	*ref*	*ref*	*ref*
Single, <65 years	-0.20	-0.16	-0.26	-0.10
Couple no children, >=65	--	--	--	--
Couple no children, <65	0.15	0.20*	0.02	0.09
Two or more adults without children	0.18	0.19	-0.02	0.01
Households with children				
Lone parent	-0.13	-0.14	-0.32	-0.35
Single parent	-0.14	-0.15	-0.21	-0.16
Couple with one child	0.008	0.01	-0.18	-0.11
Couple with two children	-0.27**	-0.27**	-0.37**	-0.35**
Couple with three or more children	-0.64**	-0.63**	-0.57**	-0.49**
Sample sizes (number of households)	2,774	2,774	2,774	2,774

Notes: *= significant at 90% confidence and **= significant at 95% confidence. All regressions include control variables such as: age and age squared of the household head, sex of hh. head, presence of a spouse, education level hh. head, number of dependent children, number of dependent adults, size of municipality, labour status of hh. head, quarter of observation and the Spanish unemployment rate at quarter t (second moment). Retention equation includes variables such as: age and age squared of the household head, sex of hh. head, presence of a spouse, education level hh. head, number of income receivers, number of children or presence of children or household type, number of dependent adults, housing ownership status, size of municipality, labour status of hh. head, quarter and year of observation. The Wald test of independence of equations shows that retention and poverty exit are independent in all three first specifications but not in the last one where the poverty gap and events are included as explanatory variables.

Results in Table 7 confirm one of our first descriptive results in section 3 related to the effectiveness of different events on household chances of leaving poverty. Most events continue to

have a smaller impact on households without children than in the rest even if we control for the poverty gap and other household characteristics. However, the regression allows us to realise that this differential impact is particularly high for two particular events: the beginning of pension and unemployment benefits. The reasons for a higher effectiveness of these two non-labour income events on households without children could be linked to the elegibility of members for higher quantities of the benefits or to the accumulation of first-time benefit receivers in these households.

Table 7 also shows that the impact on the poverty outflow rate of a member's gain of a job is fairly independent of the member's position in the household, particularly in households with children.[26]

Finally, the multivariate analysis also allows us to discover that the departure of adult household members is effective in households without children, thus reducing their needs more than their total income, while it does not have any effect on the chances of childbearing households to leave poverty. In contrast, the arrival of a new child reduces childbearing households' chances to exit poverty while it has no significant effect on households without other children.

[26] Note here that the definition of "gaining a job" for "other household members" is much more correlated with the exit from poverty than that of the spouse or the head by construction. The information used to define it comes from the number of other household members receiving employment incomes that quarter while that of the spouse and head comes from the answer to a question related to labour status in the last week before interview..

Table 7. The effect of events on the household's Poverty Outflow rate: Probit sample selection model.

	Coefficients of regressors					
	All households		Households with children		Households without children	
	Basic model + events	Basic + events + pov. gap	Basic model + events	Basic + events + pov. gap	Basic model + events	Basic + events + pov. gap
Demographic events						
Child born	-0.35*	-0.22	-0.41*	-0.37*	-0.002	0.27
Child leaves or dies	0.18	0.18	0.15	0.15	--	--
Adult leaves or dies	0.37**	0.43**	0.002	0.09	0.78**	0.85**
Elderly leaves or dies	0.48**	0.66**	-0.03	-0.11	0.87**	0.97**
Labour market events (wages)						
Labour earnings increase >=20%	0.91**	1.01**	0.88**	0.97**	0.99**	1.12**
Labour status events (head)						
More hours work (p-t to f-t)	0.99**	1.05**	0.80	1.00*	1.27**	0.89
Gain job (enters f-t work)	1.04**	1.11**	0.93**	0.97**	1.46**	1.52**
Gain job (enters p-t work)	0.54*	-0.73*	-0.26	-0.38	-0.66	-0.97*
Retirement (f-t to retirement)	-0.25	-0.18	-0.09	-0.04	-0.33	-0.37
Labour status events (spouse)						
More hours work (p-t to f-t work)	0.72**	0.67*	0.90**	0.87**	-0.46	-0.37
Gain job (enters f-t work)	0.96**	1.06**	0.90**	0.96**	0.97*	1.00*
Gain job (enters p-t work)	0.40**	0.48**	0.50**	0.54**	0.008	0.08
Retirement (f-t to retirement)	0.37	0.32	--	--	0.04	-0.09
Labour status events (others)						
Gain job (some start to receive employment income from f-t or p-t work)	1.53**	1.67**	1.32**	1.43**	2.02**	2.23**
Non-labour income change						
Begin pension benefit	1.08**	1.14**	0.50**	0.51**	1.51**	1.69**
Begin unemployment benefit	1.16**	1.42**	0.68*	0.58	1.89**	2.33**
Begin other regular transfers	0.69**	0.74**	0.59**	0.61**	0.90**	0.96**
Increase pension income >35%	1.30**	1.46**	0.76**	0.88**	1.63**	1.87**
Increase unemp. income >35%	0.64**	0.76**	0.71**	0.82**	0.46	0.56
Increase regular transfers >35%	0.91**	1.01**	--	--	1.09**	1.27**
Poverty Gap						
Income 50-60 % median		*ref*		*ref*		*ref*
Income 40-50 % median		-0.41**		-0.41**		-0.51**
Income 30-40 % median		-0.61**		-0.34**		-1.10**
Income 20-30 % median		-0.81**		-0.79**		-0.82**
Income < 20 % median (not zero)		-1.11**		-0.96**		-1.33**
Sample sizes (num. of hh.)	2,774	2,774	1,438	1,438	1,336	1,336

Notes: *= significant at 90% confidence and **= significant at 95% confidence. All regressions include control variables such as: age and age squared of the household head, sex of hh. head, presence of a spouse, education level hh. head, number of dependent children, number of dependent adults, size of municipality, labour status of hh. head, quarter of observation and the Spanish unemployment rate at quarter t (second moment). Retention equation includes variables such as: age and age squared of the household head, sex of hh. head, presence of a spouse, education level hh. head, number of children or presence of children or household type, number of dependent adults, housing ownership status, size of municipality, labour status of hh. head, quarter and year of observation. The reference household is male headed employed full-time with primary school education employed in a non-qualified job, whose spouse is not employed, lives in a township over 500,000 inhabitants and total household income is just below the poverty line (50-60 per cent if the median household income).

5. Conclusions

In this paper we have been able to offer some insights on the dynamics of poverty for households with children in Spain and to provide interesting evidence on the effects of considering multivariate approaches to the estimation of outflow rates that include events as explanatory variables.

A very interesting result of our work is that a multivariate approach to the estimation of outflow rates allows us to discover that the higher poverty outflow rate of households with children compared to the rest in the case of Spain is due to the particular demographic and socioeconomic characteristics of this group. Once we control for these, all specifications estimate a lower transition rate for households with children than for the rest.

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 to 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 probably 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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APPENDIX

Table A1. Poor households demographic and labour status characteristics by demographic groups.

	All households	Households with children	Households without children
Sample	*4,831*	*2,515*	*2,316*
age of household head	53.6	44.5	63.5
Sex of household head			
Female head	80.2	87.2	72.6
Education household head			
illiterate	8.2	6.1	10.5
no studies	35.3	29.0	42.1
primary school	44.1	48.6	39.2
secondary (1st cycle)	7.4	11.3	3.3
secondary (2nd cycle)	3.4	4.0	2.8
university (3 years)	0.9	0.5	1.4
university (5 years)	0.6	0.4	0.7
Household dependants, number and age			
Number of children (no incomes)	1.13	2.17	0
Number of income receivers	0.84	0.94	0.73
Number of dependent adults	2.80	3.88	1.62
Size of municipality of residence			
<5,000 inh.	24.2	20.0	28.8
5,000-10,000 inh.	12.7	13.8	11.5
10,000-20,000 inh.	12.1	13.6	10.4
20,000-50,000 inh.	12.0	13.7	10.1
50,000-100,000 inh.	10.7	11.9	9.5
100,000-500,000 inh.	18.4	18.0	18.9
>500,000 inh.	9.8	9.0	10.7
Type of housing			
owner-occupied	73.8	69.2	78.9
subsidised	1.1	1.6	0.6
rented	17.3	19.4	15.0
rent-free	7.7	9.7	5.4
Head labour market status			
employed - f-t, qualified	9.5	16.6	1.9
employed - f-t, non qual, agric	3.7	5.5	1.7
employed - f-t, other non qualified	7.2	11.9	2.1
employed - self employment	15.6	19.4	11.6
employed - less than 13hrs	2.6	3.0	2.0
unemployed - some UI or IS	0.2	0.2	0.2
unemployed - no UI or IS	16.4	23.3	8.8
retired - some pension benefit	38.7	16.9	62.4
retired - no pension benefit	2.3	1.3	3.4
working at home	1.6	1.1	2.1
other status	2.0	0.6	3.6
Spouse labour market status			
No spouse	22.6	12.3	33.8
Spouse employed	7.8	10.9	4.4
Spouse not employed	69.6	76.8	61.7
Poverty Gap			
Income 50-60 % median	21.7	20.8	22.6
Income 40-50 % median	15.9	14.8	17.2
Income 30-40 % median	9.5	9.9	9.0
Income 20-30 % median	5.0	5.8	4.1
Income. < 20 % median (not zero)	45.3	46.4	44.0
Income = 0	2.6	2.3	3.0

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

Figure A1. Adaptative Kernel densities for household income at different years (1985-95).