

Is leaving home a strategy for young people to escape poverty?*

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Abstract

Researchers have recently started to look at youth poverty as distinct from child poverty. However, research has yet to focus on the persistence of youth poverty in European countries. This paper analyses the link between the poverty status of youths after leaving home and the economic status of their family of origin in Southern European countries (Italy, Spain, Greece and Portugal). The sample consists of youths, aged between 18 and 32 years old, who left home to a partner. Two approaches are considered. First I model poverty status of those who have left home while, also accounting for the fact that youths from better-off households are more likely to leave home (a sample selection model). This approach considers only whether someone leaves home and the associated poverty status, but not the time that it takes before people leave. This latter aspect is addressed in the second model, which takes an independent competing risks approach. According to estimates from the first model, I find the poverty status of youths in new couples depends positively from the poverty status of their family of origin. This finding has also been confirmed from the estimates of the second model. According to estimates from the second approach I also find that time matters on the probability to leave home non-poor, not on the probability to leave home poor. Both models show that differences among countries are not statically significant, as the difference in the predicted probability to be poor after leaving home has shown.

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1 Introduction

In recent years many studies have started to focus the link between youths and their previous generation (i.e. literature on intergenerational mobility). However, only few researches have been looking explicitly at youth poverty status, and even less has been focused on the persistence of poverty in European countries. In this paper we analyze the relationship between the income of parents and the poverty status of their children while also taking account of several individual and territorial characteristics that are not often used in the literature i.e. features of family ¹, neighbourhood and area of residence that we assume are correlated with the lack of material resources.

The definition of ‘youths’ in this paper is slightly different from the one generally used in literature. Youths usually are ‘those who are no longer children, but who belong to an age group many of whose members have not yet completed all the processes of transition to adulthood’ (Aassve et al., 2005a, p. 1); youth is usually considered as starting around 15 years old and ending around 25.

We focus on Southern European countries (henceforth SEC), where the decision to leave home occurs later than in the other European countries. Accordingly to Iacovou (2004, p.27), the young people in all southern/Catholic countries are slow to leave home: for men, the mean is 30year old in Italy and 28 years old in Spain Portugal and Greece; for women, the mean is 27, in Spain and in Italy, 25 and 23 in Portugal and Greece respectively, in UK (e.g.) the mean age of young men leaving home is 25.5 and is 22.8 for young

¹A family comprises a group of people with parent links consisting of married or cohabiting couple, single male or female, with or without children. The family also can include grandparents or grandchildren living at home. The household is a quite wider concept including different unit living in the same house but not parental links i.e. a household can comprise a family of a married couple with one child plus a student renting a room in the house (see Atkinson 1990). In this work we refer to the nuclear family

women.

Moreover, the evidence in these countries shows that the age of leaving home and partnering tend to occur at the same time. As Iacovou (2004) argues, leaving home as a single person should be distinguished from leaving home as a couple.

Therefore, we adopt a wider age range than in most studies on youth poverty, i.e. we analyze youth aged between 18 years old and 32, and we consider young people who leave home to form a stable union.

There are several reasons why Southern European young people leave home later. The rate of unemployment in these countries is higher than the European mean; the housing prices as well and, even if a young man or woman has already got a job or has formed a stable cohabiting union (even marriage), the informal care provided by their parents may lead them to remain at their parents' home. Manacorda and Moretti, (2006) find evidence for this in Italy, where parents greatly value to have children at home longer and so they offer income transfers to keep their own children at home as long as possible.

The paper considers the hypothesis that young people prefer to live on their own but that they delay leaving home because they consider this to jeopardise their wellbeing: staying at home it is a protection against poverty.

Many studies, in fact, find a strong link between leaving home and youth poverty and emphasize that leaving home is more important in explaining poverty among young people than other factors like employment, presence of children or cohabitation. Aassve et al. (2005b) find that youth delay leaving home because they know they are more likely to enter poverty than those who decide to stay in the parental home.

In Italy, it is not only the poverty risk that results in delays in leaving

the parental home. Stayers also have a further incentive as their well being increases given the income transfers they receive from their parents (Manacorda and Moretti, 2006). In Spain, the poverty risk is lower for youth in the late twenties compared the ones in the early twenties: the delay in leaving home could be due to the fact that they are supporting their parents economically (Aassve et al. 2005b).

Moreover we assume that there are other factors beyond youth poverty which are correlated with the economic status of the family of origin: the lack of material resources in the family of origin influences both the neighbourhood in which the family lives and the social networks of the young people; for youths living in a better-off family, delaying the decision to leave home can increase the probability to find a better job, therefore, we assume that the persistence of poverty is fostered by the low level of wellbeing that youths face before leaving.

As we stated before, the evidence shows that in southern European countries there is a negative association between parental income and leaving home as part of a couple, in other words higher parental income less likely youths are to leave home as a couple. This suggests a potential sample selection bias because there are some unobserved factors that determine the inclusion on the sample (youth that have left parental home) and, at the same time, affect the outcome of primary interest (the youth poverty status). To address this issue we use a standard sample selection model. First I model poverty status of those who have left home while, also accounting for the fact that youths from better-off households are more likely to leave home (a sample selection model). This approach considers only whether someone leaves home and the associated poverty status, but not the time that it takes before people leave. This latter aspect is addressed in the

second model, which takes an independent competing risks approach.

The paper is structured as follows. In the first section we describe the main findings of the literature on youth poverty and the leaving home decision in Europe. This section, also provides a framework to analyze the persistence of poverty across generations. In the third section we describe the methodology, in the fourth one we summarize the data used in the analysis and describe the sample. In the fifth section the results are presented. Finally, the last section concludes.

2 Previous studies

Despite the large body of research on poverty on particular age groups (children and elderly) there are very few studies on poverty among youth as distinct from child poverty.

The first issue that arises in these studies is the definition of youth which varies widely across countries, and there is no strong agreement about when a child should be considered as belonging to the youth group.

There is consensus in considering that youth are individuals who have not yet completed all the processes of transition to adulthood. However, nowadays it is unclear in which moment a young person has completed all the steps of the transition to adulthood. It is well established that the transition include five steps (i.e. completing education, finding a job, leaving the parental home, forming a stable cohabiting union and having children)but there is room for discussion about whether they should be chronologically ordered. Moreover, the transition to adulthood is not a smooth process and some steps occur later and later in life; some others can take place simultaneously and women may make the transition differently from men. For all these reasons we can not find a standard definition of youth, in the

literature, especially if we compare different countries.

Some international organizations have adopted, in their programme or policy, a definition of youth based on upper and lower age limits: the United Nations, as well as the European Union, defines young people as individuals between 15 and 24 years of age. However, the most appropriate way to address this issue is to find a definition according to the analysis and the countries that one is going to analyse.

The previous studies on which my conceptual framework is based on can be divided in three different strands: the first concerns youth poverty, the second deals with leaving home decision and his influence on youth poverty, the third one concerns persistence of poverty across generations. These three topics are always treated separately, my paper try to link them.

2.1 Youth poverty

As we stated before, there are very few studies on youth poverty. Among comparative studies the most recent one is the paper written by Aasve, Iacovou and Mencarini (2005) on youth poverty in Europe. They review the literature on youth poverty and state that almost all the studies on poverty among young individuals are based on two datasets: the Luxembourg Income Study (LIS) and the European Community Household Panel (ECHP). Using data from ECHP, they find that in Europe the SECs have the highest rates of poverty in general, but compared with the UK, youth poverty is higher only in Italy. Moreover, in these countries there are no peak rates in any age associated with leaving home. In fact, in the SECs the difference in poverty rates between those living at home and those who have left home is the lowest when compared to the other European counties. Plotting the gap in poverty rates between those at home and those who have left home

against the proportion of youth that have left home, they found a strong positive relationship between the two variables considered. In other words, in a country where the proportion of youth that have left home is high, the gap in the poverty rate is bigger.

Smeeding and Phillips (2002) use seven nations for which there are data from LIS to portray the level of economic independence among youth (aged 18-32). They choose the seven nations according to their previous studies and to have a wide range of countries reflecting different welfare regimes and geographical position. They use, as a key to interpretation, the welfare-state classifications in Esping-Andersen (1990) when they address the issue of social benefits and economic transfers in contrast to the economic insufficiency. For each different type of welfare state regime they focus on just one country in particular. They select Italy as the representative for the Mediterranean countries. They show that looking at the economic independence achieved through market work (even if it is combined with government transfers) young Italian men experience the lowest percentage of "full-time and full-year work". They also show that neither young men nor young women can earn enough to escape from poverty in Italy. The percentage of young adults able to support a family of three people with their earnings is even lower when compared to the other countries. They stress the role of the Italian labour market saying that 'the fact that young Italian men do so poorly likely reflects that fact that labour market opportunities are fewer and less well paid and that the institution of the Italian labour market are likely to favour older men' (Smeeding and Phillips, 2002 p. 8).

Canto'-Sanchez and Mercader-Prats analyse economic poverty among children and youth aged between 18 and 29 in the 90's in Spain. They find that children are the age group with the highest risk of poverty whereas

youths have the lowest (7.6%). The risk of poverty rises drastically for children living in a household headed by a youth. The regression presented confirm this analysis showing that poverty is lower for youth aged 18-29 compared to the whole population even if it is slightly higher for older youth (aged 25-29) than for younger youth (aged 18-24). They explain in two different ways the low risk of youth poverty: first of all 80% of youth live with their family, in fact poverty is higher for the youth who have left their parental home. Secondly, the 60% of youth in Spain who live with their parents are employed, this contributes in reducing the risk of poverty for the rest of household members including children. They stress the role of the traditional Spanish family in supporting their youth children, but they also show the other face of this: the young people live in a condition of dependence for too long so the policy 'has to help the youth to cross the bridge towards the creation of their own families' (Canto'-Sanchez and Mercader-Prats, 1999).

2.2 Leaving home and poverty risk

The second strand of the literature concerns leaving home decision and the consequently poverty status. M. Iacovou (2004) found evidence that youths (aged 18-35) in SEC delay leaving home. Some recent papers indirectly give me some explanations for this.

Manacorda and Moretti (2005) modeled the co-residence decision for Italian youth as dependent on parental income. To avoid identification and endogeneity problems they use an instrumental variable for parental income: the pension reform (that occur in Italy in 1992). The main result is a strong link between the probability to leave home and parental income, 'one extra million lira of parents income (about \$500) raises the probability of

cohabitation by about 3.9 percentage points'. (Manacorda and Moretti, 2005 p.24)

In Spain, parents support their children but also the other way around (Cantó-Sánchez and Mercader-Pratz 2001). Youths have lowest risk of poverty but the 80% of young people live with their family (poverty is higher if they consider those who have left home) and 60% of young people living with their family are employed. This contributes to reduce the risk of poverty for their household, so they are helping their parents as well to escape poverty.

All these studies stress the fact that the link between leaving home and poverty is very strong but they do not address this issue directly. In fact there are almost no studies that address this issue directly, the exception being Aassve et al (2005) which studies the impact of leaving home on youth poverty in Europe. They find that youth who leave home are more likely to face poverty than those who stay in the parental home. This is true for all the countries even if (except Greece) they find just a small effect in the SEC. There are no large differences between Southern and Northern Europe, even if it is quite meaningful that they can observe the older group aged (30-34) only for the SECs. The biggest impact of leaving home on poverty risk is among those under 25 years old in Scandinavian countries. But, as they suggest, the difference between Scandinavian and Southern European countries can be due to a potential selection bias.

2.3 Persistence of poverty

The third strand, on which my paper relies on, regards the studies on persistence of poverty across generations. There are very few studies on this topic, and if we look at SECs there are almost no studies because of lack

of data. Long panel to study the transmission of poverty are not available so scholars find difficult to study this topic in these countries. However we would like to stress the importance of the persistence of poverty quoting a report for UK where data are available and a lot of studies have been done.

Blanden and Gibbons (2005) tried to disentangle the causes beyond the persistence of poverty across generations. They find that the persistence of poverty from the teens into the thirties has risen over time and that family background has had a big impact. Moreover they state that the transmission of poverty during the transition to adulthood is much more important than any other transmission between parents and children.

3 Methods

This section provides a description of the methods used for analysis. First I model poverty status of those who have left home using a sample selection model. This approach considers only whether someone leaves home and the associated poverty status, but not the time that it takes before people leave. This latter aspect is addressed in the second model, which takes an independent competing risks approach.

3.1 The sample selection model

The analysis focuses on a sample of youth who are age from 18 to 32 years old in year when they first observed (year t) and who are living with their family. In other words, these are all those youths living with parents at wave t and present in panel at wave $t + 1$.

At $t + 1$, if individuals do not drop out of the sample, some youths will have left home, some will still be living with parents. In my analysis the condition to leave home to a partner (either living in consensual union or

married at $t + 1$) has to be satisfied in order to observe both the dependent and the explanatory variables.

I use data from consecutive waves (t and $t + 1$) to estimate poverty transitions. The model is a type of first-order Markov approach because it takes into account pairs of observations for each individuals in two consecutive years t and $t + 1$. The main interest is to estimate the poverty transitions from t to $t + 1$.

I examine a sub-sample and we assume that some components, observable or unobservable, determining inclusion in the sub-sample (youth who left home to form a stable cohabiting union) are correlated with the variable of primary interest (poverty status of youth after leaving home). To address this issue we use Heckman probit take the following form:

$$y_i^* = x_i' \beta + u_i \quad (1)$$

where

$$y_i = (x_i' \beta + u_i > 0) \quad (2)$$

y is observe if and only if a second, unobservable latent variable exceeds a particular threshold:

$$s_i^* = z_i' \gamma + e_i \quad (3)$$

where

$$s_i = 1 \quad \text{if}(s_i^* > 0) \quad s_i = 0 \quad \text{otherwise} \quad (4)$$

$$e \sim N(0, 1) \quad u \sim N(0, 1) \quad \text{Corr}(e, u) = \rho \quad (5)$$

The Selection equation is the probability to leave home to live with a

partner, the dependent variable is observed for all the individuals in the sample (youth at home or not). The probability to leave home depend on some explanatory variables that reflects demographics characteristics, family structure and neighbourhood characteristic. To address the identification issue, the selection equation contains an explanatory variables that affect the probability to leave home but not the association of primary interest i.e. the relationship between the youth poverty status after they have left home and the economic status of the family of origin. This variable is the crowding index (number of equivalent adult divided by the number of room, without kitchen in the household). Children, from larger families, are more likely to leave home early and crowded accommodation is, per se, a factor determining moves out of the parental home.

The Outcome equation is the probability to be poor in the new family. It is observed only for a subset of sample: the individuals selected, i.e. the young people that had left home to live with a partner. The dependent variable is the poverty status in the new family. The explanatory variables are the same of the selected equation but calculated at $t+1$. However, some of them (the quality of neighbourhood, and the quality of the social life) are calculated at t because we believe that they influence the probability to be poor after the leaving home decision, more than the ones calculated at $t+1$.

We test whether or not ρ (the correlation between the errors terms) is significant different from zero. If ρ is different from zero, standard probit techniques applied to the outcome equation yield biased results, so we need the Heckman probit to provide consistent estimates for all the parameters.

3.2 The Competing risks model

Up until now we considered the potential selection in the sample but we did not consider the time spent into a state before to exit to another one. The independent competing risk models provide not only a method to address this issue, but also a model to take into account different types of events (including attrition).

I deal with a population sample, the data collection is based on a general survey of the population and the sampling is not related to the process of interest, the individuals are asked about their current situation. The survival time is discrete (time within interviews approximately one year) but the underlying transition process may occur in continuous time so the data are interval-censored as they are grouped into years. In this situation the overall interval hazard is only approximately equal to the sum of the destination-specific discrete hazard rates ².

Defining the discrete hazard rate for exit at time j to the destination k as $h_k(j)$. The hazard for exit to any destination ($h(j)$) is the sum of the destination-specific hazard rates only if the product of them is approximately equal to zero.

$$h(j) \approx \sum_{k=1}^K h_k(j) \quad \text{if } \prod_{k=1}^K h_k(j) \approx 0 \quad (6)$$

The survivor function for exit to any destination is:

$$S(j) = \prod_{k=1}^K S_k(j) \quad (7)$$

To estimate the model using a multinomial logit we need to assume that the transitions can only occur at the boundaries of the interval, however

²S.P., Jenkins 2004

with interval-hazard relatively small the destination-specific hazard rates constant within intervals could also be assumed, and the multinomial model will provide the same estimates of the first case.

4 Data

All the analysis of this paper is based on the European Community Household Panel. The panel is a harmonised longitudinal survey focusing on household and living conditions. A large set of questions, including items like income, health, education, housing conditions, employment and so on, were asked in every European countries of EU-15. The ECHP runs from 1994 to 2001 and in its first wave it covers a sample of more than 60000 household and almost 130.000 adults aged 16 years and over. The survey interviewed these adults in 12 member states, Austria joined the ECHP in wave 2 Finland in wave 3, also Sweden provided cross-sectional data over this period, so it is not a panel.

4.1 Selection of the analysis sample

This section mainly describes the sample on which all the results are based distinguish between the two methods used. The countries selected for this analysis are Italy, Spain, Portugal and Greece. The focus is on youths who left home to live with a partner (either in consensual union or married) at $t + 1$. But for sex, all the variables used are time-variant, distinguish between t (living in parental home) $t + 1$ (living in their own home).

4.1.1 Sample selection model

The sample consists of youths aged from 18 to 32 the first time observed living with their parents at some time t . At $t + 1$ some will be still in the

panel (living with their parents or living as a couple) some other will drop out of the sample (attrition).

The youth at risk of leaving parental home at $t + 1$, in other words, children living with their own parents at t , are 18,676 pooling the four countries together. I observe them at most 7 waves (from the 1994 to 2000) so each of them can be characterized by more than one pair-year observations i.e. an observation considering two consecutive year t and $t + 1$. For example a youth present in the panel all the 7 waves is characterized by 6 pair-year observations (1994-1995, 1995-1996 and so on).

Pooling the four countries and the individual-pair-year observations, the sample is characterized by 66,397 observations ³.

The table 1 shows the multiple destinations that can occur at $t + 1$ in the sample of pooled observations ⁴.

Table 1: Percentage of youth at $t + 1$ by destinations

	At home	Left home with partner	Left home alone	Not present in the panel
Italy	87.2	3.2	1.1	8.5
Greece	84.4	2.8	1.3	11.5
Spain	81.5	3.4	1.0	14.1
Portugal	86.5	4.7	0.5	8.3
SEC	84.9	3.5	1.0	10.6
No. of Observations	55,306	2,313	651	7,055

Sample size: Individual-pair-year observations 66,397(SEC), 22,175(Italy), 11,339(Greece), 19,544(Spain), 13,339(Portugal)

The most of youth in SEC stay at home, in Italy the 87% of them. In Portugal there is the highest percentage of youth who left home to live with a partner. Very few youth have left home alone, this confirm the hypothesis

³22,175 for Italy, 11,339 for Greece, 19,544 for Spain and 13,339 for Portugal

⁴For the following analyses on sample selection approach the attrition is not considered

that in SEC the decisions to leave home and form a partnership occur at the same time. A high percentage drop out of the panel, the highest is in Spain where the 14% of youth is not present in the panel in $t + 1$.

4.1.2 Competing risk model

I selected all youth aged 18-32 years the first time I observe them (in year t). I created a spell indicator that gives me the duration of the spells assuming that a youth is at risk to experiment the event (i.e. leaving parental home) from 18 years old. The duration is the time elapsed since the youth has 18 until the leaving home decision. A variable (destination indicator) tells me not only whether a youth left home but also the destination.

As the youth has left home multiple destinations can occur:

- the youth has left home alone and poor
- the youth has left home alone and non poor
- the youth have left home with a partner and poor
- the youth have left home with a partner and non poor
- the youth can drop out of the panel causing attrition.

To summarize, a youth entered in the sample at 23 years old and observed leaving parental home to a partner the year after (at 24 years old) will has the spell indicator equal to 5 ($24-18+1$), and the destination indicator equal to 1 and so on so forth. We follow the sample of youth until the end of the survey so we could not see for all of them the transition to the event: it could be that the event has not yet occurred or it will never occur. These observations are right-censored, the spell indicator will be equal to their age

at the end of the survey minus 18+1 but the destination indicator will be equal to 0.

I expanded the data set in person-year form and I created a censoring indicator with categories corresponding to the occurrence of events in each spell year: whether there was an exit from home to live alone (and if so whether the individuals was poor) whether there was an exit from home to live with a partner (and if so whether the individuals was poor), whether there was attrition, or whether there was no exit. For persons with censored spells, all observations, in the reorganised data, are censored, for persons with completed spell, all observations are censored except the final one. For these persons the final observation takes value 1 up to K if K destinations can occur.

The table 2 reports the number of observations in each category, it is a tabulation of the censored indicator (used in the analysis that follows) and the 6 possible outcomes occurring.

Table 2: Percentage of youth at $t + 1$ by destinations

	At home	Left home with partner	Left home alone	Not present in the panel
italy	85.5	2.7	0.9	10.9
greece	83.8	2.3	0.6	13.3
spain	80.4	2.7	0.7	16.2
portugal	85.0	4.4	0.4	10.3
Sec	83.6	3.0	0.7	12.7
No. of observations	54,183	1,930	435	8,236

4.2 Definition of key variables

The variable used both on the RHS and on the LHS are described in the appendix B. All the variables used are time-varying except for gender. In the

Heckman model, I estimate the impact of the explanatory variables on the dependent variable using the covariates at two point in time t and $t + 1$, the same variables are used in the multinomial model allowing for time-varying covariates along the spell. The main explanatory variable of interest, both in the Heckman and in the multinomial model, is the income. The income variable is used to determinate the poverty line and all the other income measure used in the regressions. The section below describes the method to construct the income variable and the income measures used.

4.2.1 The income

The ECHP includes many income variables for each household. For instance, the total net household income - the sum of the income of each members of the family from earnings, private and state benefits and from other sources - or the personal net income - the income of each members of the household. All these income variables are collected retrospectively, and so, each wave contains information on the income received over the previous calendar year.

I can not use the total net household income because household composition change year to year so it can include the personal income of some individuals who are not in the household anymore. At the same time I can not use the net personal income provided in each wave as it refers to the previous wave.

My analysis is based on the comparison between two points in time (before and after the leaving home decision) and it focuses on youth a category most likely to leave home and the panel, so the estimates can be very sensitive to the way on which the variable income is constructed.

I follow the approach suggested by Iacovou (2004). I construct the net household income in each year t as the sum of the net personal income

reported at $t + 1$ of the individuals present in the household at t . The approach could lead to a number of missing value on income variable because of the attrition. In order to avoid this, I replaced the personal income at t with the one reported into the survey at t for the individuals not present in the panel at $t + 1$. However I did not follow this procedure if all the members of the household (i.e. the household itself) has left the panel at $t + 1$. The way in which the variable income is constructed allow us to use only 7 waves of the panel.

The following example should help to clarify the approach. I could face the following situations:

- all the members of the household are present two consecutive year in the panel: t and $t + 1$,
- one of the members of the household is not present in the panel at $t + 1$
- all the members of the household (i.e. the household itself) are not present in the panel at $t + 1$

In the first case, the most likely one, I constructed the household income in each year t as the sum of the net personal income reported at $t + 1$, in the second case I constructed the household income as above, but imputing to the member not present at $t + 1$ the income reported at t , in the third case I generated a missing value for the income variable.

Net household income is divided by a scaling factor taking into account the economies of scale within the household as it reflects the number of adults and children among whom the income has to be shared. This scaling factor is the modified OECD equivalent scale (provided in the survey) of

the year t ⁵. For comparative purposes the income has been converted to a common scale using the purchasing power parities.

Using the equivalent household income, the poverty line is the 60% of national contemporary median computed using all individuals in each wave and for each country. A youth is considered poor if his equivalized income is below the national poverty line.

I use different specifications of the income measure either for the Heckman probit and for the Competing Risk model. I compare a categorical income measure (four dummy variables for different income categories where the boundaries are expressed in terms of fraction of the median i.e. 60% 100% 150%) and the logarithmic transformation of the equivalised income.

4.3 Descriptive statistics for sample

The aim of the paper is to analyze the relationship between the youth poverty after they leave parental home to live with a partner and the economic conditions of their own family of origin, in other words, the poverty transition, so it is better to start looking at some descriptive on this transitions.

The table 3 reports the transition rates for the pooled sample considering all the pair-year-observations, observed at t and at $t + 1$, including missing case and the attrition. At $t + 1$, in fact, a youth is not present in the panel because of missing value (item non response) for one or more key variables, on the other side, the youth is not present in the panel at all, and I can not observe him/her.

The table shows that in Italy there is the highest rate of persistence of

⁵I did some sensitive analysis using OECD equivalent scale and the result are quite robust, however the percentage of poor slightly increase as well as the percentage of the persistent poor

poverty, 62.3% of poor youth remain poor at $t + 1$, and Italy shows also the highest rate of youth entering poverty in $t + 1$ (7.9%) i.e. non-poor at t and poor at $t + 1$. Either the attrition and the missing cases, seems to be not correlate with the poverty status.

Analyzing the relative risk of poverty (defined from the transition matrix as the relative frequency of being poor divided the relative frequency of being non-poor) the highest chances to be poor at $t + 1$ than non-poor is in Portugal: a youth poor at t , in fact, is 26.8⁶ times more likely to be poor than non-poor at $t + 1$ compare to the fact he/she was non-poor at t . These chances decrease at 22 times for Italy, 17 times for Greece and 13 times for Spain.

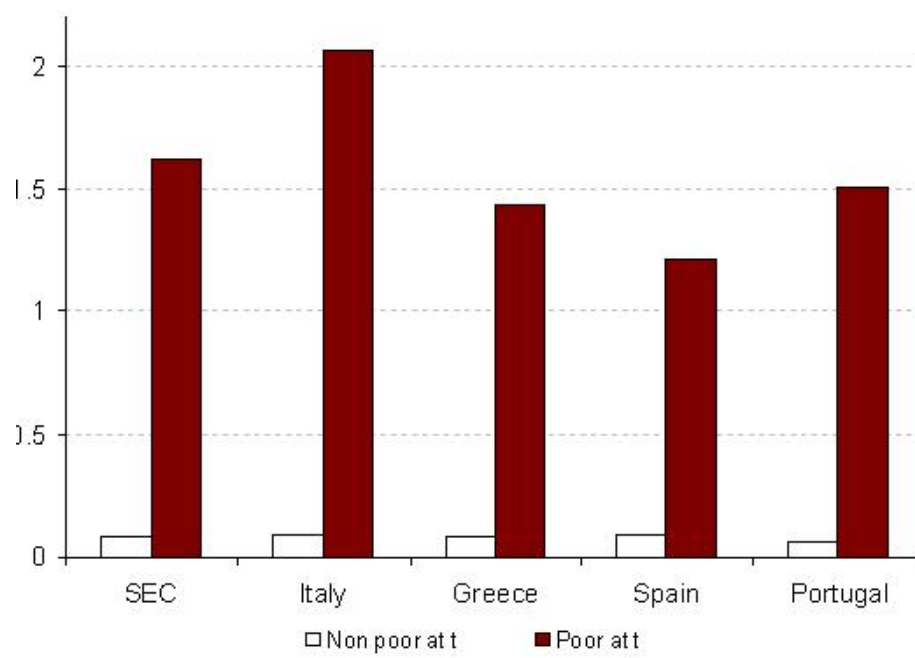
Table 3: Transition Matrix for all the sample

Country	t	Present at t+1		Non present at t+1	
		Not Poor	Poor	Missing	Attrition
Italy	Not Poor	81.6	7.9	3.6	6.9
	Poor	30.0	62.3	3.2	4.5
Greece	Not Poor	80.9	7.3	5.9	6.0
	Poor	36.0	51.8	6.7	5.5
Spain	Not Poor	79.0	7.2	6.3	7.5
	Poor	39.7	47.3	5.9	7.2
Portugal	Not Poor	86.4	4.9	5.5	3.3
	Poor	36.3	54.6	5.7	3.4
SEC	Not Poor	81.8	6.9	5.2	6.1
	Poor	34.5	55.5	4.8	5.2

Sample size: Individual-pair-year observations 66,397(SEC), 22,175(Italy), 11,339(Greece), 19,544(Spain), 13,339(Portugal)

⁶26.8=86.4/4.9 divided 36.3/54.6

Figure 1: Relative risk of being poor against non-poor at $t + 1$, comparing between all those poor at t and non-poor at t



The table 4 shows the persistence of poverty only for the youth I can observe in the two consecutive years but distinguishing between two groups. The first group is the youth at home at t but leaving to a partner at $t+1$, the second is characterized by all those at home both at t and at $t+1$. These two groups are divided in four categories showing respectively the persistence of poverty (youth poor at t and $t+1$, the moving out and in poverty and the youth never poor).

Focusing on the third category, that shows the entry into poverty, we can observe that the proportion of youth that entry poverty at $t+1$, in every country, is higher for youth outside parental home than for youth still at home at $t+1$. The difference between these two groups (overall SEC) is 2.6 percentage points.

The figure 2 plots the relative risk of entry and exit poverty of a youth that has left home comparing a youth that has stayed at home at $t+1$. As we can see the odds of entry is higher than the odds of exit except for Italy and Greece. The biggest difference in Portugal where a youth that has left home is 2^7 times more likely to entry poverty than exit if he/she had left home at $t+1$.

The descriptives statistics seems to confirm the hypothesis that staying at home is a protection against poverty, at least looking overall Secs. They show that it seems to be a difference among countries, above all for Italy and Greece.

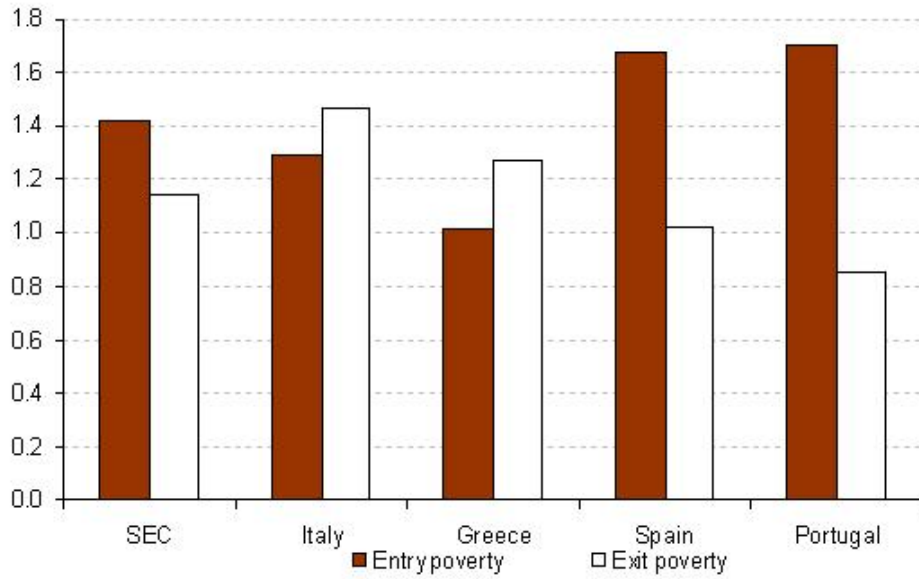
⁷Odds of entry divided odds of exit, i.e. $1.7/0.8$

Table 4: Proportion of poor and non-poor in two consecutive years, t and $t + 1$, distinguish between all those at home at t and leaving to a partner at $t + 1$ and all those at home both at t and $t + 1$

Destination at $t + 1$	SEC	Italy	Greece	Spain	Portugal
Leaving to a partner					
Poor at t and at $t+1$	5.5 <i>0.005</i>	8.9 <i>0.011</i>	2.4 <i>0.009</i>	5.4 <i>0.009</i>	3.3 <i>0.007</i>
Poor at t and non poor at $t+1$	8.5 <i>0.006</i>	11.6 <i>0.012</i>	9.4 <i>0.017</i>	8.5 <i>0.011</i>	4.7 <i>0.009</i>
Non poor at t but poor at $t+1$	8.7 <i>0.006</i>	8.3 <i>0.011</i>	6.6 <i>0.014</i>	11.1 <i>0.013</i>	7.5 <i>0.011</i>
Non poor at t and at $t+1$	77.3 <i>0.009</i>	71.1 <i>0.018</i>	81.5 <i>0.023</i>	74.9 <i>0.018</i>	84.5 <i>0.015</i>
No of observations	2,092	638	287	591	574
At home					
Poor at t and at $t+1$	12.3 <i>0.002</i>	17.0 <i>0.005</i>	11.1 <i>0.005</i>	10.1 <i>0.004</i>	8.5 <i>0.004</i>
Poor at t and non poor at $t+1$	7.4 <i>0.001</i>	7.9 <i>0.001</i>	7.4 <i>0.002</i>	8.3 <i>0.002</i>	5.5 <i>0.002</i>
Non poor at t but poor at $t+1$	6.1 <i>0.001</i>	6.4 <i>0.001</i>	6.5 <i>0.002</i>	6.6 <i>0.002</i>	4.4 <i>0.002</i>
Non poor at t and at $t+1$	74.2 <i>0.003</i>	68.7 <i>0.006</i>	74.9 <i>0.007</i>	74.9 <i>0.006</i>	81.5 <i>0.006</i>
No of observations	52,968	18,099	9,033	14,690	11,146

Standard error in italic

Figure 2: Relative risk of entry and exit poverty in $t+1$, comparing between all those at home at t and leaving to a partner at $t+1$ and all those at home both at t and $t+1$



5 Model estimates and implications

5.1 The sample selection model

I estimate the Heckman Probit as described above where in both the selection and the outcome equation I control for the same explanatory variables (sex, education, health, family structure, quality of neighbourhood and quality of the relationship outside the family). I estimate the model pooling all the countries together, allowing for countries interactions. In the tables below I present the result for three specification of economic status in the family of origin:

1. categorical income measure
2. log of income at t
3. income and income squared at t

I do not present the specifications with the interaction as they are not statistically different from zero. However the graphs on the predicted probability are based on the full model with categorical income measure and interactions.

The Wald test of independence of the equations shows that ρ (the correlation between the errors terms) is positive and significant different from zero in all the specifications used. The Heckman procedure is useful to correct the selection bias, the outcome would have been different from the outcome obtained by fitting a probit without selection. As first result, therefore, I can argue that in all the countries there is sample selection bias on the persistence of poverty, and this is a positive one: the richer the youth has been the most likely to leave parental home.

Looking at the estimates in the tables below, the main result is that the economic status of family of origin has a strong impact on the probability to be poor at $t + 1$ (tab. 5). The richer is the youth at t the less likely the youth is to be poor at $t + 1$.

Concerning the other explanatory variables, as I discuss in the second paragraph, one of the main findings in the Spanish literature is that youth at home are supporting their family more than the other way around, unlike the others SECs. As my income measures are constructed at household level, the correlation between the income at t and the income at $t + 1$ could be driven by the proportion of youth income at t . I introduced in my analysis the fraction of youth income on household income to address this issue. My concern was to disentangle the effect of the parental income on youth income at $t + 1$. However, the fraction of youth income on household income is not significant different from zero, I allow for interaction to underline difference, but I found only Portugal be different from Italy.

Looking at the individual characteristics (tab. 5)) I can state I do not find a gender effect on the probability to be poor at $t + 1$. I do find a correlation between the education and the probability to be poor: being educated decrease the probability to be poor at $t + 1$.

Interesting the findings for what I define *social network*. I have 3 variables for social network: first of all the *social life*, which includes questions on the frequency of going out, eating out and meeting people; secondly whether or not a person is *member of club and organizations*; and finally the *social relationship* which includes variable on talking and meeting neighbours. The last one is not statistically different from zero, the first two are, but they have an opposite sign (i.e. having a good social life decrease the probability to be poor at $t + 1$ whereas being a member of club increase the probability

to be poor). I could argue that having good Social Life provide a network with weaker ties than the one a person can create in a club or organization. The sociological theory of the strength of weak ties ⁸ states that are the weak ties to give people better opportunities. That is why could be the one helping the young person to escape poverty.

Table 5: Heckman Probit on the probability to be poor at $t + 1$, pooled model for SEC: outcome equation

	(1) ^b	(2) [§]	(3) [◇]
Probability of being poor			
Income Fraction 1 †	0.62***		
Income Fraction 2 ††	0.35***		
Income Fraction 3 †††	0.19**		
Log of income at t		-0.31***	
Income at t			-0.00**
Income squared at t			0.00
Male	0.06	0.11	0.03
Age	0.02**	0.01	0.02**
Spain	0.12*	1.45***	0.28**
Greece	-0.26***	1.11**	-0.04
Portugal	-0.09	1.04**	0.01
Fraction of youth income at t	-0.09	-0.39	-0.19
Tertiary education	-0.32***	-0.45***	-0.37***
Secondary education	-0.17***	-0.23***	-0.22***
Couple without children ‡	-0.02	-0.13	-0.08
Couple with children	0.22**	0.21*	0.17**
Good health	0.01	0.01	0.02
Good social life at t	-0.14*	-0.21**	-0.13*
Member of club or organization at t	0.18**	0.18**	0.20***
Living in a good environment at t	-0.05	-0.03	-0.04
Good social relationship at t	0.1	0.11	0.1
Constant	-3.47***	0.77	-3.04***

Notes: ^b Categorical Income measure; [§] Log of Income; [◇] Quadratic form of income; † Equivalised Income under 60% of Median †† Equivalised Income between 60% and 100% of Median ††† Equivalised Income between 100% and 150% of Median; ‡ Reference

category: other family but not single;

No of observations 52,401, Standard errors adjusted for 15,383 clusters

* : $p < 0.1$; ** : $p < 0.05$; *** : $p < 0.01$

Regarding the selection equation, the table 6, provides the estimates for the Heckman probit model where the dependent variable is the probability to leave home as a part of a couple.

⁸Granovetter (1973)

The results show that there is a strong positive correlation between the income of the family of origin and the probability to leave home. In the table 6, the reference category for the income dummies is having an income above 150% of the Median, and we can see that in each country having an income lower this threshold decrease the probability to leave home: lower the family income lower the probability to leave home.

In the selection equation, I do find a strong gender effect: the probability to leave home is higher for female than male.

The fraction of youth income on household income is strongly significant in both the specification and also the interactions are significant. There is a strong effect of the family type. As the sample (at t) is constituted of family with children, they are divided in three category: single, couple and other type of family with children. So the probability to leave home decrease if the youth live in a ‘traditional’ family either with single parent or not. The variable used to identify the sample selection model (i.e. the crowding index) is correlated with the probability to leave home. More crowded the house is, more likely is the youth to leave home.

The figure 3 plots the predicted probability to be poor at $t + 1$ against the categorical income measure used in the regression ⁹. The figure shows this negative relationship and that the persistence of poverty is stronger in Spain: holding all the explanatory variable at their mean, except the parental income and its interactions with countries, the predicted probability to be poor at $t + 1$ is higher in Spain than in the other SEC. The pattern from Spain Italy and Portugal is quite similar, the Greek one differs as I could observe also in the estimates as the intercept of Greece is negative

⁹The predicted probability are calculated using the pooled model with interactions, the covariates are fixed of being a man of 32 years old, with secondary education, living at t in a good environment but with bad social life, no social network and no crowded house.

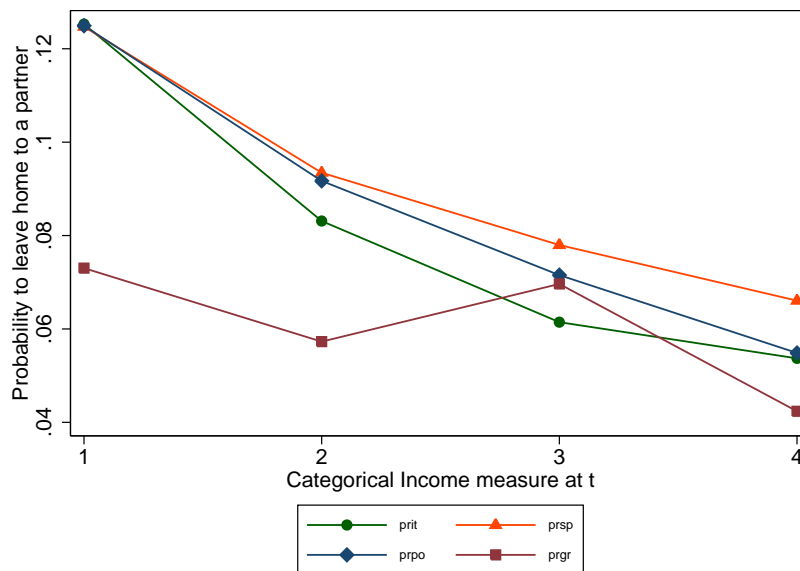
Table 6: Ctd. Heckman Probit on the probability to be poor at $t+1$, pooled model for SEC: selection equation

	(1)	(2)	(3)
Leaving to a partner			
Income Fraction 1	-0.16***		
Income Fraction 2	-0.14***		
Income Fraction 3	-0.06**		
Log of eq.income at t		0.12***	
Income at t			0.00***
Income squared at t			-0.00***
Male	-0.27***	-0.28***	-0.28***
age of individual	0.05***	0.05***	0.05***
Spain	0.03	-0.48***	-0.20***
Greece	-0.10***	-0.65***	-0.39***
Portugal	0.12***	-0.36***	-0.07
Fraction of youth income at t	0.82***	0.85***	0.87***
Tertiary education	-0.01	-0.02	-0.02
Secondary education	-0.13***	-0.14***	-0.13***
Single with children	-0.33***	-0.28***	-0.29***
Couple with children	-0.13***	-0.11***	-0.12***
Good health	0.09***	0.09***	0.09***
Good social life at t	0.07*	0.07*	0.08**
Member of club or organization at t	0.10***	0.10***	0.10***
Good social relationship at t	0.07**	0.07**	0.07**
Living in a good environment at t	-0.03	-0.03	-0.03
House crowded at t	0.39***	0.43***	0.44***
Constant	-3.54***	-4.93***	-3.71***
Rho	0.90***	0.75***	0.93***
Log likelihood	-8,590.50	-8597.5	-8,608.90

Notes: ‡ Reference category: other family with children;
Number of observations 52,401, Standard errors adjusted for 15,383 clusters
* : $p < 0.1$; ** : $p < 0.05$; *** : $p < 0.01$

and significant different from Italy.

Figure 3: Predicted probability to be poor at $t + 1$ plotting on categorical income measure



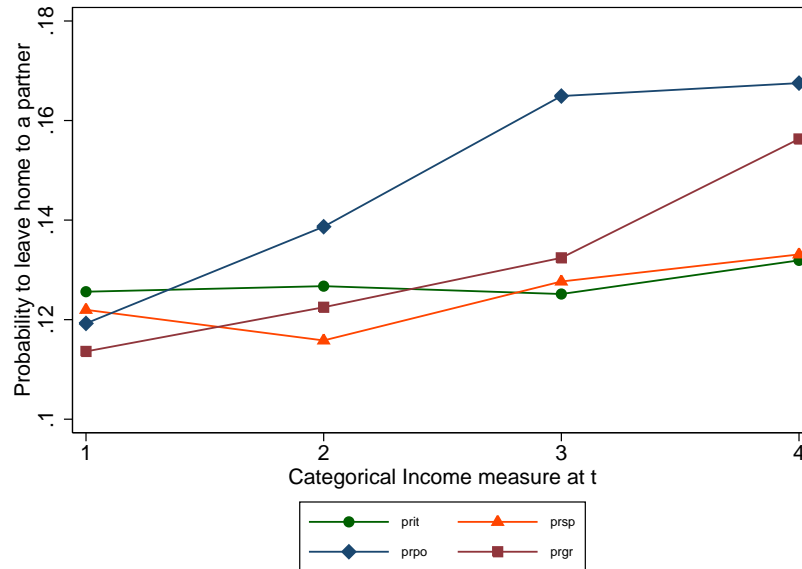
Note: 1)under 60% of Median 2)between 60% and 100% of Median, 3)between 100% and 150% of Median, 4)above 150% of Median

However, I do not find any country effect, the interactions are not significant different from zero ¹⁰

The figure 4 plots the predicted probability to leave home against the categorical income measure used in the regression. It confirms the analysis showing an increase in probability to leave home as the income increase.

¹⁰To test formally if there were differences among SECs and if so, the magnitude of them, I calculated the predicted probability to be poor at $t + 1$, and the confidential interval for them. I do not report the results, as none of the differences among countries is statistically different from zero.

Figure 4: Predicted probability to leave home to a partner plotting on categorical income measure at t



Looking at the interaction terms, I find a difference among SECs, above all Portugal and Greece seems to be different from Italy. This difference is confirmed if we look at the predicted probability. Portugal is different from the other country regarding the two highest fraction of the income measure: income above 100% of Median.

5.2 The Competing Risk Model

The independent competing risk model is estimated with a multinomial logit.

In the following tables are reported the estimates where the reference category is the right-censored group. This group includes also the youth that have left home alone (either poor and non) but as it is shown in the previous table they are few. In the tables below I present the result for three specification of economic status in the family of origin, and to compare this result with the previous one I have the same specification on the RHS.

As well as in the Heckman model, the income at t have a negative impact on the probability to leave home poor and a positive one on the probability to leave home non poor. The female are more likely to leave home either poor and non-poor, while the time has a positive effect on the probability to leave home non-poor but no effect on the probability to leave home poor. Again here the education impact the probability to leave home (poor and non-poor) and I can not find any neighbourhood effect. The tables 7 and 8 reports the predicted probability and the confidential intervals respectively of leaving home poor and non-poor. I do not find any strong and significant difference among SEC.

Table 7: Multinomial Logit. Probability to leave home to a partner and poor: reference groups right-censored

	(1)	(2)	(3)
Left home to a partner and poor			
Income Fraction 1	2.99***		
Income Fraction 2	1.67***		
Income Fraction 3	-0.15		
Log of income at t		-0.61***	
Income at t			0
Income squared at t			0
Male	-0.83***	-0.89***	-0.87***
age of individual	0.06	0.03	0.04
Greece	-0.81***	1.95***	1.13***
Spain	-0.25	2.25***	1.02***
Portugal	-0.52**	1.69***	0.39
Fraction of youth income at t	0.58**	0.11	0.01
Tertiary education	-0.55**	-0.86***	-0.75***
Secondary education	-0.69***	-0.91***	-0.92***
Single with children	0.22	0.08	0.02
Couple with children	0.39	0.37	0.40*
Good health	0.64**	0.57**	0.63**
Good social life at t	0.25	0.21	0.19
Member of club or organization at t	-0.38	-0.56**	-0.58**
Good social relationship at t	0.01	0.04	-0.04
Living in a good environment at t	0.60**	0.63***	0.68***
House crowded at t	-0.5	-1.07*	-1.19*
Log of time	0.27	0.39	0.36
Constant	-9.20***	0.34	-5.84***

Number of observations 45,056, Standard errors adjusted for 13,503 clusters

* : $p < 0.1$; ** : $p < 0.05$; *** : $p < 0.01$

Table 8: Ctd. Multinomial Logit. Probability to leave home to a partner and non-poor: reference groups right-censored

	(1)	(2)	(3)
Left home to a partner and non-poor			
Income Fraction 1	-0.85***		
Income Fraction 2	-0.07		
Income Fraction 3	0.06		
Log of income at t		0.40***	
Income at t			0.00***
Income squared at t			-0.00**
Male	-0.39***	-0.40***	-0.39***
age of individual	0.07**	0.07**	0.07**
Greece	-0.15	-2.04***	-0.68***
Spain	0.13*	-1.58***	-0.24**
Portugal	0.56***	-1.07***	0.26**
Fraction of youth income at t	0.99***	1.19***	1.15***
Tertiary education	-0.09	-0.14	-0.1
Secondary education	-0.30***	-0.31***	-0.28***
Single with children	-0.56***	-0.47***	-0.52***
Couple with children	-0.1	-0.08	-0.1
Good health	0.15*	0.14	0.15*
Good social life at t	-0.04	-0.04	-0.03
Member of club or organization at t	0.04	0.03	0.05
Good social relationship at t	0.07	0.07	0.08
Living in a good environment at t	0.09	0.11	0.09
House crowded at t	1.30***	1.45***	1.50***
Log of time	0.63***	0.63***	0.64***
Constant	-7.70***	-12.28***	-8.11***

Number of observations 45,056, Standard errors adjusted for 13,503 clusters

* : $p < 0.1$; ** : $p < 0.05$; *** : $p < 0.01$

Looking at the attrition, the income is associated to the probability to drop out of the panel: the poorer is the youth in the family of origin more likely is to drop out the panel. The factor negative associate to the probability to be attrited are having children, and there is a strong negative neighbourhood effect: living in a good environment and having good relationship decrease the probability to not be in the panel at $t + 1$. The table 9 shows the predicted probability to drop out the panel and the confidential interval for them, and I can notice that Spanish youth are significantly different from Italian youth to drop out the panel according to the income

of the family of origin.

Table 9: Ctd. Multinomial Logit. Probability to drop out to the sample: reference groups right-censored

	(1)	(2)	(3)
Non present in the panel			
Income Fraction 1	-0.34***		
Income Fraction 2	-0.31***		
Income Fraction 3	-0.26***		
Log of income at t		0.11***	
Income at t			0.00***
Income squared at t			-0.00**
Male	-0.09***	-0.09***	-0.08***
age of individual	0.18***	0.18***	0.18***
Greece	0.06	-0.43***	-0.06
Spain	0.34***	-0.12	0.24***
Portugal	-0.12***	-0.54***	-0.18***
Fraction of youth income at t	0.46***	0.50***	0.50***
Tertiary education	0.02	0.06	0.07
Secondary education	-0.07**	-0.05	-0.04
Single with children	-0.01	0.04	0.02
Couple with children	-0.07*	-0.05	-0.06
Good health	-0.04	-0.04	-0.03
Good social life at t	0.02	0.02	0.03
Member of club or organization at t	-0.06	-0.04	-0.04
Good social relationship at t	-0.11***	-0.12***	-0.12***
Living in a good environment at t	-0.17***	-0.18***	-0.19***
House crowded at t	0.05	0.13	0.15
Log of time	-0.70***	-0.72***	-0.72***
Constant	-4.73***	-6.28***	-5.17***
Log Likelihood	-23,854	-23,824	-23,983

Number of observations 45,056, Standard errors adjusted for 13,498 clusters

* : $p < 0.1$; ** : $p < 0.05$; *** : $p < 0.01$

The figure 5 and 6 plots the predicted probability to leave home poor and non-poor (respectively) against the categorical income measure used in the regression. It confirms the analysis of the sample selection model, showing a decrease in probability to leave home poor as the income increase, whereas an increase in probability to leave home non-poor as the income at t increase. However, according with the previous literature (i.e. Manacorda and Moretti 2006) youths from better-off family (in my sample with income

above 150% of the median) are less likely to leave home.

Figure 5: Predicted probability to be poor after leaving home plotting on categorical income measure

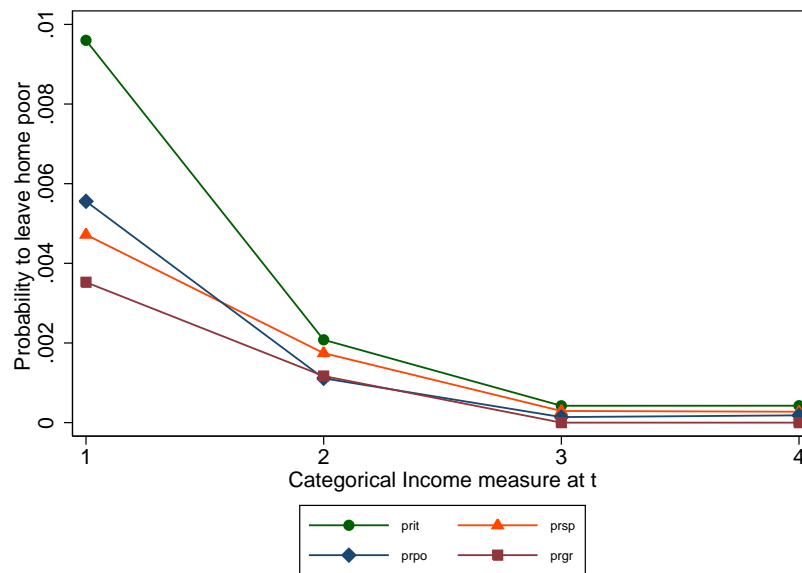
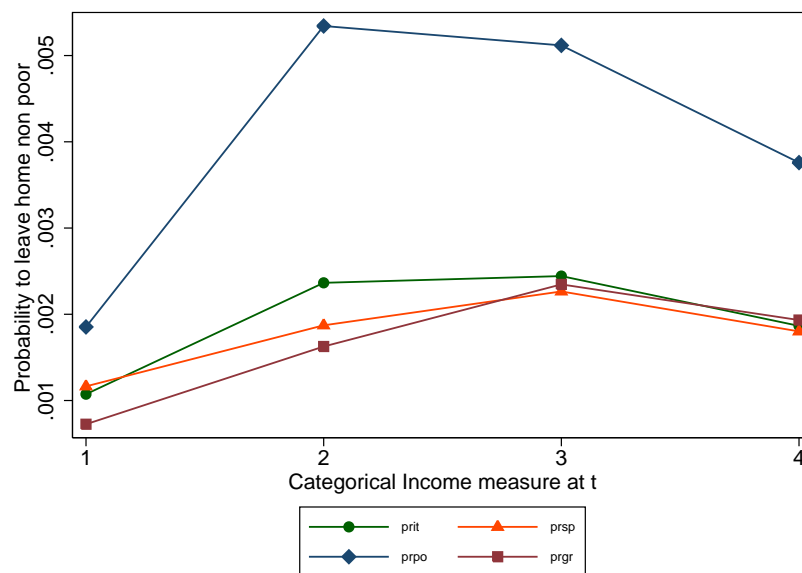


Figure 6: Predicted probability to be non poor after leaving home plotting on categorical income measure at t



6 Conclusion

In Southern European Countries there is a negative association between parental income and leaving home as part of a couple, in other words the poorer the family of origin is, the less likely is youth to leave home to a partner. The youth stays at home longer but the risk of poverty is higher than the other age group, in fact I find a positive sample selection bias estimating the Heckman probit where the outcome equation is the probability to be poor after leaving home and the selection equation is the probability to leave home as a part of a couple.

The model shows that the economic status of family of origin has a strong impact on the probability to be poor at $t + 1$, the persistence of poverty seems to be stronger in Spain respect to the other SEC even if testing the differences among SEC I do not find any significative ones.

The competing risk model shows that time matters: as the time pass by the youth is more likely to leave home (if non-poor) and less likely to drop out the panel. There is no association between time and leaving home poor.

The control variables seem to show a gender effect on the probability to leave home: female are more likely to leave, but they are as likely as the male to be poor.

Southern European countries show a similar patterns of persistence of poverty. The differences in the predicted probability to be poor after leaving home (either in the Heckman and in the Competing Risk model) are not statistically significant.

I could conclude saying that youth poverty is an issue as well as child poverty so should be studied separately from child poverty. Young people stay at home (in a condition of dependence) longer in order to avoid poverty after leaving home. Policies could help them to cross the bridge towards

the creation of their own family because staying at home longer could have negative consequence on, for instance, fertility behaviour (it is well know the low fertility rate that southern European countries nowadays are facing).

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