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**Working and Studying:
What Explains Youngsters Decisions?**

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Abstract

During the last decades, major changes have occurred in youth labour markets and it has become harder for young people who have finished their secondary education to find a job. This study aims at identifying the factors behind individuals' decisions in their transition from high school, in Spain and in the United Kingdom. To do so, we have modelled a bivariate probit to the choices of studying and working. The propensity for unemployment and the educational level of the reference person in the household are the major factors that influence these decisions.

Keywords: *Transition from school, bivariate probit, youth unemployment, Spain, United Kingdom*

JEL: C25, I20, J20

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1 Introduction

Poor job perspectives faced by young people are one of the most serious labour market problems in the 90s. Authors such as White and Smith (1994) and Ryan and Büchtemann (1996) have tried to explain why the youth unemployment rate is so high. Several causes have been pointed out, namely the enlargement of the relative size of the youth cohort, the experimentation period associated with the school-to-work transition and the reduction of job offers in sectors in which young people are used to working. The idea is that none of these aspects can, by itself, explain the unemployment of youngsters, but their interaction is associated with the high youth unemployment rate, justifying their lower probability of finding a job. At this point a question emerges: can this absence of job perspectives influence school leavers' decisions on continuing or not continuing at school?

Several studies have analysed the choices made by school leavers at the end of compulsory schooling. In fact, at this particular point in time young people have to opt between staying on or leaving the educational system. Micklewright (1989) studied the probability of leaving school at the minimum age in Britain, that is, at sixteen. From a simple form logit, with a binary dependent variable for continuing or not continuing at school, he concluded that not only the family background, but also the type of school and the academic ability of teenagers, have an important impact on these choice probabilities.

Recent changes in the labour market have enlarged the choices set faced by school leavers. Participating in training schemes and continuing in education are possible decisions which have been gaining many adepts. Thus, it is more appropriate to talk broadly about the transition from school instead of referring strictly to the school-to-work transition. Andrews and Bradley (1997) added categories to the dependent variable (school leavers choice at the end of compulsory schooling), to study a "new" set of choices. They modelled the first destination from school, combining it with training demand in the United Kingdom. A multinomial logit model was thus estimated, instead of a binomial logit, to accommodate six possible choices: non-vocational continuing education, vocational continuing education, youth training, employment with on-the-job training, employment with general-skills training and unemployment. It was possible to conclude that the transition from school is determined by local labour market conditions, by school characteristics and individual's characteristics. Young people who have studied in larger schools, who have lower academic performance, and who expect to have lower

earnings, are more likely to leave the educational system.

Another work studying the first destinations of school leavers was presented by Murphy and Shuttleworth (1997). They distinguished six destinations: employment, youth training programme schemes, unemployment, higher education, further education and other inactivity. The nested logit estimates obtained suggest that, in Northern Ireland, there is a strong relationship between school qualifications and religion on one hand, and the choices made by school leavers on the other hand.

The present study concentrates on the choices made by school leavers, not at the end of compulsory schooling, but when they finish high school. In fact, nowadays individuals tend to spend more and more time at school and the number of students who conclude high school is rising (OCDE, 1997). At the same time, the most recent discussion about wage inequalities is centred on the difference between the earnings of those who get a university degree and the earnings of those who just finish the secondary school (Levy, 1995; Katz and Murphy, 1992).

What are the possible reasons behind an individual's decision to go to university? Is it a possible way to postpone his/her entry into the labour market, in order to avoid becoming unemployed, if that is a highly probable outcome? What is the role of the socio-economic background on working and studying decisions?

To answer these questions, we have applied a bivariate probit model to the choices made by school leavers in their transition from school, at the end of secondary education¹. Modelling two different equations for the decisions of studying and working enables us to analyse Spain and the United Kingdom in a comparative perspective, which, in our opinion, makes the study more instructive and provides additional evidence about the way different economic backgrounds and unemployment experiences could lead to different school-leavers choices. In fact, these cross-countries comparisons have remained unexplored by previous studies.

The empirical work uses standardized cross-section information about Spain (1993) and the United Kingdom (1989), provided by the Luxembourg Employment Study (LES) micro data base². The analysis is not affected by the fact that samples referring to different years are involved. Indeed, while Spain is experiencing a boom, there is a recession in the United Kingdom, that is, each country is on a different phase of the economic cycle. As both countries

¹Throughout this study, school leavers should be taken as meaning the individuals who finished high school.

²The LES project is a data base which aims at providing standardized and harmonized information useful for longitudinal comparisons of labour markets. It is composed of micro data sets, obtained from labour force surveys from fourteen countries.

have similar patterns regarding unemployment and activity rates (OECD, 1997: p. 191), the contrast between them could also be conclusive. In fact, our proposal is not only to quantify the effects of the independent variables on choice probabilities, but also to determine their direction and their relative importance. Results have to be interpreted in a relative way.

In Spain, the rise of the unemployment rate among young people has been very strong and persistent. Youngsters remain dependant for a long time on their parents' economic support, spending more years in the educational system. Working and studying at the same time is not common among Spanish youth. The British experience is different. Its unemployment rate is much lower; people tend to enter the labour market earlier; and youngsters usually study and work at the same time. Comparison of these two countries may provide interesting information about relationships between the unemployment rate of a country, its social and economic background and the options made by its youth.

In Section 2 the choice concerning the countries studied is justified. Sections 3 and 4 present the empirical model and the interpretation of the estimation results, respectively. Finally, some conclusions of the study are presented.

2 Some contrasts between Spain and the United Kingdom

During the 80s, unemployment rates increased substantially in industrialized countries. The persistence of these high unemployment levels made the situation in Europe more dramatic than in other countries. Obviously, there were several differences among the European Community nations. Neither were all economies affected in the same way, nor were the effects of high unemployment rates felt equally by all age groups.

Spain is one of the most affected countries. The factors behind this situation, which is sometimes called the "Spanish disease", have been found in recent labour market evolution. The 60s and 70s witnessed a significant reduction in the Spanish employment rate, partially caused by job destruction that occurred in agricultural activity. On the other hand, governments have faced an exceptional increase in labour supply, brought about by a higher female participation rate, by the end of emigration flows and by the fact that the Spanish babyboom had been slower and longer compared to other countries.

The most relevant aspect of Spanish unemployment is that it falls upon two particular

groups - youth and women - which partly justifies our decision to study school leavers' choices in this country.

Although suffering from the unemployment disease too, the United Kingdom has experienced lower unemployment rates. Table 1 compares the British youth unemployment rate (10%) with the higher Spanish one (43.3%). We can see that young people face higher unemployment rates than the population as a whole (7.3% for the United Kingdom and 22% for Spain). Table 1 also shows that the British unemployment rate is higher for male than for female youngsters (10.8% for males against 9.1% for females). It is exactly the opposite of what happens in Spain.

Table 1

Unemployment rates by age, sex and country (%)³

Age	15-24			25-34	35-44	45-54	55-64	65+	All ages		
	M	F	T	T	T	T	T	T	M	F	T
Spain	39.9	47.7	43.3	26.3	16.2	13.4	11.4	3.2	18.6	28.6	22.0
UK	10.8	9.1	10.0	7.8	5.0	5.5	7.7	10.4	7.4	7.1	7.3

Source: LES micro data base. Note: M - male; F - female; T - total.

The qualitative inadequacy of the British schooling system has been pointed out as one of the most important problems in the United Kingdom. It has also been mentioned that firms provide some specific training instead of general training. So, there is a lack of intermediate skills. Thus, since 1979, the United Kingdom government has been introducing schemes with the purpose of making the transition from school to work easier⁴. A similar link between school and the labour market was established in Spain by apprenticeship and training contracts. The former were recently abolished and the latter were substituted by the new apprenticeship contracts⁵, which are a mixture of training and working programmes.

The pattern of transition from school is apparently another difference between both countries. If we observe the number of youngsters who are studying (in every educational level), we conclude that this indicator has been increasing in both countries, but the behaviour patterns are not similar. In the decade between 1984 and 1994, the share of Spanish aged 18 who were in the educational system increased from 49.3% to 64.3%; for the British, it just increased from

³The unemployment rates are computed as the number of unemployed persons in each group as a percentage of the labour force in the group.

⁴Nowadays, every British youngster without a job, can improve his/her knowledge via Youth Training (YT).

⁵This is the way Alba-Ramirez (1996) designated the "Contratos de aprendizaje".

26.7% to 31.7% (Blanchflower and Freeman, 1997: p. 22). If we consider youngsters aged 22, the differences between these two countries are even stronger. In Spain, the share of young men aged 22 who remained in the educational system increased from 18.5% to 34.2%, whereas in the United Kingdom it increased slightly, from a lower 11.3% to 12.8% (Blanchflower and Freeman, 1997: p. 22).

The United Kingdom has one of the lowest proportions of people at school. Indeed, more than half of the British leave school at sixteen (White and Smith, 1994: 108). In spite of having similar enrollment rates (62.9% in Spain and 65.9 in the United Kingdom, according to OECD, 1998), it is important to note that studying and working at the same time is more common in Britain than in Spain. The differences are greater when young males aged 18 are considered (Blanchflower and Freeman, 1997: p. 23).

This study searches for the determinants of the contrast across countries in the profile of transition from school. The following questions will be addressed: Why is the proportion of youth studying full-time higher in Spain than it is in the United Kingdom? Are these differences just due to the cultural gap between the two countries? Or, do we have to consider other factors such as the probability of being unemployed and the influence of social and economic background? Are the gender differences a relevant aspect in the analysis of the choices?

3 Modelling the choices of school leavers: data and empirical specification

The major point of our analysis is to study the two choices made by school leavers when they finish high school. As they could decide to go on studying or not, and working or not, we find four possible pairs of decisions: studying and not working, studying and working, not studying and working, not studying and not working. Applying these pairs of choices to our sub-sample, our expectations were confirmed.⁶ From table C1 we can see that studying and not working is the most frequent situation among Spanish youth. In fact, about 90% of Spanish youngsters choose to stay in the educational system, without having any job. The same is not true for the United Kingdom. There, studying and working at the same time is the most usual decision (37%). Those who decide just work are also in a large proportion (35%), but just studying does

⁶See appendix A for additional details about the data and the sample, and appendix C for descriptive statistics.

not appear as usual as in Spain.

Doing a similar analysis, but now by gender, an immediate conclusion emerges: in Spain, there are no differences between men and women as regards the decisions youngsters make at the end of secondary education. The information in table C2 shows that the relative importance of each pair of decisions is the same for males and females. Again, the United Kingdom presents a different situation. It is more common to find a British man working and studying at the same time, than a woman (see table C3).

A bivariate probit model has been applied, a method used for analysing two quantal variables, in which two equations are considered, one for each choice: studying and working. Each individual is classified with respect to these dichotomous categories.

The model specification is

$$\begin{aligned}
 y_{i1}^* &= \beta_1' x_{i1} + \varepsilon_{i1}, & y_{i1} &= 1 \text{ if } y_{i1}^* > 0, 0 \text{ otherwise,} \\
 y_{i2}^* &= \beta_2' x_{i2} + \varepsilon_{i2}, & y_{i2} &= 1 \text{ if } y_{i2}^* > 0, 0 \text{ otherwise,} \\
 E(\varepsilon_{i1}) &= E(\varepsilon_{i2}) = 0, \\
 Var(\varepsilon_{i1}) &= Var(\varepsilon_{i2}) = 1, \\
 Cov(\varepsilon_{i1}, \varepsilon_{i2}) &= \rho, \\
 (\varepsilon_1, \varepsilon_2) &\sim N_2(0, 0, 1, 1, \rho),
 \end{aligned}$$

where y_{i1}^* and y_{i2}^* denotes the latent variables, y_{i1} and y_{i2} denotes binary choice variables to study and to work, respectively. x_{i1} and x_{i2} are vectors, one for each decision, which contain the explanatory variables that may affect these decisions. β_1' and β_2' are the coefficients we intend to estimate. The symbol N_2 means a bivariate normal distribution.

In our attempt to answer the questions set out in this section, we will concentrate on some specific groups of explanatory variables⁷: gender, propensity for unemployment, social background and economic background.

Some of the statistics presented before suggest the school leavers' gender could determine different choice probabilities; that is why we have included a variable called GEND. We also consider family aspects. Several variables are intended to be proxies for individual's economic background: the proportion of employed people in the household (PEMP); permanency of job contract (R-TEMP, taking the value 1 if the reference person has a temporary job contract); and labour force status of the reference person in the household (R-INACT takes the value 1 if the

⁷All the used variables are listed on appendix B.

reference person is inactive, and R-UNEMP takes the value 1 if he/she is unemployed). Other variables are intended to be proxies for individuals' social background: the educational level of the reference person (represented by R-SECO, which takes the value 1 if he/she finished high school, and R-HIGH, which is 1 if he/she has a university degree) as well as his/her occupation (R-OCCU takes the value 1 if he/she is white collar). The idea present here is that a high parents' education is associated with a higher propensity to stay in the educational system. Indeed, the decisions made by school leavers at the end of secondary education and their probability of becoming unemployed are strongly influenced by the economic situation of each individual's household. We only used information about the reference person, instead of parent variables, because in the latter situation we will obtain two coefficients, one for each parent, and its interpretation could be misleading.

Our regression explanatory variables also includes the propensity for unemployment of an individual who has just finished secondary education (PUNE). This probability is faced at the moment in which an individual makes his/her decision; it reflects actual market conditions. Since this variable could not be directly obtained, a binomial probit was estimated for the "individual's propensity for unemployment". Therefore this variable will deserve a detailed explanation in the section below.

Almost all the explanatory variables are dichotomic, and the modal category was considered as the reference category. To interpret continuous variables' coefficients, their mean value is considered. Thus, a man with a propensity to be unemployed that equals its mean, whose reference person in the household is a blue collar and has less than the secondary level of education constitutes the base category.

4 Are Spanish youngsters studying more and working less than British ones?

Let us begin with the estimation of the propensity for unemployment. Lack of experience, lack of education/training and individual characteristics (like self confidence, reservation wage and effort devoted to search) are relevant variables in explaining this propensity. As our sample individuals are in equal circumstances as regards experience and education/training, a simple model was constructed considering individual characteristics. Some variables referring to social and economic background are used as proxies to these aspects. For the estimation of the

propensity to unemployment for those who just had studied till secondary level the sample consist of individuals under 27 years old, in labour force and still dependent on their parents⁸.

Table 2

Estimation results for propensity for unemployment⁹

	Spain		United Kingdom	
	Coefficients (t-Statistics)	Marginal effects	Coefficients (t-Statistics)	Marginal effects
GEND	0.330 (4.812)	0.011	-0.277 (-2.349)	-0.018
PEMP	-5.874 (-24.966)	-0.272	-4.940 (-14.514)	-0.246
R-UNEMP	-1.147 (-7.806)	-0.158	-1.466 (-5.212)	-0.263
R-SELF	-0.064 (-0.670)	-0.003	0.123 (0.864)	0.005
R-TEMP	0.115 (0.696)	0.005	0.000 (0.000)	0.000
R-INACT	-1.040 (-11.320)	-0.131	-1.611 (-7.689)	-0.313
CONSTANT	2.075 (17.450)	-	2.039 (8.825)	-
Predicted	0.475		0.166	
Log-likelihood	-868.853		-298.849	
$\chi^2_{(6)}$	1012.48		383.57	

Source: LES micro data base

⁸On this regression we use two sub-samples, one for Spain and another for the United Kingdom, made up of 2,218 and 1,698 observations, respectively.

⁹These marginal effects were calculated for a modal individual as probability differences, when the regressors were dummy variables.

Table 2 reports the estimation results for propensity for unemployment, for both countries. The situation of the reference person in the labour market is among the main factors which influence unemployment propensity in both countries. Thus, an inactive or unemployed reference person is associated with a lower probability of being unemployed. It seems that youngsters opt to work “at any price” to assure household survival. The proportion of employed persons in the household also influences negatively the unemployment propensity, representing the better conditions faced by his/her household members in the labour market. What makes the difference between the two countries is gender. In Spain, women’s propensity for being unemployed is higher than men’s propensity. In the United Kingdom, exactly the opposite occurs.

The next step uses these regression estimates to predict the unemployment propensities for each individual in our sub-sample of school leavers. The bivariate regressions for both countries (tables 3 and 4 bellow) point in the same direction as regards the correlation between the two choices. Studying and working are negatively correlated, but this correlation is higher in Spain, where the estimated ρ is -0.861.

The unemployment propensity perceived by the youngsters is positively correlated with the decision of studying, but negatively correlated to the working decision. However, a greater sensitivity to this probability of being unemployed is shown by the British results. As we have already seen, the Spanish youth have a high probability of entering the unemployment pool. So, changes in the unemployment rate seem to be disregarded when they have to decide what they are going to do after high school. The most important effect can be found in the Spanish regression for the youngsters who decide not to study. In this case, a 1% increase in the propensity for unemployment implies a reduction of 1.7% on the probability of having a job.

While gender is not significant in the Spanish regression, in the United Kingdom it is. The probability of British women continuing their studies is lower by about 11 percentage points, than for British men. Although less than the previous effect, women are associated with a lower probability of working. Even women who decide to study after high school face a lower probability of working at the same time.

Table 3

Bivariate probit estimation results, for Spain

Studying	Coefficient	(t-stat.)	Marginal effects		
			unconditional	(for those who work)	(for those who do not work)
PUNE	1.231	(12.207)	0.210	-0.325	0.320
GEND	-0.044	(-0.725)	-0.008	0.023	-0.001
R-OCCU	0.416	(5.200)	0.053	0.118	0.044
R-SECO	0.187	(1.798)	0.028	0.044	0.023
R-HIGH	0.943	(5.518)	0.084	0.220	0.066
CONST	0.580	(8.815)	-	-	-
Working	Coefficient	(t-stat.)	Marginal effects		
			unconditional	(for those who study)	(for those who do not study)
PUNE	-2.703	(-18.536)	-0.163	-0.031	-1.710
GEND	0.133	(1.885)	0.009	0.002	0.053
R-OCCU	-0.193	(-2.197)	-0.010	0.001	0.054
R-SECO	-0.096	(-0.804)	-0.005	0.000	0.016
R-HIGH	-0.643	(-4.156)	-0.021	-0.002	0.023
CONST	-0.353	(-4.934)	-	-	-
ρ	-0.861 ($\sigma = 0.005$)				
Log-likelihood	-1525.337				
$\chi^2_{(10)}$	636.12				

Source: LES micro data base

The socio-economic level of the household, represented here by the occupation and the education level of the reference person, has a positive effect on the probability of studying and reduces the probability of working. In Spain, living in a household where the reference person has a university degree decreases the probability of working. Instead, the impact of a high school diploma is not statistically different from that of lower levels of education. In the United Kingdom, being in the household of a white collar reference person does not change the probability of studying or the probability of working, with the respect to the situation of blue collar.

Table 4

Bivariate probit estimation results, for The United Kingdom

Studying	Coefficient	(t-stat.)	Marginal effects		
			unconditional	(for those who work)	(for those who do not work)
PUNE	1.098	(8.092)	0.431	0.257	0.690
GEND	-0.267	(-4.433)	-0.106	-0.119	-0.114
R-OCCU	0.053	(0.807)	0.021	0.019	0.013
R-SECO	0.388	(5.244)	0.144	0.137	0.087
R-HIGH	0.561	(5.970)	0.199	0.183	0.109
CONST	-0.017	(-0.313)	-	-	-
Working	Coefficient	t-stat.	Marginal effects		
			unconditional	(for those who study)	(for those who do not study)
PUNE	-3.823	(-23.459)	-0.911	-1.071	-0.658
GEND	-0.201	(-2.721)	-0.053	-0.083	-0.051
R-OCCU	-0.044	(-0.534)	-0.011	-0.010	-0.005
R-SECO	-0.287	(-3.221)	-0.078	-0.071	-0.035
R-HIGH	-0.567	(-5.305)	-0.172	-0.164	-0.091
CONST	1.702	(22.208)	-	-	-

ρ	-0.337 ($\sigma = 0.041$)
Log-likelihood	-1900.170
$\chi^2_{(10)}$	835.61

Source: LES micro data base

It is the magnitude of the socio-economic effects that determines the differences between these two countries. When the reference person has an undergraduate degree, those who decide to work are more stimulated to study at the same time. Thus, in Spain, the probability of studying for sons/daughters of graduates is 22 percentage points higher than for those who are in families with a less educated reference person. On the other hand, those who go on studying have a lower probability of working, if their parents have a high educational level. In the United Kingdom, this effect is even strongly observed, although it is usual to study and work at the same time. We also tested whether the dummies on the educational level are statistically different from each other. The test results indicate that their impact is indeed different. The

Wald test enables us to say that graduates' sons/daughters are less likely to work than those whose parents just have secondary education, in both countries. In Spain this difference is also relevant for the decision to study.

Not all the possible influences can be captured by the variables available in our dataset. Looking at the constant term for the Spanish regression, it seems that there is another factor that influences, in a positive way, the decision about studying. Possibly, cultural background and other incentives, such as educational policy, are represented here.

Table 5

Probabilities of choices						
	Spain			United Kingdom		
	Not Working	Working	Total	Not Working	Working	Total
Not Studying	0.073	0.023	0.096	0.036	0.393	0.429
Studying	0.901	0.003	0.904	0.119	0.452	0.571
Total	0.974	0.026	1	0.155	0.845	1

Source: LES micro data base

Concentrate on table 5 which reports the estimated probabilities of choices. In Spain, it is almost certain that the choice of youngsters is study and not work. Their low probability of working is also relevant. In the United Kingdom, there is a higher probability of choosing to work. It is usual to study and work at the same time and to just work. The probability of just studying is only 12%, for the British.

Finally, in order to make a direct cross-country comparison, we estimate the bivariate probit, using the joint sample including the observations for both countries. The results presented on table 6 lead us to the conclusion that the effect of the propensity for unemployment upon the probability of studying is not statistically different between the two countries. But the effect of this regressor on the decision to work is different and greater in the United Kingdom. When British youngsters who are studying decide to work, they are more affected by the propensity for unemployment changes. The differences between women's decisions constitute another aspect to mention. As regards the socio-economic background, the high educational level of the reference person reveals a more significant effect on the British studying decision.

Table 6Bivariate probit estimation results, for the joint sample (Spain and the United) Kingdom¹⁰

	Studying		Working	
	Coefficient	(t-stat.)	Coefficient	(t-stat.)
COUNTRY	-0.633	(-7.305)	1.996	(18.964)
PUNE	1.201	(11.738)	-2.834	(-17.626)
C*PUNE	-0.108	(-0.644)	-0.864	(-3.855)
GEND	-0.039	(-0.629)	0.147	(1.945)
C*GEND	-0.223	(-2.606)	-0.338	(-3.250)
OCCU	0.431	(5.243)	-0.178	(-1.927)
C*R-OCCU	-0.376	(-3.585)	0.148	(1.210)
R-SECO	0.186	(1.752)	-0.089	(-0.706)
C*R-SECO	0.198	(1.534)	-0.168	(-1.101)
R-HIGH	0.936	(5.332)	-0.668	(-4.065)
C*R-HIGH	-0.376	(-1.891)	0.135	(0.691)
CONST.	0.604	(8.990)	-0.360	(-4.783)
ρ	-0.627 ($\sigma = 0.015$)			
Log-likelihood	-3486.044			
$\chi^2_{(22)}$	4447.25			

Source: LES micro data base

5 Concluding comments

This study presents results from the estimates of a bivariate probit model applied to the school leavers' choices at the end of secondary educational level, in Spain and the United Kingdom. Spanish youngsters tend to stay longer in the educational system, and, usually, do not work during this period. British, on average, enter the labour market sooner. For them it is common to work and study at the same time.

The Spanish youth, facing a higher unemployment rate, realise they will have difficulties in finding a job at the end of secondary education. Their choice to remain in the schooling system

¹⁰The explanatory variables include interaction terms between the dummy variable for the country (C) and the original variable. Country and C takes the value 1 when the country is the United Kingdom.

represents a way of accumulating human capital, but is also a way of postponing unemployment.

For those who decide to go on studying, the choice between just working and working while studying, is mainly affected by a range of socio-economic background variables. At this level, country differences are also due to the cultural gap. Indeed, in Anglo-Saxon countries, it is usual for youngsters to work and study at the same time.

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Appendix A: The data

Database The Luxembourg Employment Study (LES) micro data base is the data source we have used on this study. The United Kingdom data came from the “National labour force survey” made between February and May 1989. It is a cross-section sample with 166,463 observations which was picked from the resident population (all civilian persons). The “Encuesta da poblacion activa” provides the information about Spain used here. The cross section sample is made up of 190,708 observations and it was obtained from the resident population (all persons in private households), during the second quarter of 1993.¹¹

Sampling To produce our estimates we did not use the whole set of observations available for each country. Our sub-sample includes only people who are between 17 and 20 years old, and have already concluded secondary education level. Rather than being a year cohort, it is an event cohort. Thus, for Spain we used 4,266 observations against 1,883 considered for the United Kingdom.

Appendix B: The independent variable definitions

Table B1

Independent variables		
variable	definition	categories
GEND	gender of each individual	1=female
PEMP	proportion of employed in household	

Note: All dummy variables are zero for “others” category.

¹¹For additional information see Förster, Helliesen and Kolberg (1996).

Table B1(cont.)

Independent variables

variable	definition	categories
R-HIGH	educational level of	1=higher (tertiary)
R-SECO	reference person in household	1=secondary
R-SELF	professional status of reference person	1=self-employed
R-TEMP	permanency of job contract of reference person	1-temporary job/work contract
R-OCCU	occupation of reference person	1=employee white collar
R-UNEMP	labour force status of	1=unemployed
R-INACT	reference person	1=inactive
PUNE	propensity for unemployment for those who just have studied till secondary level	

Note: All dummy variables are zero for “others” category.

Appendix C: Descriptive statistics for the sub-sample considered**Table C1**

Proportion of individuals for each pair of decisions

	Spain			United Kingdom		
	Not Working	Working	Total	Not Working	Working	Total
Not Studying	0.04	0.04	0.08	0.06	0.35	0.41
Studying	0.90	0.02	0.92	0.22	0.37	0.59
Total	0.94	0.06	1	0.28	0.72	1

Source: LES micro data base

Table C2

Proportion of individuals for each pair of decisions, by gender (Spain)

	Not working		Working		Total
	Studying	Not Studying	Studying	Not Studying	
Males	0.90	0.04	0.02	0.04	1
Females	0.90	0.04	0.02	0.04	1

Source: LES micro data base

Table C3

Proportion of individuals for each pair of decisions, by gender (United Kingdom)

	Not working		Working		Total
	Studying	Not Studying	Studying	Not Studying	
Males	0.21	0.05	0.43	0.31	1
Females	0.23	0.07	0.31	0.39	1

Source: LES micro data base

Table C4

Characteristics of the mean unemployed, who just have secondary educational level

	Spain		United Kingdom	
	Unemployed	Employed	Unemployed	Employed
GEND	0.522	0.423	0.371	0.417
PEMP	0.255	0.529	0.397	0.795
UPEMP-R	0.083	0.062	0.119	0.039
R-SELF	0.168	0.197	0.196	0.184
R-TEMP	0.036	0.045	0.007	0.010
R-INACT	0.316	0.306	0.140	0.102

Source: LES micro data base

Table C5

Characterization of the choices of the school leavers (Spain)

	Studying	Not studying	Studying	Not studying
	Not working	Working	Working	Not working
PUNE	0.613	0.199	0.205	0.599
GEND	0.561	0.534	0.538	0.552
R-OCCU	0.370	0.169	0.363	0.116
R-SECO	0.119	0.107	0.100	0.058
R-HIGH	0.186	0.011	0.086	0.017

Source: LES micro data base

Table C6

Characterization of the choices of the school leavers (United Kingdom)

	Studying	Not studying	Studying	Not studying
	Not working	Working	Working	Not working
PUNE	0.408	0.074	0.105	0.431
GEND	0.482	0.514	0.375	0.538
R-OCCU	0.453	0.401	0.423	0.274
R-SECO	0.338	0.189	0.233	0.170
R-HIGH	0.281	0.111	0.159	0.075

Source: LES micro data base