

THE PROCESS OF FINDING THE FIRST 'GOOD' JOB: THE CASE OF SPAIN ^(E)

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ABSTRACT

This paper aims at providing evidence on youth transitions from education to significant jobs using data from the EULFS 2000 *ad hoc* module for Spain. Results show that the educational investment (level and field of education) has a larger return in terms of achievement of a first significant job. Strong differences between men and women arise: for the latter the educational attainment is a stronger advantage for finding a job, whereas for the former both human capital and family background is less important than for women. Finally, results corroborate the important role of the economic cycle on youth employment.

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1. INTRODUCTION

Unemployment has been traditionally seen as the most important problem of the labour market in many European countries, but the recent economic boost has transferred the concern of policy-makers towards the quantity and quality of employment. Both features are particularly linked to youth labour markets and, specially, to the Spanish youth, which has additionally gone throughout an intense educational expansion.

The difficulties for finding a job and, especially, for finding a first "good" job need to be assessed and determining which levels and fields of education give a good signal in the labour market or what factors explain initial success is crucial. Besides, it would be interesting to know for how long the human capital investments represent an advantage for first job seekers.

In this paper we intend to contribute to the evidence about this question. We cover the matter of the time needed to achieve a first "good" job throughout the nineties, for which evidence in Spain is not very large (Lassibille et al. (2001), Fernández (2003)).

Although we focus on the characteristics of young people which improve the achievement of a first "good" job, the concept of job quality is not clear. We assume the definition stemming from EUROSTAT in the LFS ad hoc module: a "good" (namely, significant) job is tenured more than 6 months with a working week over 20 hours. This definition is very relevant for Spain, where temporary contracts are so frequent among both young and adult workers. The minimum hours working week is in accordance with one of the ten guidelines the European Commission¹ (2001)) has defined, together with other features such as equal opportunities for men and women, access to jobs, specifically the effective transition of young people to active life.

Therefore, this paper studies the time taken to obtain a first 'good' job and analyses the impact of several human capital indicators using duration models. This enables the effect of different human capital indicators to be studied over time rather than at a specific point while retaining a range of individual and household determinants for the employment probability. The study has been for the whole decade of the nineties, and this enables us to estimate the effect of changes in the business cycle on the probability of achieving a good job. Kaplan-Meier plots of the survivor function are compared and estimates of the Cox proportional hazard model are produced.

The contents of the paper are displayed as follows: first, a review of theoretical approaches to the study of school-to-work transitions, together with the econometric specification (Section 2). Afterwards, the institutional framework is presented (Section 3),

¹ Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the regions: Employment and Social policies: a framework for investing in quality. Brussels, 20.6.2001, COM (2001) 313 final.

followed by the presentation of the data-set (Section 4). Section 5 focuses on the report of the results of an econometric model for estimating the hazard of achieving a first “good” job. Finally, Section 6 concludes.

2. THEORETICAL FRAMEWORK, ECONOMETRIC SPECIFICATION

The link between education or human capital and labour market outcomes is one of the most fruitful fields in labour economics. Several theories have dealt with the school-to-work transition process: the most conventional and well known one is the human capital theory (Becker, 1964) that initially aimed at explaining the relation between education and income distribution. According to the human capital theory, more qualified workers are more productive and, therefore, more employable.

Some critics to human capital theory disagree with Becker on the mechanism explaining the link between education and wages, and consider education certificates as productivity signals the employers may use in their recruiting processes to select the more able workers. One of the most well-known versions of this critical models is the theory of job competition (Thurow, 1983) and the concept of “job queues”. Job applicants are ranked in queues according to the expected training costs for the employers. Due to demand constrains, only the best ranked workers will achieve a position in the labour market and the rest will be consigned to non-employment.

In order to approach the probability of achieving a "significant" job versus a non "significant" one Albert et al (2003) adopted a multinomial (stationary) model. The econometric model used here is a non parametric proportional hazards Cox model, which allows the researcher to dispense with the assumption of stationary probability without imposing any specific density function to the way in which time affects this probability. The Cox model specification stems from the standard general equation for defining the hazard rate (Greene (2002) or Castilla, 1998). The risk of achieving a “good” job has a time component ($q(t)$), but it also depends on a set of explanatory variables gathered in the function $\theta(x_{it})$, which follows an exponential function. Proportional hazard models rest on the assumption that the variation of the risk along time, defined by $q(t)$, is identical across individuals, as well as the effects of the explanatory variables of such function:

$$r(t, x) = r_{ix} = \theta(x_{it})q(t) = \exp(\beta x_{it})q(t)$$

where x_{it} represents the vector of explanatory variables introduced in the model. The values of these variables may change both between individuals (i) and across time (t) and account for observed heterogeneity. The effect of human capital is captured by using several dummy

variables related to education level and fields taking the same value in each time period². The likelihood function is as follows:

$$L_p = \prod_{i=1}^N \left[\frac{r(t_i, x_i)}{\sum_{j \geq 1} r(t_i, x_j)} \right]^{1 - c_i}$$

where $r(t_i, x_j)$ is the value of the hazard rate for the individual j at moment t_i , and t_i is the moment when the individual i either has experienced the relevant event or is censored. Besides, c_i is a dummy variable that takes value 1 when the interviewee i is censored, that is, when, at the end of the observation period (the Spring LFS 2000 interview), she has not achieved a significant job.

The relevant explanatory variables will be the following: gender, age when leaving education, level and field of education achieved, the regional employment yearly growth rate for young workers, the highest educational attainment of one of the parents and length of search periods (when the worker has looked for a job). The interpretation of coefficients in this kind of model is the same as in any hazard model: a significant and positive coefficient will mean a higher probability of finding a first significant job.

3. THE DATA SET: THE EULFS *AD HOC* MODULE IN 2000

The EULFS *ad hoc* module was implemented with the second quarter questionnaire of the 2000 EULFS and represents an end of the aforementioned limitations in other data bases. This data set has three main new features (Krogan and Müller, 2002): first of all, it is comparable across Europe, been launched in twenty European countries following *Eurostat* indications³. Secondly, it adds significant detail with respect to *educational attainment and careers* by providing measures of level and type (field) of education at leaving the educational system for the first time. Besides, the EULFS *ad hoc* module adds a *longitudinal perspective on individual employment careers* by providing measures of the incidence of job search periods, job search duration, duration of first job, and occupation of first job, which allow assessing some features of labour market dynamics at the early career stages.

² Although the investment on education might have changed throughout the period of observation, the fact that this survey explicitly asks about the situation when education was interrupted for the first time for at least one year means that the assumption of formal human capital keeping constant along the observational period is somehow realistic. The same applies to the family background measured through the parents' educational attainment.

³ Unfortunately it is not *strictly comparable*, since during the implementation of the survey some countries did not follow exactly the instructions from *Eurostat*. The evaluation of the implementation of the module (Ianelli, 2002b) shows that some countries have not used the right definitions of certain

The sample studied in the EULFS *ad hoc* module covers people aged 15 to 35 (16 to 35 in the Spanish case since the legal working age is 16) who have left continuous education for the first time in 1991 or afterwards. The main concepts to take into account are the following ones: “*leaving continuous education*” refers to both education and training, full-time or part-time and vocational and general courses which are abandoned for at least one year⁴. The *first significant job* is defined as a job that started after leaving continuous education, had a duration of, at least, 6 months, implied at least a 20 hours working week and was neither casual work nor training scheme.

The definitions of the concepts used in the survey are very important and may also bias results in certain countries. For instance, as Ianeli (2002a) points out, the extended use of fixed-term contracts with short duration (less than 6 months) among Spanish young people is quite usual (especially for those aged 16-24).

In this paper the selected sample consist on young between 16 to 35 years old in 2000 who had left continuos between 1991 and 1999⁵. The final sample is made up by 14.467 observations, of which 7.601 are males and 6.866 are females.

Table 1 describes the more relevant variables for the analysis. First of all, 60.2 % of those young who left education from 1991 to 1999 had achieved at least one significant job. The proportion is higher among men than among women. The stock of human capital is somehow different to other countries, with both low qualified and university graduates being quite frequent (Smyth, 2002). Women register a higher education attainment than men and there are also gender differentials on fields of education. As regards the distribution between vocational an general programmes, Spanish youth tend to prefer general to vocational training programmes. Finally, it is noticeable the extraordinary inter-generations change when comparing the education attainment of young people with their parents’.

The distribution by age is coherent with the one for education levels described above. Women leave the education system later than men do and there are more early leavers among males than among females. Finally, as for continuos job search after leaving school⁶, no

concepts or have not used the originally stated samples, so that comparability is not perfect. Nevertheless, Spain is one of the countries that have been most strict in the implementation of the survey.

⁴ Interruptions during less than a year are not considered. And interruptions due to (p)maternity, serious illness, military service or waiting for the diploma or certificate that allows to carry on further education are not considered as interruptions either.

⁵ The whole sample of 16 to 35 year-olds in 2000 is conformed by 152.374, 76.8% of which have not left school yet, while 13.2 % left school before 1991 and the remaining (9.9%) left school in 1991 or afterwards. That last group is asked about their trajectory in the labour market and it is the objective group of our study. Those who left school in 2000 have been dropped from the sample because they do not have enough time to find any job (333 observations). Those whose parents educational attainment is unknown (215 observations) have also been excluded from the sample.

⁶ The interviewees that had had at least one search period are asked to report the duration of the longest spell.

remarkable gender differences arise, and the distribution is quite polarised: around one in four school leavers have not looked for a job already, while nearly a half have looked for a job during one year or more.

Table 1. Description of variables including in the models

	All	Male	Female
Event: school leaver finds a significant job	0.592	0.633	0.546
Censored (in Spring 2000 no significant job had been found)	0.408	0.367	0.454
Youth employment growth rate	1.129	0.117	2.248
Men	0.525		
Woman	0.475		
Highest level of education or training successfully completed, when leaving education for the first time			
Primary	0.067	0.080	0.052
Lower secondary	0.298	0.350	0.240
Upper secondary	0.108	0.107	0.110
Lower vocational training	0.113	0.113	0.113
Upper vocational training	0.158	0.152	0.165
Short university programmes	0.113	0.078	0.151
Long university programmes	0.143	0.120	0.169
Field of education			
Basic programmes, Literacy and personal development	0.474	0.538	0.402
Teacher training and education science	0.026	0.009	0.045
Arts	0.017	0.017	0.018
Humanities, Social sciences, Journalism & information	0.040	0.024	0.057
Business and Administration	0.151	0.092	0.217
Law	0.030	0.021	0.040
Life and Physical sciences, Mathematics & statistics	0.017	0.016	0.018
Computing	0.020	0.026	0.014
Engineering and Engineering Trades	0.083	0.145	0.014
Manufacturing & production, Architecture & building	0.037	0.057	0.014
Agriculture, forestry and fishery, Veterinary	0.010	0.013	0.006
Health	0.052	0.019	0.088
Welfare and services (Social, Personal, Transport , Environmental protection and Security services)	0.039	0.018	0.062
Non specified	0.005	0.006	0.004
Highest level of education of one of the parents			
Primary	0.273	0.631	0.651
Lower secondary education	0.391	0.200	0.184
Upper secondary education	0.282	0.091	0.090
Higher education	0.053	0.077	0.075
Left age from school			
Age when leaving education: under 16	0.641	0.324	0.217
Age when leaving education: 16 to 20	0.193	0.395	0.387
Age when leaving education: 21 to 25	0.091	0.229	0.341
Age when leaving education: 26 and more	0.076	0.052	0.055
Continuous job search after leaving education			
No search for a job	0.245	0.258	0.232
Search period: one or two months	0.056	0.059	0.051
Search period: between 3 and 5 month	0.095	0.099	0.090
Search period: between 6 and 11 month	0.131	0.124	0.139
Search period: One year or more	0.473	0.460	0.488
N	14467	7601	6866

The Kaplan-Meier plots (not shown for the sake of brevity but available from the authors upon request) show that the net advantage of more qualified youth in terms of probability of achieving a significant job changes along with the time. The Log Rank Statistic confirms the different profiles across levels and fields of education, although some of them turn to be non significant in pairwise comparisons.

4. THE LABOUR MARKET OUTCOMES OF SCHOOL-LEAVERS: RESULTS OF THE ECONOMETRIC MODEL

In this section the main results of the proportional hazards model will be reported. The coefficients in the model will be interpreted in terms of increase (or decrease when negative) in the probability of succeeding in the labour market.

As regards independent variables, (x_{it}) , three different specifications have been estimated. They have a common set of variables and one human capital indicator variable that differentiates them. The common variables are: age when the individual left education, the search (and length of longest search period) of employment and, in order to capture business cycle factors, the regional employment growth rate for workers under 36 at the moment of leaving education has been included. The variables that vary across the models and indicate human capital are the highest level of education achieved by the respondent before interrupting education (Model I), the field of education (Model II) and the education attainment of the parents (Model III). With the three specifications we intend to respond to the strong correlation between these three variables, so that they are not included at the same time in the model.

The first most relevant result refers to gender differences: once observed heterogeneity is controlled for, men are more prone to achieve a significant job than women (this is, they tend to find one “good” job before women do). As regards the first indicator of human capital, educational attainment, although there is a progression in the employability of youth with education attainment, it seems to be more important for women than for men, being the coefficients for educational levels higher for the former.

Table 2. Cox model: hazard for finding a first significant job.

	All		Men		Women	
	B	Sign	B	Sign	B	Sign
Highest level of education or training successfully completed, when leaving education for the first time (Primary): MODEL I						
Lower secondary	0.459	*	0.363	*	0.688	*
Upper secondary	0.361	*	0.227	*	0.647	*
Lower vocational training	0.547	*	0.355	*	0.906	*
Upper vocational training	0.633	*	0.508	*	0.900	*
Short university programmes	0.621	*	0.470	*	0.922	*
Long university programmes	0.692	*	0.445	*	1.062	*
Field of education (Basic programmes, Literacy and numeracy and personal development) MODEL II						
Teacher training and education science	-0.017		-0.361	***	0.113	
Arts	0.150	***	0.112		0.202	
Human, Social Sciences, Journal, infor	0.032		-0.011		0.082	
Business and Administration	0.236	*	0.127		0.314	*
Law	0.186	*	-0.036		0.338	*
Life & Physical Sciences, Maths, Statist	0.069		-0.115		0.250	***
Computing	0.305	*	0.243	*	0.395	**
Engineering and Engineering Trades	0.259	*	0.220	*	0.349	*
Manufacturing & production, Architecture & building	0.299	*	0.239	*	0.434	***
Agriculture, forestry % fishery, Vet.	0.304	*	0.251	*	0.282	
Health	0.162	*	-0.025		0.254	*
Welfare and services (*)	0.242	*	0.043		0.352	*
Non specified	-0.179		-0.378	***	0.127	
Highest level of education of one of the parents (primary): MODEL III						
Lower secondary	0.086	*	0.119	***	0.038	
Upper secondary	0.093	***	0.075		0.097	***
Higher education	0.100	***	0.080		0.115	***
Rest of independent variables for MODEL I						
Sex: woman	-0.278	*				
Age when leaving education (ref: less than 16)						
From 16 to 20	0.432	*	0.430	*	0.434	*
From 21 to 25	0.611	*	0.656	*	0.565	*
From 26 and more	0.487	*	0.577	*	0.406	*
Continuous job search after leaving education (ref. no search)						
One or two months	0.909	*	0.762	*	1.111	*
between 3 and 5 months	0.400	*	0.230	*	0.628	*
between 6 and 11 months	0.053		-0.122	***	0.272	*
One year or more	-0.555	*	-0.659	*	-0.420	*
Youth employment growth rate	0.019	*	0.032	*	0.014	*
-2 log likelihood	150021.13		78079.29		60104.23	
Chi-squared	2914.58		1582.95		1378.48	
Degrees of freedom	15		14		14	
Significance	0.000		0.000		0.000	
Number of observations	14467		7601		6866	

(*) significant at 1% (**) significant at 5% and (***) significant at 10%.

(+) (Social, Personal, Transport, Environmental protection and Security services)

Source: EULFS *ad hoc* module, 2000.

More interesting gender differences arise across fields of study: to begin with, all the fields of specialization (which only apply to vocational training or university graduates) increase women's chances to find a "good job" or reduce the time they need to find one compared to those non-specialised young females, the ones that have studied either compulsory education or post-compulsory secondary general programmes. In the case of males not all the fields contribute significantly to improve employability, with Humanities, Social Sciences, Journalism and Information, Law and Physical Sciences, Mathematics, Physics, Statistics and Health showing no relevant help to get a first job compared to general programmes in secondary education. Maybe the most relevant difference is found in the Teacher Training and Education Science, which shows a positive impact on the hazard of finding a good job for women whereas the opposite holds true for men.

Educational attainment of the parents, which may be also seen as a way of human capital or a signal of productivity for potential employers, also seem to influence men and women in a different way: females whose parents are educated tend to get a good job more quickly than those whose parents are not qualified whereas in the case of men only those whose parents hold compulsory education are significantly more prone to get a good job than those whose parents are very low qualified. This could be interpreted as a different direction of the family background for males and females, so that in the case of young men it is related with "more demanding" youth and in the case of women it is related to either a more valuable employability signal or a demonstration of social networks and knowledge of the labour market.

As for the rest of explanatory variables in the model, age when leaving education is correlated with the education attainment and, once this is controlled for, the positive sign of the relevant coefficient may have several interpretations: on the one hand, it may mean that, given a level of education, spending more time on education is a good marketable signal. On the other hand it may indicate that the older the job seeker is the more actively she looks for a job and the more attention she pays to the market. Short search periods seem to be the best strategy in the achievement of a good job compared to no search at all. At the same time, long searches are related with a lower chance of getting a good job, or a longer necessary period for achieving it. The "punishing" effect of long search periods start at six months in the case of men and one year in the case of women. The economic cycle in the moment of leaving education, which has been approached through the regional youth employment growth rate in the moment of leaving school, shows a very significant positive effect, meaning that youngsters who leave the education system in an economic boost tend to succeed sooner than youth with the same features but entering the labour market in a recession.

5. CONCLUSIONS

The present work has focused on the analysis of the patterns of transition both to relatively stable jobs, which is an important count in the Spanish labour market, where temporary is so frequent. This has been addressed through a proportional hazards Cox model.

The well-known high youth employment elasticity to the business cycle is here corroborated for both men and women. The results show that education attainment increases the hazard of gaining employment, thus rising the probability of being in work for the first time at each point in the survey period. This confirms that the impression given by the earlier survivor functions was not due to the different characteristics of youth with different educational levels. The educational attainment is quite relevant, and university studies and upper vocational training provide the best signals in the labour market.

We have also detected the educational fields that enhance employability the most: Business and Administration, Computing, Health, Engineering and Engineering trades, Manufacturing, Production and Building related fields, together with Agriculture and Foreseeing, and Welfare and Services.

Strong gender differences arise: In the case of women, both their educational attainment and their parents' act as an advantage for a good school-to-work transition. For men the human capital is not only less important (although significant) but also their family background. Indeed family background seems to mark young men and women in different ways. The link found between family background, education investment and labour market outcomes induces to insist on the relevance that policies that contribute to the equality of opportunities for the access to higher education still may have in Spain nowadays in order to promote intergenerational mobility and reduce dispersion in the distribution of income in the future.

Another interesting result for youth employment policies deals with the positive effect of job search on success rates and the eventual stigma we find in long-term searchers. This may be indicative of the need for fostering dynamism in youth job search processes. More work to be done in order to find out whether there is a sort of duration dependence from this fact but, regardless the result of such a technical improvement in the research, active labour market policies targeted at youth should focus (as they already do according to the Lisbon targets and the European Employment Strategy) on short-term unemployed in order to avoid long-term unemployment spells.

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