

# **Do university grades explain short-term salaries? Evidence from recent graduates in Catalonia (Spain)**

Toni Mora

School of Economics and Social Sciences, Universitat Internacional de Catalunya

Correspondence to: Toni Mora, School of Economics and Social Sciences, Universitat Internacional de Catalunya, Immaculada, 22, 08017, Barcelona (Spain) Phone 0034 932541800 (4511) Fax 0034 932541850. Email: amora@cir.uic.es

## **Abstract**

The aim of this paper is to seek to answer the specific question: are short-term salaries also explained through grades in Spain (Catalonia)? Thus, our study considers not only a unique economic region, but also individuals with the same level of education, at an early stage of their working life. Our empirical approach includes most common unobservables of individual job characteristics and we control by means of several academic individual characteristics related to higher education attainment. Our results indicate that grades are not relevant in explaining short-term salaries in Catalonia for recent university graduates. On the contrary, job individual characteristics besides gender and personality traits are the main explaining factors of higher salary records. No conclusions can be derived regarding long-term salaries.

**JEL codes:** J24, J31, I22

**Keywords:** educational economics, salary wage differentials

# **Do university grades explain short-term salaries? Evidence from recent graduates in Catalonia (Spain)**

## **1. Introduction**

Labour and educational economics literature has focused on examining whether higher educational achievement has consequences on salaries. Usually, the empirical approaches that analyse economics return to education have considered either schooling years or attainment levels through a Mincerian type earnings function. It is well known that the higher the educational level the greater the earnings which is also evidenced by the Spanish labour market. In this regard, the recent debate is focused on the magnitude of the rate of return and characterizing local labour market effects. In doing so, empirical papers had mainly put stress on solving either overestimation being a consequence of omitting individual ability in the estimated model or underestimation derived from measurement errors in the reported years of schooling (see Ashenfelter, Harmon and Oosterbeek, 1999 and Card, 2001).

Although it is well known that obtaining a university degree leads to higher salaries because of the higher number of schooling years (the Spanish case can be seen in Marcenaro and Navarro, 2005 for overall schooling attainments returns and Salas-Velasco, 2006 for a university education return), our specific aim is to examine empirically whether higher university grades also allow higher graduated individuals to achieve higher salaries. Therefore, our approach distinguishes a quality measure for educational attainment once a homogeneous quantity of attainment is achieved.

Specifically, the aim of this paper is to seek to answer the question: are short-term salaries also explained through grades in Spain (Catalonia)? In this regard, little is known about the benefits of the quality of higher education achievements. Recent empirical studies have demonstrated that university grades are relevant for UK (Boero et al., 2001) and Switzerland (Schweri, 2004) labour markets but it does not apply for the Italian case (Boero et al., 2001). Therefore, local labour market characteristics

condition the significance of university grades. As far as we know, this is the first empirical analysis for the Spanish (Catalan) case.

University grades are relevant because of, at least, three reasons: (i) university institutions pursue higher qualified individuals as a signal of higher academic achievement; (ii) they reflect human capital acquisition at a time when young adults are on the point of permanent entry to the labour market (Betts and Morell, 1999; and Krueger, 1999) and; (iii) grades are an important element in the debate focused on the efficiency of public expenditure in education, as Spanish (Catalan) higher education is largely financed by the State.

Note that we examine grade effects on the three years after graduating, i.e. we dispose short-term salaries rather than starting ones. The latter conditions to include past job experience which we control through the number of jobs and the share of fixed contracts and the characteristics of their previous job, among other factors. Likewise, through the empirical analysis, we also need to control by means of several academic individual characteristics related to higher education, i.e. the specific attained field of study. It is well known that the field of studies and the obtained degree also condition present and past job experiences of higher graduated individuals. Our empirical approach includes most common unobservables of individual job characteristics. The econometric modelling used is an ordinal probit since salaries are observed into categories.

Our results indicate that university grades are not relevant in explaining short-term salaries in Catalonia for recent university graduates. On the contrary, job individual characteristics besides gender and personality traits (predicted ability at job) are the main explaining factors of higher salary records. Notwithstanding, we can not conclude in relation to the possible effects of grades on long-term wages for the higher graduated people in Catalonia which is under its own future research agenda. Moreover, we questioned on either learning or training relationship with grades which would be related to jobs featured by higher, steeper profiles.

The remainder of this paper is structured in the following manner. The next section shows the data and the model used in analysing the effects of university grades on short-

term salaries while the fourth section shows our empirical evidence and the final section contains a brief discussion of our overall findings.

## **2. The data and the econometric approach**

The empirical analysis is based on a data set provided by The Quality Assurance Agency for the University System in Catalonia (AQU). The survey was conducted in 2000 and covered all the individuals who graduated in the 1997-1998 academic year from one of the seven public Catalan universities. The main aim of this survey was to study the position of the university graduates in the labour market. In Catalonia there are twelve recognized universities, seven are public, four are private, and one is virtual. Of the total number of university students, the vast majority (nearly 80%) are graduates from one of the seven public universities.

The response rate was 48%. For this study, we eliminate all individuals younger than 34 (about 7%), i.e. we exclude those students who graduated at an older age and may already have some working experience. In doing so, we obtain a fairly homogenous sample of young highly educated individuals. After cleaning for age and for missing observations, we obtain a final sample of more than 3,500 individuals.

Thus, our study considers not only a unique economic region, but also individuals with the same level of education, at an early stage of their working life. Consequently, our individuals are highly comparable. Indeed, it covers those individuals who graduated in one specific academic year from one of the seven public Catalan universities (Catalonia is one of the richest Spanish regions). We were not able to collect information on certain unobservable factors such as parental background, partner, children, or health. However, since we focus on a sample of a restricted young cohort, we expect a low occurrence of illness. In addition, fertility rates for women are lower in this age band (the average age for having a first child is 29.7, and the average number of births per woman of reproductive age is 1.2) and most individuals are not engaged or married (the average age for marriage is 28.6, and over 30 for men) since a high proportion of individuals still live with their parents (the co-residence rate for Spanish men aged 25 to 29 in 2002 was 67%).

Table 1 shows the descriptive statistics. The questionnaire divides salary boundaries into 6 categories. We then preferred to consider our endogenous variable as an ordered one in order to avoid attenuation bias when replacing these segments by the logarithm of the average for each. We can observe that individuals are allocated into the four first categories. The final sample consists of 58.92% of women which is very close to the percentage of female graduates in that same year in Catalonia (58.59%). Higher graduated mainly attained social science studies and a Master degree with a pass-very good final grade, acceded by their own network to their first job, a high percentage had already left their first job, more than 50% have a fixed contract, work in a firm with a workforce higher than 500 or between 11 and 50 employees, and also work in Barcelona.

[Insert Table 1 here]

Our model estimate ordinal responses to earnings expressed in (1), where  $y_i^*$  corresponds to the latent unobserved continuous responses. Whilst,  $y_i$  is the observed ordered variable where  $i = 1, \dots, N$ ,  $x_i$  is the  $k$ -vector of explanatory variables,  $\delta$  is a  $k$ -vector of unknown parameters and  $\varepsilon_i$  represents the random error term independently distributed. Then, probabilities of an observed outcome are obtained for a given value of  $x$  through the area under the curve between a pair of cut-points. For example, the probability of observing  $y = j$  for given values of the  $x$ s leads to the standard formula for the predicted probability in the ordered regression model (see expression 2), where  $F$  is the cumulative distribution function for  $\varepsilon$  where  $\tau_i$  are the five cut-off points leading to six levels of  $y$ .

$$y_i^* = x_i' \delta + \varepsilon_i \quad (1)$$

$$\Pr(y = j / x) = F(\tau_j - x' \delta) - F(\tau_{j-1} - x' \delta) \quad (2)$$

We look not only at reported segment of salaries, but also examining differences in employment conditions, gender wage gap, educational choices and attainments, and at the combination of both while controlling for personality traits. Because of the

systematic analysis, we can be fairly certain that we are able to isolate the reason for the differences in salaries. We include as control variables ( $x_s$ ) information about: (i) personal characteristics (age, personality traits and gender); (ii) past job experiences (in which manner they acceded to their first job, the number of jobs and the share of fixed contracts since they graduated and part-full time characteristics of their previous job); (iv) the characteristics of their present job (whether it is their first job at present, the kind of workday, the degree requirement, type of contract, establishment size, type of occupation, branch of activity and working region); and (v) educational attainment characteristics (specific field of study, the kind of degree obtained and their final grade).

Another issue to notice is the inclusion of personality traits as a proxy for individual ability. Note that we are including a measure of ability in the sense of skill at job rather than acknowledgement ability which is related to university grades. Therefore, the omission of ability would overestimate the rate of return for the final grades. If the data is a panel, one can control for these by including individual effects. Since the present sample is a cross-section, we need to find a more creative way to control for those psychological traits. The data set contains a set of questions indicating individual's perception of why they were selected for their present job. Here we use the answer to these questions, known as self-efficacy evaluation, to create a measure of individual personality by using factor analysis, as is usual in the self-evaluation literature. This measure is highly correlated with self-esteem and ability at job (Bono and Judge, 2003). Likewise, Judge, Erez and Bono (1998) point out core self-evaluations represent an ability or skill factor. Positive self-evaluations would be effective in overcoming obstacles at job.

Finally, the grade variable obtained from the questionnaire avoids the informational problems raised from a unique grade because averages of grades across several courses taken by a given student provide useful information regards student characteristics rather than individual grades (Grant, 2007) and overcomes attenuation bias effects commonly arisen from an individual exam grade. Likewise, we do not suffer underestimation as a result of attenuation bias introduced through the years of schooling since all individuals present a higher graduated level and we differentiate either by means of degrees corresponding to Architecture, Engineering, Bachelor and Master or including the specific attained field of study.

### 3. Empirical results

Table 2 reports estimation results for the ordered probit estimation. Our results show that the final grade which is an average final grade has no effect on short-term salaries. Thus, the accumulated academic achievement has no consequences on this short-term labour market outcome. Therefore, although being higher educated leads to a positive rate of return within dissimilarity at short-term salaries, it is not a consequence of final university grades. Although final grades are collected in four categories instead of disposing the concrete value, we expected an average positive effect for the higher grade categories. We have to stress that this empirical result is obtained for short-term effects of university grades on earnings.

Notwithstanding, contrary to grades statistical non-significance, other educational attainment characteristics show statistical significance as was expected. Thus, either the attained kind of studies or the obtained degree has an effect on salaries. On one hand, and compared to social sciences (the more populated studies), humanities show a lower level of salaries whilst medical sciences and mostly science studies evidence higher level of earnings. Therefore, occupational earnings show differences according to the attended field of study. This result is corroborated for Science studies through the greatest magnitude for the odds-ratio. Indeed, high differences were observed when comparing earnings frequencies by field of study. The latter would be in accordance to university students predicting their starting salaries when enrolling in a specific field of study (Webbink and Hartog, 2004). Thus, our result corroborates, as is well known, that Humanities show lower expected returns than, for instance, Social Sciences. In fact, we introduced interactions between mismatch and the field of studies so as to evidence differences in labour transition from university to work by field of study. However, we did not evidence greater inequalities (no interaction was significant).

Moreover, we also wondered about the possible rising differences between fields of studies returns due to their final grades differences. Our sample evidences that Humanities showed the higher percentages in upper grades categories whilst remaining

fields present rather closer frequencies. A further decomposition was able by the specific field of study (as mentioned above). Then, we have run out regressions disentangling the five big fields of studies into 32 specific fields. Figure 1a evidences grading differences according to these specific fields. Therefore, including the specific field of study we will be able to capture common tuition systems effects on grading. In doing so, we also tested dropping these fields of studies to achieve robustness for the significance of grade parameters. Results did not change (we do not report to save space). Furthermore, note that we did not expect earnings differences based on the university choice since it is well known that Catalan students (the same applies for Spanish ones) enrol in a public university due to reasons of proximity, i.e. admission criteria are not determinant and these criteria rather similar among these public institutions for each field of study. Moreover, it is also well known that firms do not contract Catalan university graduates looking at the enrolled university.

[Insert Figure 1 here]

On the other hand, as was expected, studies with a shorter attending period show lower salaries. The latter would corroborate the positive return of one additional year, i.e. differences from three, four or five-year regimes of university education. This is in accordance with previous research (see Webbink, 2007 for the Dutch case). Notwithstanding, we did not focus here on analysing whether these parameters are underestimated as a consequence of attenuation bias since our interest is strictly restricted to university grades' return. Grades percentages differences were not observed based on the degree obtained (see figure 1b).

[Insert Table 2 here]

Therefore, salary differentials are due to other reasons instead of the quality of the academic achievement. These are related to labour market features but also explained by ability and gender characteristics. Thus, ability at job measured through personality traits has one of the highest marginal effects when transiting from university to work. The latter is in accordance to previous literature that more able individuals receive larger monetary gains. Notwithstanding, we have disentangled ability in two components: personality traits denoting ability at job and individual acknowledgement



ability measured by means of final university grades (being this grade an overall score rather than a unique test result). Hence, our result indicates that individual characteristics are also relevant when computing the effect of education on monetary outcomes. Note that we analyse a higher graduated sample, so our empirical evidence is not contradictory, pointing out that the greater the education the higher the monetary benefits. In addition, we should also note that we examine short-term salaries. Thus, at least for the short-run, higher university grades would not imply greater initial earnings but nothing can be said about future earnings. Our result is robust since the inclusion/exclusion of the predicted ability (personality traits) does not alter the estimated parameters, and thus so for final grades. Again, we do not report them in order to save space.

Likewise, we corroborate the presence of a gender gap since women show lower salaries once we have controlled through mismatch, job occupations, establishment size, working region and the type of contract, among other relevant labour market factors. Gender statistical significance is consistent with the existence of an increasingly evident 'glass ceiling' in Spain for more highly-educated women (De la Rica, Dolado and Llorens, 2007; and Del Río, Gradín, and Cantó, 2006). Specially, occupational differences by gender are strongly relevant (Joy, 2006) since women and men concentrate in diverse job occupations. Descriptive results for our sample show that when compared to men, women, on average, are less often self-employed, have a larger chance to have a fixed term contract (instead of a permanent one), work in smaller establishments, are more often found in low-level qualified occupations, and work more frequently in the 'medical care and social work' and 'teaching and training' sectors. Men and women also differ regarding their education choices and achievements. On average, women have a lower degree of education (they are over represented among individuals with a 3-year degree –'diplomatura'–), and obtain less often the highest final grade (excellent). In the field of study choice, there are also gender differences: women choose more often humanities, social sciences, and medical sciences. Therefore, our results evidence that, while young women's expectations have risen, their labour market achievements (salaries) have not improved at the same pace, being the latter out of the paper's scope.

Regarding labour market characteristics, some results should be highlighted besides some obvious factors (mismatch through degree requirement, not being a student in their previous job or the type of contract). The lower the establishment size the lower the earnings. Regarding job occupation, only product management and administration and accountancy report a higher salary record. Working in another Catalan province, compared to Barcelona province, show a lower salary whilst working abroad (European Union or outside the European Union) show higher salaries records. Although graduating with higher grades would generally be expected to be more migratory than students achieving lower grades in the United Kingdom (Faggian, McCann and Sheppard, 2006) or in the United States (Baryla and Dotterweich, 2001), the latter does not apply for the Spanish university graduates since working abroad in Spain is not related to higher university human capital acquisition. Finally, most of the branches report higher salaries compared to the most populated branch (education and research). Specially, the odds-ratio coefficients are noticeably bigger for Metal industry, Transport equipment and Technological communications.

At this point, we finally tested the interactions between final grades and job characteristics. In this regard, tabulating mismatch by grades was the only significant difference. Thus, those higher graduated obtaining lower final grades show a higher mismatch rate (overeducation). Therefore, we included into our regression the interaction between final grades and those variables indicating a labour mismatch (previous results were robust). In doing so, the interaction between the lower grade category and those with a university degree requirement (although not for those requiring a specific degree) was the only significant parameter whilst grades remained not statistically significant. Therefore, no additional conclusions can be reported from this analysis.

#### **4. Discussion**

Our results evidence that final university grade does not affect short-term salaries in Catalonia (Spain). Besides grades' non statistical significance, we evidence the relevance of other individual features. In this regard, personality traits as a proxy for

ability at job are the most outstanding factor. Likewise, we evidence that other educational characteristics such as additional schooling university years or the field of study are also relevant when explaining short-term earnings. Finally, and obviously, job characteristics (e.g. establishment size or job occupation) are also rather determinant to achieve higher salary records.

In some manner, two reasons rise to explain the non significance of university grades. On one hand, perhaps firms do not initially pay for higher educated individuals with a greater accumulated knowledge (measured through their final grade). Thus, Spanish firms do not examine the quality of the educational attainment levels since they usually ask for employees with a concrete attainment level. By any means, in our opinion, although grades were available to employers, they have no access to grades' distribution for every year and faculty. Notwithstanding, our results are also because of transition features from university to work. The Spanish economy, especially in Catalonia, shows a high percentage of overeducated population compared to most OECD countries (Dolado, Felgueroso and Jimeno, 2000). On the other hand, since we have focused on short-term salaries, we could be detecting that those individuals with higher university grades would be selecting jobs featured with greater promotion or learning possibilities rather than choosing highly paid jobs. Indeed, whilst the overall share of recent university graduates doing further training is 66.5%, once we disentangle this percentage by grade categories we observe a higher rate for the upper grades (59.7%, 66.5%, 71.2% and 86%, respectively). The latter is in accordance with the well known need of the Spanish (Catalan) overeducated higher graduate to accumulate further training experiences (e.g. being a postgraduate) so as to differentiate from the other higher graduates.

However, we were concerned about one question: the labour market signal on future higher graduates. Thus, a lower effort can be expected from new higher graduates generations since their higher academic achievement (effort) would not have consequences, at least short-term, on their salaries. Notwithstanding, we hope that final grades will have consequences on future salaries.

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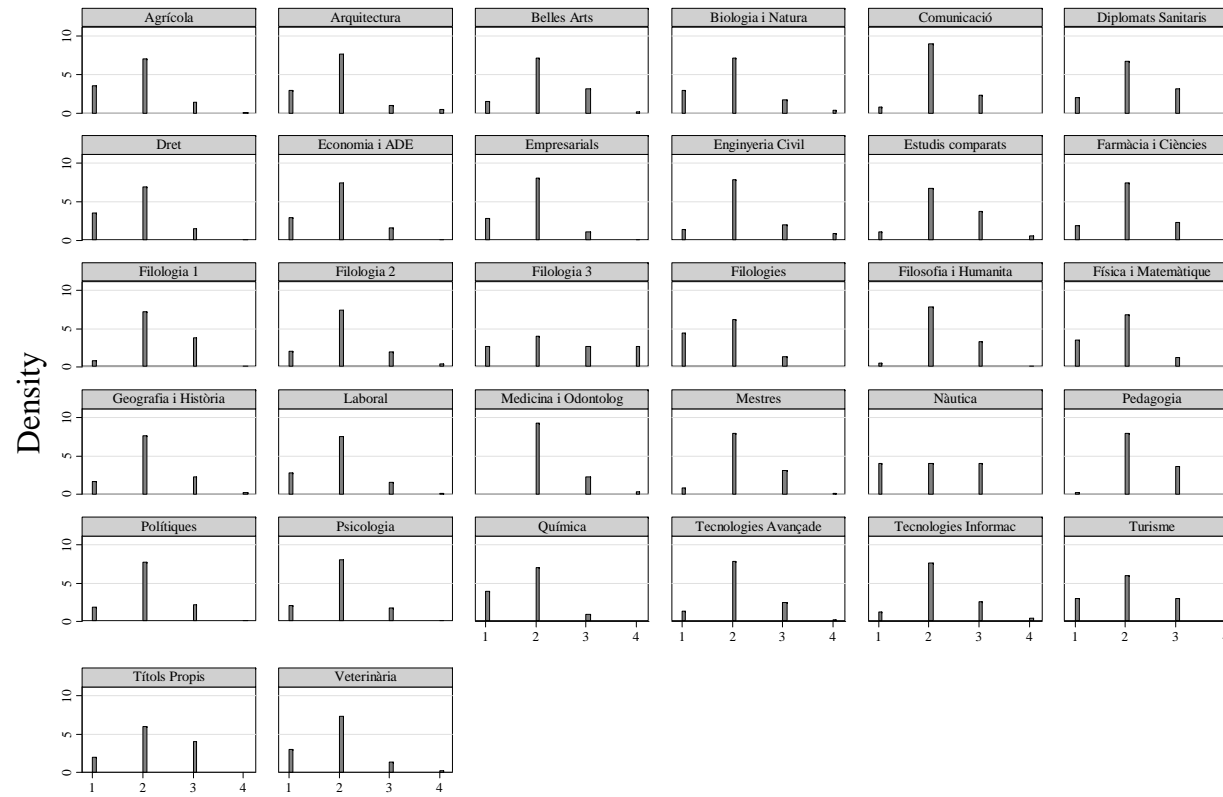
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**Figure 1 Frequencies for grades categories**

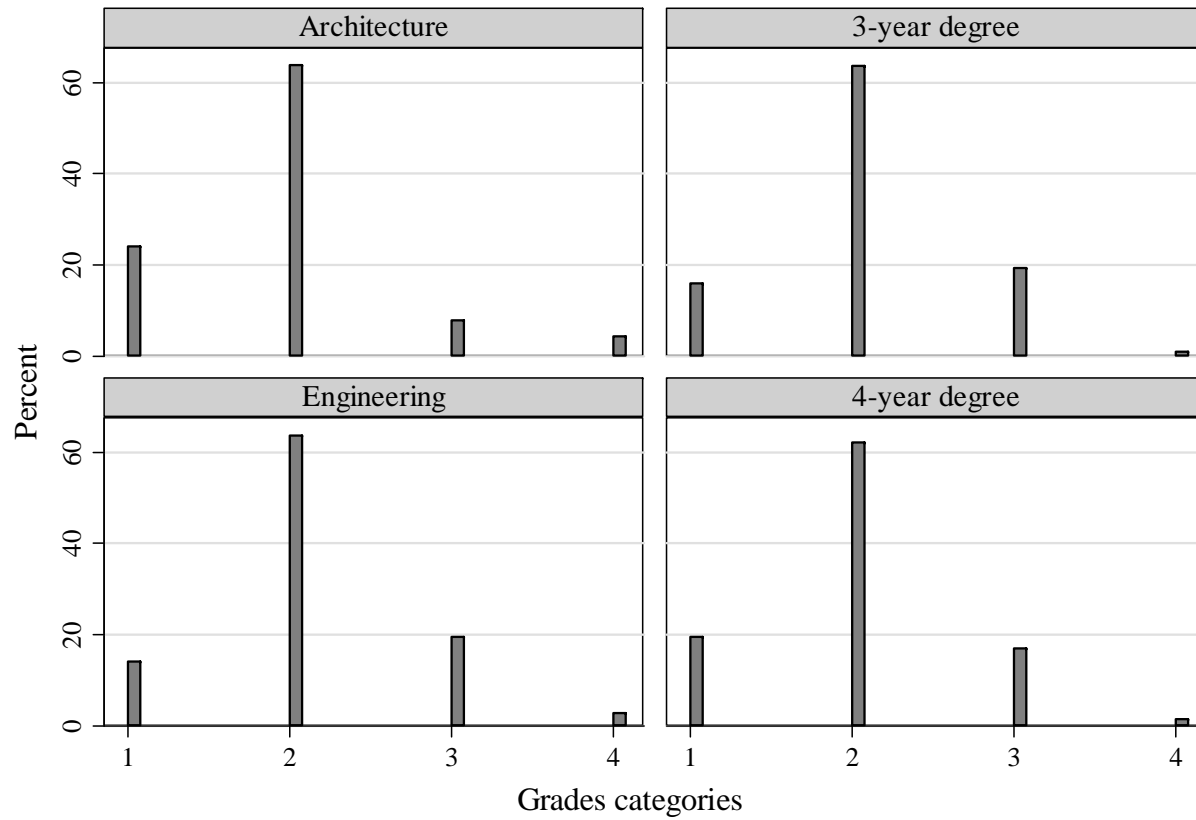
**1a. By specific field of study**



Grades categories

Graphs by Specific kind of study

### 1b. By the obtained degree



Graphs by Degree obtained



**Table 1 Summary of statistics and description of explanatory variables**

Variable	Share	Variable	Share	Variable	Share	Variable	Share
Age (average)	27.29	<b>Type of occupation</b>		<b>Branch of activity</b>		<b>Grade obtained</b>	
Personality traits (average)	0.46	Low-level qualified occupations	0.09	Agricultural and fishing	0.02	Pass ('aprovat')	0.18
Doing further training	0.66	Corporate Management	0.02	Energy	0.02	Pass- very good ('notable')	0.63
Gender (female=1)	0.59	Advising and Consultancy	0.10	Chemical industries	0.04	Very good –Excellent	0.17
		Product Management	0.03	Metal industry	0.05	Excellent	0.02
<b>Wage (Euros/ year, gross)</b>		Technical support	0.10	Transport equipment	0.02		
less than 9000 Euros	0.15	Administ. & Accountancy	0.08	Food and beverage	0.03	<b>Degree obtained</b>	
[9000 – 12000) Euros	0.15	Medical Care & Social Work	0.04	Textiles and clothing	0.02	Architecture	0.04
[12000 – 18000) Euros	0.28	Logistics, Distrib. & Marketing	0.03	Wood, paper and plastics	0.03	3-year degree (“diplomatura”)	0.25
[18000 – 30000) Euros	0.33	Teaching and Training	0.14	Construction	0.05	Engineering	0.20
[30000 – 40000] Euros	0.07	Design and Media	0.03	Commerce	0.02	4-year degree (“Licenciatura”)	0.51
More than 40000 Euros	0.02	R&D	0.08	Transport and hotel services	0.02		
		Other qualified occupations	0.26	Technological communications	0.07	<b>Field of Study</b>	
<b>How obtained their first job</b>				Mass media communications	0.04	Humanities	0.11
by own network	0.33	<b>Working Region</b>		Financing institutions	0.10	Social Sciences	0.48
by press appointments	0.20	Barcelona province	0.72	Services to firms	0.08	Experimental Sciences	0.08
by public competition	0.11	Tarragona province	0.09	Public administration	0.07	Medical Sciences	0.07
by agencies	0.09	Girona province	0.08	Education and Research	0.20	Science	0.26
by self-employed	0.02	Lleida province	0.05	Health services	0.08		
by job centre at university	0.11	Rest of Spain	0.03	Other branches	0.04		
by any other means	0.14	In the EU	0.02				
Only one job experience	0.37	Outside the EU	0.01	<b>Mismatch</b>			
Share of fixed contracts	0.51			No degree requirement	0.21		
		<b>Establishment size</b>		University degree required	0.18		
<b>Previous job</b>		Less than 10 =1	0.17	Specific degree requirement	0.61		
Student	0.67	Between [11,50]	0.23				
Part-time related	0.11	Between [51,100]	0.12				
Part-time non-related	0.09	Between [101,250]	0.10				
Full time related	0.07	Between [251,500]	0.08				
Full time non-related	0.06	More than 500 =1	0.30				

**Table 2 Short-term salaries for recent higher graduated, Ordered Probit results**

Gender	-0.3042 (-7.02)a
Age	0.0674 (6.22)a
Personality traits	1.0008 (8.11)a
Doing further training	0.0195 (0.49)
Only one job experience	-0.1226 (-2.33)b
Number of jobs since graduated	-0.0311 (-1.82)c
Share of fixed contracts	0.2730 (4.06)a
<b>Kind of labour workday</b>	
Splitting workday	-1.0323 (-13.77)a
Workday over weekend	-0.7101 (-2.64)a
Other workday	-0.4979 (-3.43)a
<b>How obtained their first job (ref. by personal networks)</b>	
by press appointments	0.0598 (1.13)
by public competition	0.1958 (2.51)b
by agencies	0.0367 (0.54)
by self-employed	0.1564 (0.64)
by job centre at university	-0.0162 (-0.24)
by any other means	0.1594 (2.51)b
<b>Type of contract (ref. fixed permanent contract)</b>	
Type of contract: Self-employed	-0.0991 (-0.92)
Type of contract: Fixed term contract	-0.5942 (-10.79)a
Type of contract: No contract	-1.1676 (-5.81)a
<b>Mismatch (ref. no degree required)</b>	
University degree required	0.3803 (5.83)a
Specific degree requirement	0.3924 (6.60)a
<b>Establishment size (ref. &gt;500)</b>	

Less than 10 =1	-0.8319 (-11.62)a
Between [11,50]	-0.4464 (-7.64)a
Between [51,100]	-0.1820 (-2.87)a
Between [101,250]	-0.1823 (-2.67)a
Between [251,500]	-0.0672 (-0.90)
<b>Type of occupation (ref. other qualified occupations)</b>	
Corporate Management	-0.0147 (-0.07)
Advising and Consultancy	0.0879 (1.22)
Product Management	0.3010 (2.56)b
Technical support	0.0304 (0.43)
Administration and Accountancy	0.2519 (3.20)a
Medical Care and Social Work	0.2341 (1.60)
Logistics, Distribution & Mark.	0.2513 (1.89)c
Teaching and Training	0.2268 (2.26)b
Design and Media	-0.3131 (-2.03)b
R&D	-0.2023 (-2.12)b
Low-level qualified occupations	-0.2349 (-3.30)a
<b>Working Region (ref. Barcelona region)</b>	
Tarragona province	-0.2790 (-4.10)a
Girona province	-0.1180 (-1.67)c
Lleida province	-0.0689 (-0.80)
Rest of Spain	0.1158 (0.99)
In the EU	0.8568 (5.19)a
Outside the EU	0.8697 (2.73)a
<b>Previous job (ref. student)</b>	
Part time related	0.2081 (3.06)a
Part-time non-related	0.0274 (0.41)
Full-time related	0.2886 (3.33)a
Full time non-related	0.2675 (2.71)a

<b>Field of Study (ref. Social Sciences)</b>	
Humanities	-0.9383 (-2.67)a
Experimental Sciences	-0.0072 (-0.04)
Medical Sciences	-0.9334 (-3.22)a
Science	0.6334 (1.50)
<b>Degree obtained (ref. 'Llicenciatura'-equiv. to Master-)</b>	
'Diplomatura' (equiv. to B.A.)	0.0197 (0.13)
Engineering	-0.2840 (-0.73)
<b>Grade obtained (ref. Pass- very good ('notable'))</b>	
Pass ('aprovat')	-0.0414 (-0.75)
Very good -Excellent	0.0539 (1.03)
Excellent	0.1103 (0.71)
<b>Branch of activity</b>	
Agricultural and fishing	0.1972 (0.93)
Energy	0.2594 (1.63)
Chemical industries	0.4925 (3.96)a
Metal industry	0.4618 (4.03)a
Transport equipment	0.5034 (3.47)a
Food and beverage	0.1686 (1.29)
Textiles and clothing	0.1002 (0.50)
Wood, paper and plastics	0.1970 (1.35)
Construction	0.3807 (2.68)a
Commerce	0.0902 (0.63)
Transport and hotel services	0.1056 (0.64)
Technological communications	0.5365 (4.45)a
Mass media communications	0.1274 (0.72)
Financing institutions	0.1335 (1.19)
Services to firms	0.1773 (1.63)
Public administration	0.5674 (5.04)a
Health services	0.1636 (1.23)

Other branches	0.0795 (0.60)
<b>Specific degree of studies</b>	
Agricultural	-0.4962 (-3.15)a
Architecture	-0.1257 (-0.30)
Fine Arts	0.0376 (0.11)
Biology and Nature	-0.5477 (-3.74)a
Health 3-year degree studies	0.4195 (1.44)
Law	-0.4562 (-2.35)b
Economics and Business	0.0430 (0.23)
Business 3-year degree	-0.5393 (-2.26)b
Civil Engineering	-0.2071 (-1.14)
Comparative studies	0.9516 (2.54)b
Pharmacy and Sciences	0.9995 (3.87)a
Philology 1	0.2721 (0.80)
Philology 2	0.1988 (0.56)
Philology (rest)	-0.0083 (-0.01)
Philosophy and Humanities	0.4520 (1.24)
Geography and History	0.1319 (0.41)
Labour Relations and Labour Studies	-0.5618 (-2.31)b
Medicine and Odontology	2.0461 (5.22)a
Teacher training	-0.7054 (-2.87)a
Pedagogy	-0.6235 (-3.01)a
Political and Administration Sciences	-0.6604 (-3.16)a
Psychology	-0.5951 (-2.86)a
Chemistry	-0.2640 (-1.69)c
Information Systems	0.1263 (1.25)
Tourism	-0.7970 (-1.95)c
Own degrees	0.1360 (0.28)
N	3,558
Wald $\chi^2$	2371.43 (0.00)
Pseudo R <sup>2</sup>	0.2600

t-statistics are reported in brackets. Note: a, b, c denote significance at 1%, 5% and 10%, respectively.