

OVEREDUCATION AND OVERSKILLING: THE INFLUENCE OF SOCIAL BACKGROUND ON JOB PLACEMENT

SOBREEDUCACIÓN Y SOBRECAPACITACIÓN: LA INFLUENCIA DEL ORIGEN SOCIAL EN LA INSERCIÓN LABORAL

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ABSTRACT

This article examines the relationship between social origin and the probability of being overeducated or overskilled. Using PIAAC microdata for EU countries, we carried out an econometric analysis, which examine the importance of parents having higher education on the probability of individuals being overeducated and/or overskilled. The results show that workers whose parents have high levels of education are less likely to be overeducated for a young cohort, while this effect disappears for an older sample. However, these individuals will be more likely to be overskilled, given the greater cultural capital received in their families. This occurs for both cohorts.

Keywords: Job placement, overeducation, overskilling, parental education and social capital.

RESUMEN

Este artículo examina la relación entre el origen social y la probabilidad de estar sobreeducado o sobrecualificado. Utilizando microdatos PIAAC para los países de la UE, llevamos a cabo un análisis econométrico que examina el efecto de que los padres de los trabajadores tengan una educación superior sobre la probabilidad de que se encuentren sobreeducados y / o sobrecualificado. Los resultados muestran que los trabajadores cuyos padres tienen altos niveles de educación tienen menos probabilidades de estar sobreeducados para una cohorte joven, mientras que este efecto desaparece para una muestra de mayor edad. Sin embargo, estos individuos tendrán más probabilidades de estar sobrecualificados, dado el mayor capital cultural recibido en sus familias. Esto ocurre para ambas cohortes.

Palabras clave: inserción laboral, sobreeducación, sobrecualificación, educación de los padres y capital social.

JEL Classification / Clasificación JEL: I26, J01, J24.

1. INTRODUCTION

Within the social sciences, much research has focused on the mismatches between the educational system (formal or informal) and the qualification requirements of labour markets.

An extensive bibliography exists on the specific topic of overeducation as expressed in labour practices, job hiring, and in people's working lives. As is often the case with many of the topics of study in social-science research, empirical contrasts are often inconclusive in explaining the origin of the phenomenon being analyzed and the causality that defines it in different economic, political, and social contexts. When approached explicitly, theoretical formalization does not offer a unique explanation of the phenomenon and, as usual, different approaches attempt to draw conclusions from the empirical evidence as compiled and modeled. Here again, in the field of theoretical abstraction, there is no consensus for interpreting the topic of overeducation and its consequences on labour market equilibrium and, by extension, the macroeconomic market. For some, overeducation is a circumstantial phenomenon in the working life of the employed, while for others it persists over time. For still others, the labour mismatch that can arise from overeducation is not necessarily directly attributable to it, but rather in general to the lack of a match between workers' diverse qualitative characteristics and skills and those of existing jobs.

This article empirically analyzes various aspects of overeducation and overskilling based on the information provided by the PIAAC (Program for the International Assessment of Adult Competencies), as developed by the Organization for Economic Cooperation and Development (OECD). Specifically, the article associates the relative importance of these phenomena with the social backgrounds of the employed and estimates their quantitative influence. This is a question of singular transcendence when developing active labour market policies aimed at improving the balance in the labour market with external tools that facilitate the flow of information between supply (unemployment) and demand (vacant jobs) (Pérez-Trujillo et al., 2018).

To this end, we first review of the most relevant literature on overeducation and overskilling, analyzing their overall economic and labour impact, and their relationship and effects on labour market equilibrium.

Secondly, as a new objective, we develop the resulting research hypotheses to contrast and so we built the econometric model estimated below, specifying the applied methodological singularities.

Third, we analyze the results obtained in the estimation of the model and discuss different conclusions regarding the contrasts arising from our hypotheses.

2. LITERATURE REVIEW

Economic theory has tried to explain the relationship between education and the labour market in different ways while adapting to the social changes that have taken place over time (McGuinness, 2006; Quintini, 2011).

In an initial approach, the Theory of Human Capital (Becker, 1964) points out how workers access the right jobs in relation to their acquisition of human capital through formal education and the training obtained at work. The demand for labour will adjust in relation to the supply in order to maximise the use of acquired human capital. For this theoretical framework, overeducation is only a temporary mismatch that occurs at the beginning of a worker's labour career who correct it with the acquisition of experience (Sicherman and Galor, 1990). In other words, from this point of view, educational mismatches are a stepping stone in the career of individuals, rather than a permanent trap in which they remain. Numerous empirical studies have tried to validate this approach (Alba-Ramirez, 1993; Carroll and Tani, 2013), not always conclusively, in our opinion.

In contrast, the theory of Job Competition (Knight, 1979) predicts, unlike the previous neoclassical approach, that overeducation will be a persistent phenomenon over time (Baert et al., 2013; Mavromaras et al., 2015; Meroni and Vera-Toscano, 2017). In this theory, job characteristics are those that determine the inherent productivity, skills, and earnings. Potential employees compete for employment by acquiring human capital, valued by employers as a useful asset that can reduce the training costs necessary to perform a job. Thus, the company will hire those individuals whose training for a job is less costly. Consequently, workers could employ in jobs that are not commensurate with their level of training. Following a similar approach, Signaling Theory (Spence, 1973) defines the acquisition of human capital as a mere sign of an individual's productivity. Education implies a different effort for people, insofar as only the productive ones invest in a higher level of training, since the benefit they obtain in the labour market is greater than the costs involved in acquiring education.

Lastly, the Allocation Theory (Sattinger, 1993) is situated halfway between the previous analytical proposals. This theory posits that, on the one hand, training increases productivity per se, i.e., it is not just another diploma. On the other hand, the theory maintains that workers' productivity is determined by the job's characteristics, so that the conversion of human capital in terms of productivity is conditioned, for such purposes, by achieving an adequate

match between labour supply and demand. Workers with few skills, occupying a position requiring a high level of training, will see their productivity limited by their (lack of) skills, while in the opposite case productivity will be limited by the opportunities offered by a particular position to the worker.

Overeducation, therefore, is a labour and educational problem that has been studied academically for decades (Freeman, 1976). The growth in access to education in the second half of the last century throughout the world explains why this phenomenon is one of the main topics of debate within labour economics. The academic literature on this field has tried to identify the implications of this phenomenon (Duncan and Hoffman, 1981; Fleming and Kler, 2008; García-Aracil and Van der Velden, 2008; Iriondo and Pérez-Amaral, 2016; Nieto and Ramos, 2017; Verdugo and Verdugo, 1989), and its determining factors (Baquero and Ruesga, 2019; Pollmann-Schult and Büchel, 2004; Dolton and Silles, 2003; Verhaest and Omeij, 2010), although less research has delved into this second aspect.

The most commonly used theoretical framework was proposed by the Theory of Allocation (Sattinger, 1993). However, a significant number of studies have taken into account the heterogeneity of individuals' skills (Mavromaras and McGuinness, 2012). Given the massification of higher education in society, different skill sets exist within the same level of training. This means that overeducation and overskilling do not necessarily coincide and, thus, should be measured differently (Allen and Van der Velden, 2001; Flisi et al., 2014).

In view of the loss of indications of the educational level in the labour market, other factors emerge that allow access to jobs in accordance with an individual's training. In addition to the skills acquired in formal education, soft skills become more important when competing for a job among a group of people who have comparable educational degrees. These skills include a wide range of abilities and behaviors (McQuaid and Lindsay, 2005). Aptitudes such as communicating in foreign languages, use of new technologies, or even one's cultural level and well-honed speaking skills become helpful talents for entering the labour market more successfully.

An individual acquires skills through education that is outside the formal systems. That education is not exogenous, since it arises from the social environment in which a person is raised, as well as by his or her innate learning abilities. The social environment can act in several ways in circumstances in which individuals need to highlight their qualifications in order to get a matched job (Perales and Gil-Hernández, 2015).

First, indirectly, people's social background may create habits —such as reading assiduously— that increase their cultural baggage (Bukodi et al., 2014; Williams and Connell, 2010; Zamudio and Lichter, 2008) and facilitate skills development through higher quality schooling or access to after-school tutoring. Further, when individuals reproduce certain behaviors, they signal their specific status, i.e., information that is valued by employers when hiring personnel (Rivera, 2012). On the other hand, beyond the education received

in the earliest stages, the social origin can cause differences in the quality of training in an adult stage. The need to obtain income due to not being able to obtain it from their family environment, can lead individuals to work during their studies. This fact can harm their student performance and, therefore, their training (Ruesga et al., 2014). Likewise, when the work carried out by students is not related to their studies, it will be a greater handicap in finding a suitable job in the future. This is related to the greater aversion to the risk of running out of income that these individuals will have, which may lead them to settle into jobs that are not in line with their education level (Baquero y Ruesga, 2020). In addition to the educational, cultural, and social advantages, there is a direct effect on the ability to find a suitable job. A privileged social background can bring with it a social capital (or a social network) that is better situated in the job market. This social capital can widen the opportunities of individuals who belong to a certain class, by virtue of their greater access to information and better references (Barone and Ortiz, 2011; Hällsten, 2013; Bernardi and Ballarino, 2016; Capsada-Munsech, 2015; Ortiz and Kucel, 2008; Perales and Gil-Hernández, 2015). Social networks may be more important at the time of labour market placement than any other personal attribute, such as human-capital background, for example. When individuals enter the job market, employers have little information about their skills and productivity. Given this situation, information and confidence, supported by an individual's social network, can be an important factor in finding a suitable job. The influence exerted by one's social extraction can dissipate as an individual's professional career advances, since the level of experience and performance at work will have increasingly greater importance (Passaretta et al., 2018). In the same way, the person's own relational capital, generated during his or her working career, emerges as a factor in hiring.

3. OBJECTIVE

Based on this theoretical framework, the main objective of this article, succinctly analyzed, focuses on identifying the direct effect of individuals' social background on the probability of finding a job for which they are overeducated or overskilled.

A second objective of the study is to test whether this effect can be considered the same in a sample of young workers (16-34 years old), whose working careers are in the first stage, compared to a sample of workers whose professional careers are in more advanced stages (35-64 years old), where the latter's own relational capital, and the ongoing development of their own human capital begins to come into play.

The hypotheses to be discussed and tested in this article are the following:

1. Workers whose parents have higher education will be less likely to be overeducated or overskilled.
2. The effects cited in the first hypothesis will be greater for the younger group of workers, since their professional careers are not yet established.

4. METHODOLOGY

4.1. DATA

The data used to carry out this study were obtained from The Survey of Adult Skills implemented by the OECD as part of the Programme for the International Assessment of Adult Competencies (PIAAC). In its first round, this survey collected information from the working-age population (16 to 64) in 33 countries. The first round of this survey was taken by 166,000 adults between 2011 and 2012¹ and 50,000 in a second round between 2014 and 2015².

This survey provides information on individuals' skill levels, evaluated through tests of numeracy skills, literacy, and problem solving³. It also allows controlling participants' social background, work history, and educational level, among other factors. This makes it a very useful tool for studying labour market dynamics from an international point of view, taking into detailed account each person's skills in terms of literacy, numeracy reasoning, and problem solving⁴.

To undertake this research, data from European Union countries were used. Since not all countries were sampled in the same round of data collection, we have included data from the second round compiled in Greece, Lithuania, and Slovenia. Given that a mere three years passed between the first and second rounds of data collection, it did not seem that the short-term elements would have much impact on the variables of interest, given the labour market structure in each country. In addition, considering the objective of this study, the sample was restricted to individuals who were working at the time the survey was conducted. Those who received education abroad were also eliminated, since their situation can lead to errors in interpreting overeducation. Thus, the sample we worked with decreased from 121,354 to 61,993 individuals.

Further, in order to differentiate results for younger individuals, we separated the total sample into two subsamples. The first includes workers from 16 to 34 years old, while the second includes those who are 35 years old or older.

4.2. DEPENDENT VARIABLES: OVEREDUCATION AND OVERSKILLING

The mismatch between the number of years of education completed and those required in the workplace has implications for worker productivity. According to the theory of allocation (Sattinger, 1993), productivity is limited to the workplace, so workers who are overskilled underuse their acquired skills, thus losing part of their potential productivity, i.e., their acquired human capital. However, conflating overeducation with overskilling is not necessarily the best path, since within the same educational level we find diversity in terms of skills,

¹ In this first round, data were from Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Netherlands, Ireland, Italy, Poland, Slovakia, Spain, Sweden, and the United Kingdom.

² In this second round, data were from Greece, Lithuania, and Slovenia.

³ Not all countries agreed to the problem-solving tests.

⁴ In the problem-solving category, some countries did not participate in the evaluation.

so not considering this heterogeneity would lead us to overestimate the levels of overskilling (Chevalier, 2003; Chevalier and Lindley, 2009). Measuring skills is more challenging than the quantification of years of education; however, a significant number of research papers have addressed this problem, differentiating the meaning of both concepts (see Quintini, 2011).

Using traditional overeducation measures, we typically find a wage penalty compared to individuals with the same level of education working in a position that matches their training (Budría and Moro-Égido, 2008; Dolton and Vignoles, 2000). Yet when skills are considered, different implications arise when differentiating overeducation and overskilling. Allen and Van der Velden (2001) show that, while educational mismatches result in a salary penalty, skills mismatches impact job satisfaction as well as employees' pursuit of other positions that could change their situation. Sánchez-Sánchez and McGuinness (2015) find similar results, based on the idea that it is the perception of underutilization of skills that undermines workers' morale and, consequently, their productivity (Wright and Cropanzano, 1998; Wright et al., 2007). To interpret the low productivity that the literature associates with overeducation, we revisit what behavioral psychology says are the classic laws of learning. One of their basic principles holds that an individual's particular behavior that is followed up with positive reinforcement (for that individual), increases the probability of that same behavior reappearing in the future (Skinner, 1953). However, there are various situations in which this basic law does not hold. For example, when a constant positive response occurs for a prolonged period and thus a reinforcing consequence or a similar one ensues, a so-called "satiation" effect takes hold. This precept predicts that it is more likely that this consequence will lose its capacity to increase the probability of positive response and, in fact, will reduce it, when the reinforcing consequence is administered at levels close to 1:1 —that is, whenever the behavior occurs, the reinforcing effect occurs—. Thus, when workers have more skills than the task requires, they will probably be successful initially —the satisfaction of a job well done— which will most often reinforce that behavior. As the process repeats itself, the phenomenon of "satiation" of this positive outcome may appear which, in turn, could have a negative impact on the future labour productivity of those workers.

Based on this reasoning, it is proposed to record independently two different measures to allow overeducation and overskilling. Firstly, overeducation was used as a dependent variable, as evaluated by comparing the highest educational degree that workers get and which is required at their jobs. This variable arose from two questions posed in the PIAAC survey:

Which is the highest qualification you have obtained?

Talking about your current job: If applying today, what would be the usual qualifications, if any, which someone would need to get this type of job?

With the answer to these two questions, we used a binary variable that takes the value 1 when the most advanced degree obtained by a worker is greater than that required for his or her job, and 0 otherwise.

Furthermore, a measurement proposed by the OECD for the PIAAC survey was used to define overskilling by considering workers' perceptions and their skill levels (Nieto and Ramos, 2017; OECD, 2013a; Pellizzari and Fichen 2013.). The questions that elicit workers' perceptions are the following:

Do you feel that you have the skills to cope with more demanding duties than those you are required to perform in your current job?

Do you feel that you need further training in order to cope well with your present duties?

Individuals who answered "no" to both questions were defined as adequately qualified from a subjective point of view. Within this group, we established a maximum qualification limit, indicated by the score obtained in the tests by individuals who occupy the 95th percentile within this group for each occupation (ISCO-1 digit) and country⁵. Workers who had a higher score for each type of occupation were considered overskilled. Thus, a binary variable was created that differs from the one proposed by Pellizzari and Fichen (2013) in that the underqualified were not identified, since they were not subjects of our study.

Table 1 indicates that the group of young workers has a greater proportion of overeducated and overskilled workers. As previously argued, the information available to companies is more limited and refers to the degree obtained by the individual and, as their professional career progresses, their job experience becomes more important (Iriondo and Pérez-Amaral, 2016; Passaretta et al., 2018). For this reason, studying the sample in two separate age groups could provide relevant information when evaluating the relationship of interest.

TABLE 1. OVEREDUCATED AND OVERSKILLED EMPLOYED FOR DIFFERENT EU COUNTRIES (% OF SAMPLE)

Variable	Overeducated			Overskilled		
	Total	35 years or more	From 16 to 34 years	Total	35 years or more	From 16 to 34 years
Germany	25.39	25.10	25.90	20.03	17.80	24.14
Spain	28.65	26.72	32.29	22.48	21.09	25.17
Italy	20.32	18.17	26.37	18.42	16.47	23.93
France	25.05	22.95	29.70	12.67	10.51	17.42
United Kingdom	32.48	28.80	38.86	14.54	13.23	16.83
Total	23.59	21.34	27.76	16.56	14.15	20.83

Source: Own elaboration with PIAAC data.

4.3. MODEL

Various binary probit models were used to perform the econometric analysis. Given that the purpose of this study was to determine the effect on the probability of being overeducated or overskilled, which are both binary

⁵ This was done for the categories of numeracy and literacy skills since some countries did not participate in the problem-solving evaluation.

variables, this model was the most appropriate, since the linear probability model would not detect non-linear relationships. Also, a linear model could cause estimation problems, since it is not limited to a probability interval between 0 and 1 (Stock and Watson, 2015). Thus, the model is defined in a similar way in both cases:

For each subsample, defined by age group, we tested the models specified in equations (1) and (2). In addition to their different dependent variables, there was also a slight difference between the sets of controls X_i and Z_i . The X_i vector includes a variable that controls individuals' skills based on the results from the tests included in the previously mentioned survey.

On the other hand, a variable related to educational level is not included, since it would cause perfect identification problem, since it is included in the definition of the dependent variable.

The opposite is true in Z_i . It includes a variable that controls the maximum educational level reached by the individual but does not control skills for reasons similar to those explained in the previous case.

We built these models to account for results obtained in the tests of numeracy skills and literacy⁶. In other words, both were defined, the dependent variable *overskilling* and the explanatory variable *skills*, based on these two values.

4.4. EXPLANATORY AND CONTROL VARIABLES

In order to record individuals' social backgrounds, we used two binomial variables to indicate whether either parent has a higher education degree. Capsada-Munsech (2015) uses these measures to control for the social and cultural capital of a sample of Italian citizens; however, in her work this variable was accurate at the time when the individuals in the sample were 14 years old. Other research uses the parents' job to indicate the social background of individuals. However, in this case, this option was not possible given the database we used. In addition, using the parents' educational level can provide information about the family's cultural level, which is important in this study.

These two indicators reflect individuals' cultural capital by reproducing their parents' educational level, as previously explained. The fact that parents have higher education increases the probability that their children will also achieve comparable academic levels (Bukodi et al., 2014). Similarly, in previous generations, having a higher degree meant belonging to a higher status within the labour market, taking into account that the sample used only includes individuals from 16 to 64 years old. For this reason, parents' educational attainments reflect the social capital acquired, which will later help their children's professional development (Perales and Gil-Hernández, 2015).

⁶In both cases, to the first plausible value provided by the OECD normalizes the result.

Monitoring of the educational level of both parents independently can provide relevant information, since it can have different implications. The existence of a gender gap within the labour market means that historically women have had more difficulty accessing positions of greater responsibility (García et al., 2001). This means that generally, fathers obtain better job placements, allowing them to establish more social networks powerful to promote the development of their son's professional career. Similarly, the reproduction of gender roles made women primarily responsible for the so-called household chores, among which is the care of children (Baquero et al., 2019). Women's greater involvement in childcare can have a larger impact on the education and cultural development of their offspring.

Given that both, overskilling and overeducation, can arise due to a significant number of factors, it was included a relevant number of control variables, whose purpose is to limit the direct effect of parents' contribution to social capital. In Table 2, we defined these main explanatory variables along with those used as controls, as well as their purpose within the model.

5. RESULTS

We reviewed results for the two subsamples separately. Tables 3 and 4 depict the marginal effects obtained for the different probit models tested. The comparison between both subsamples allowed us to observe how the relationship between social background and job suitability progressed throughout individuals' professional careers. Thus, we could draw conclusions based on the hypothesis that this relationship is stronger in the years when individuals entered the labour market.

5.1. RESULTS FOR THE 16–34-YEAR-OLD SAMPLE

In this case, we found several different results, depending on the measure used. In terms of the effect of parental education on the probability of being overeducated, we saw that only in the case of the father there was a relevant effect with a 95% significance level. The fact that the father had a higher education entails a decrease of 2.6% in this probability. This result is consistent with the father's greater influence within the labour market that we cited above (García et al., 2001). Being overeducated is a result of the accessibility of a job with a status linked to the requirements of the job. Therefore, even controlling for individuals' skill sets, they were in a beneficial position when their fathers have a high level of education, and in general, a better position within the labour market.

We found very different results in models related to overskilling. Here we are not analyzing a variable related to the mismatch of labour status, but rather a comparison of skills in relation to workers who were in the same job category. Therefore, the positive effect of parental education on the probability of being overskilled links to cultural reproduction from one generation to the next. This

TABLE 2. DESCRIPTION OF EXPLANATORY AND CONTROL VARIABLES OF THE MODEL

Type	Variable	Description
Explicatives	Father with higher education	Binary variable that indicates whether the father has a higher education
	Mother with higher education	Binary variable that indicates whether the mother has a higher education
Control	Control by country	Binary variables that indicate the country in which the individual conducts the survey
	Male	Variable that takes the value 1 if the individual is male and 0 if he is female
	Field of study	Binary variables that indicate the study area reached by the individual at their highest level of education
	Experience	Continuous variable that collects the individual's years of experience in the labour market
	Experience ²	Variable that collects the individual's years of experience in the labour market squared
	Company size	Binary variables that indicate the number of employees in the individual's company
	Permanent contract	Binary variable that takes value 1 if the individual has a permanente contract and 0 otherwise
	Full-time	Binary variable that takes the value 1 if the individual works full-time and 0 if he works part-time
	Books at home	Binary variables that collect by intervals the number of books that the individual has at home
	Children	Binary variable that indicates whether the individual has children or not
	Numeracy skills	Continuous variable that indicates the result obtained by the individual in the numeracy skills test
	Literacy skills	Continuous variable that indicates the result obtained by the individual in the literacy skills test
	Education level	Continuous variable that indicates the result obtained by the individual in the skill tests

Source: Own elaboration with PIAAC data.

interpretation is coherent with what we observed with the variables related to the control of the cultural level, such as the number of books individuals have at home, or their educational level, which also elicited positive effects.

Despite the high correlation of test numeracy skills and literacy outcomes, results vary when we based interpreting overskilling on these two variables. In the first case, only the mother's education had a relevant effect with a 95% significance level on the probability of being overskilled. This is consistent with mothers' greater involvement in their son's education, as previously mentioned. However, both parents showed a positive and significant effect on the probability of offspring being overskilled when the dependent variable was literacy, so this hypothesis did not seem to be fulfilled.

TABLE 3. MARGINAL EFFECTS OF THE PROBIT MODELS IN THE SAMPLE OF 16 TO 34 YEARS

	Overeducated		Overskilled	
	(1) Numeracy skills	(2) Literacy skills	(1) Numeracy skills	(2) Literacy skills
Father with higher education	-0.026*** (0.01)	-0.026*** (0.01)	-0.001 (0.009)	0.019** (0.009)
Mother with higher education	-0.006 (0.01)	-0.007 (0.01)	0.031*** (0.009)	0.019** (0.009)
Male	0.006 (0.008)	0.002 (0.008)	0.071*** (0.007)	0.037*** (0.007)
Field of study				
Teaching and educational sciences	0.013 (0.017)	0.013 (0.018)	-0.098*** (0.017)	-0.099*** (0.017)
Humanities, languages and art	0.112*** (0.017)	0.115*** (0.017)	-0.07*** (0.016)	-0.015 (0.017)
Social Sciences, Business and Law	0.073*** (0.013)	0.072*** (0.013)	-0.028** (0.014)	-0.024* (0.014)
Science, Mathematics and Computers	0.033** (0.015)	0.031** (0.015)	-0.0002 (0.016)	0.01 (0.016)
Engineering, manufacturing and construction	0.006 (0.012)	0.003 (0.012)	-0.033** (0.013)	-0.039*** (0.013)
Agriculture and veterinary	0.085** (0.025)	0.083*** (0.025)	0.011 (0.026)	-0.025 (0.025)
Health & Wellness	-0.028* (0.015)	-0.028* (0.015)	-0.128*** (0.015)	-0.098*** (0.015)
Services	0.058*** (0.015)	0.059*** (0.015)	-0.06*** (0.015)	-0.055*** (0.015)
Experience	-0.011*** (0.002)	-0.011*** (0.002)	0.003 (0.002)	0.005** (0.002)
Experience ²	0.0003*** (0.00008)	0.0003*** (0.00008)	-0.0002* (0.0001)	-0.0003** (0.0001)
Company size				
From 11 to 50 employees	-0.018* (0.009)	-0.018* (0.009)	0.019** (0.008)	0.003 (0.009)
From 51 to 250 employees	-0.019* (0.01)	-0.018* (0.01)	0.024** (0.009)	0.017* (0.009)
From 251 to 1000 employees	-0.0005 (0.012)	-0.001 (0.012)	0.037*** (0.011)	0.012 (0.011)
More than 1000 employees	-0.066*** (0.014)	-0.065*** (0.014)	0.044*** (0.014)	0.034** (0.014)
Permanent contract	-0.02** (0.008)	-0.02** (0.008)	0.0002 (0.008)	-0.006 (0.008)
Full-time	-0.126*** (0.009)	-0.127*** (0.009)	-0.027*** (0.01)	-0.035*** (0.009)
Books at home				
From 11 to 25 books	0.002 (0.015)	0.002 (0.015)	0.025** (0.012)	-0.0008 (0.13)
From 26 to 100 books	0.0007 (0.014)	0.0005 (0.014)	0.071*** (0.011)	0.05*** (0.012)
From 101 to 200 books	0.002 (0.015)	0.002 (0.015)	0.111*** (0.013)	0.09*** (0.013)
From 201 to 500 books	-0.009 (0.016)	-0.01 (0.016)	0.14*** (0.014)	0.127*** (0.014)
More than 500 books	-0.013 (0.019)	-0.015 (0.019)	0.131*** (0.17)	0.109*** (0.017)
Children	-0.001 (0.008)	-0.002 (0.008)	-0.019** (0.029)	-0.036*** (0.008)
Education level				

ISCED 4			0.096*(0.053)	0.038**(0.015)
ISCED 5B			0.052(0.047)	0.18(0.012)
ISCED 5A y 6			0.183*** (0.033)	0.059*** (0.009)
Numeracy skills	-0.0006*** (0.00008)			
Literacy skills		-0.0006*** (0.00009)		
Control by country	Si	Si	Si	Si
N	15,622	15,622	15,234	15,234

Notes: Standard deviations are in parentheses. Significance levels: * 10%. ** 5%. *** 1%.
Source: Own elaboration with PIAAC data.

5.2. RESULTS FOR THE 35–64-YEAR-OLD SAMPLE

Turning to workers over 35, the results we obtained are different. In line with studies that argue that social capital would lose importance in the labour market as professional experience was acquired (Iriundo and Pérez-Amaral, 2016; Passaretta et al., 2018), the significance of the effect of a father’s higher education disappeared in terms of the probability of being overeducated. Thus, we have confirmed the greater importance of social background in the first stage, while its importance dissipates as individuals develop their own social network.

On the other hand, we did find significant and positive effects of both parents’ education on the probability of being overskilled. Here we observed a positive effect for both parents when referencing the numerical-skills test, while when the model considered literacy it is only the father who had a relevant effect with a 95% significance level. These results seem to confirm that the influence of parents on cultural capital does not disappear with career advancement. Individuals acquire routines and skills during their education that they continue to maintain throughout their lives, at least in comparison with workers in the same occupational category.

TABLE 4. MARGINAL EFFECTS OF THE PROBIT MODELS IN THE SAMPLE OF 35 TO 64

	Overeducated		Overskilled	
	(1) Numeracy skills	(2) Literacy skills	(1) Numeracy skills	(2) Literacy skills
Father with higher education	-0.009(0.007)	-0.009(0.007)	0.015** (0.006)	0.015** (0.006)
Mother with higher education	-0.008(0.009)	-0.009(0.009)	0.021*** (0.007)	0.003(0.007)
Male	0.002(0.001)	-0.003(0.006)	0.055*** (0.005)	0.024*** (0.005)
<i>Field of study</i>				
Teaching and educational sciences	-0.034*** (0.007)	-0.035*** (0.01)	-0.066*** (0.01)	-0.048*** (0.01)
Humanities, languages and art	0.044*** (0.012)	0.049*** (0.012)	-0.031*** (0.011)	0.002(0.011)
Social Sciences, Business and Law	0.036*** (0.009)	0.034*** (0.009)	-0.0001 (0.009)	-0.006(0.009)



Science Mathematics and Computers	0.009(0.011)	0.003(0.011)	0.053***(0.011)	0.033***(0.011)
Engineering manufacturing and construction	0.026***(0.009)	0.022***(0.009)	0.018**(0.009)	-0.00004(0.008)
Agriculture and veterinary	0.084***(0.015)	0.08***(0.015)	0.002(0.014)	-0.021(0.013)
Health & Wellness	-0.05***(0.009)	-0.05***(0.009)	-0.073***(0.009)	-0.061***(0.009)
Services	0.067***(0.011)	0.069***(0.011)	-0.025**(0.01)	-0.02**(0.01)
Experience	-0.008***(0.001)	-0.008***(0.007)	0.004***(0.0001)	0.0017*(0.001)
Experience ²	0.00009***(0.00002)	0.00009***(0.00002)	-0.0001***(0.00002)	-0.0001***(0.00002)
<i>Company size</i>				
From 11 to 50 employees	-0.032***(0.007)	-0.033***(0.007)	0.01*(0.006)	0.011**(0.005)
From 51 to 250 employees	-0.039***(0.007)	-0.039***(0.007)	0.007(0.006)	0.01*(0.006)
From 251 to 1000 employees	-0.051***(0.008)	-0.052***(0.008)	0.017**(0.008)	0.012*(0.007)
More than 1000 employees	-0.08***(0.009)	-0.081***(0.009)	0.024***(0.008)	0.02**(0.008)
Permanent contract	-0.064***(0.007)	-0.065***(0.007)	0.015**(0.007)	0.002(0.006)
Full-time	-0.059***(0.006)	-0.059***(0.006)	-0.008(0.006)	-0.004(0.006)
<i>Books at home</i>				
From 11 to 25 books	0.0009(0.01)	0.0002(0.01)	0.019***(0.007)	0.007(0.007)
From 26 to 100 books	-0.016*(0.009)	-0.017**(0.009)	0.053***(0.007)	0.028***(0.007)
From 101 to 200 books	-0.018*(0.01)	-0.019**(0.01)	0.078***(0.008)	0.062***(0.008)
From 201 to 500 books	-0.022**(0.01)	-0.025**(0.01)	0.11***(0.009)	0.08***(0.011)
More than 500 books	-0.034***(0.012)	-0.035***(0.006)	0.101***(0.011)	0.086***(0.011)
Children	-0.026***(0.006)	-0.027***(0.006)	-0.005(0.005)	-0.012**(0.005)
<i>Education level</i>				
ISCED 4			0.012(0.009)	0.016*(0.008)
ISCED 5B			0.016**(0.007)	0.01(0.007)
ISCED 5A y 6			0.031***(0.006)	0.022***(0.006)
Numeracy skills	-0.0008***(0.00005)			
Literacy skills		-0.0009***(0.00006)		
Control by country	Si	Si	Si	Si
N	30,776	30,776	30,001	30,001

Notes: Standard deviations are in parentheses. Significance levels: * 10%. ** 5%. *** 1%.

Source: Own elaboration with PIAAC data.

Generally, these results seem to confirm that a higher socio-cultural background can be beneficial at an initial stage in achieving a good educational-labour adjustment. We can also confirm this relationship for both age groups by observing the effects on the probability of being overskilled.

6. CONCLUSIONS

The main objective of this article is to identify the effect of social background on being overeducated or overskilled in the labour market, depending on career development. This study provides valuable information to contrast a generalised notion about how meritocracy (academic merits or acquired skills) translates into successfully obtaining employment in the job market, while stipulating that individuals' social background has a little significant impact. The results of this study seem to point precisely in the opposite direction, in line with the first hypotheses posited in this paper that places importance on employed persons' social background. Likewise, this study concludes that the effects on the probability of being overskilled will be more persistent than those of being overeducated, which drastically decreased for individuals sampled of more advanced age. This is noteworthy, since it emphasises the importance of differentiating both concepts, considering the significant increase in educational opportunities in advanced societies.

First, our results show that, in terms of young people under 35, if the father has a university education, his offspring at work will be 2.6% less likely to be overeducated. This result coincides with results found by other authors (Barone and Ortiz, 2011; Bernardi and Ballarino, 2016; Capsada-Munsech, 2015; Hällsten, 2013; Ortiz and Kucel, 2008; Perales and Gil-Hernández, 2015), and confirms the idea behind the second hypothesis herein. The period of job placement may be an uncertain stage in one's professional career. Given that employers lack certainty about new workers' productivity, having the support of a social network or skills acquired outside the formal sector may be a significant advantage in obtaining suitable employment. This hypothesis is also hold on the fact that, with workers over 35 years of age, the effects of social background have no influence on the probability of being overeducated. Therefore, as workers' careers advance and they gain independence, the incidence of background seemingly becomes diluted (Iriondo and Pérez-Amaral, 2016; Passaretta et al., 2018).

On the other hand, we should point out the difference in the results obtained in terms of overskilling with respect to overeducation. In the case of overskilling, the second hypothesis, which maintained the differences between both age groups, do not fulfill. This result is in line with the literature that suggests that overeducation and overskilling are different situations and so they must be measured as independent phenomena (Allen and Van der Velden, 2001; Chevalier, 2003). When we talk about overskilling, we find positive effects of parental education on the probability of being overskilled for both age groups. Given that the measure of overskilling proposed by Pellizzari and Fichen

(2013) is based on a comparison with other workers in the same professional category, this means that workers whose parents have higher education will have a comparatively higher level of skills, given the cultural capital that their environment contributes (Perales and Gil-Hernández, 2015), even when controlled by educational level. If this difference in skills, in comparison to their (adequately qualified) peers, also implies an underutilization of workers' skills at work, it can lead to frustration and a consequent decrease in their productivity (Allen and Van der Velden, 2001; Sánchez-Sánchez and McGuinness, 2015). Since this mismatch does not occur when we refer to formal education, we infer that the skills actually required when performing tasks at work are not really those requested when one is hired.

Given the results obtained, different factors can be highlighted that must be considered in the studies that relate social origin with over-education and over-qualification.

In the first place, continuing with the idea defended by an important part of the literature, it is essential to differentiate between overeducation and overskilling. As mentioned, the heterogeneity of individuals who reach the same educational level means that they are very different concepts. Therefore, the results obtained for each of them do not have to be the same. Second, the separation of the credentials of the father and the mother to describe social origin also proves to be important. The different implications that each of the parents represents, given the social conventions, make their differentiation provide very relevant information. Third, the convenience of differentiating the cohorts of workers has also become evident. Social origin loses importance throughout life and, in the same way, job uncertainty becomes less as the professional career progresses. The labour market responds in a different way for younger groups. Therefore, the treatment of labour data in general, and its relationship with the social origin, particularly, must consider the age group on which it is focusing so as not to incur erroneous generalities.

Although the results obtained herein are rigorous and valid in terms of our discussion of the effect of social background, they must be interpreted with caution, since they contain certain limitations. As for the study of the effect at different moments of one's professional career, it would be preferable to have panel data that study individuals longitudinally throughout their careers. The differences between generations could influence the comparison according to age, since students entered into the labour market under different economic conditions, following different behavior patterns. Therefore, for future research, it would be important to follow the careers of individuals in the sample. Further, the use of other indicators of parental background would also be a great source of information. For example, childhood habits, the type of school attended, or the ability to access educational tutoring or cultural activities can enrich the study of the relationship between social background and subsequent job suitability. Along the same lines, it would be interesting to have sufficient information about the path to employment, because if researchers address this topic, the incidence of inherited social capital could be further explored. Finally, it is

worth highlighting the relevant differences found in this article according to the knowledge area that the individuals studied during their formal education. Researching independently each of the study areas can represent a great source of information. This is due to the fact that the labour market is very different within each knowledge area, but also because social origin can take on very different relevance depending on the occupation and field of study to which we refer.

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