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THE WORKERS WHO KNOW TOO MUCH: ANTECEDENTS, CONSEQUENCES AND DYNAMICS OF OVERQUALIFICATION

J. Ramos, M. Ramos and M. Subirats

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The workers who know too much:

Antecedents, consequences and dynamics of overqualification

José Ramos^{1,2}, Mariam Ramos¹ and Montse Subirats¹

Abstract

Overqualification is a common form of underemployment in recent times, reaching in some countries one third of work force. Defined as an excess of possessed qualification (education, work experience or skills) by workers regarding the level of qualifications required by the current job, there is a relevant person-job mismatch. Research on overqualified had proliferated recently, allowing to provide insights regarding substantial issues. This paper summarizes recent research on overqualification, reflecting the state of the art around four main points: Different concepts (over-education, skills mismatch) and measures (objective vs. perceived) of overqualified; Relevant theoretical frameworks, the motives workers and employees have to engage in overqualified employment and the institutional and individual antecedents of overqualified; Relationships between overqualified and different work outcomes; and the dynamics of overqualified along time, considering if it is a temporary phenomenon that is overpassed as workers gain job experience (step-stone) or if most overqualified workers remain trapped in deprived jobs during long periods. Implications for labour market and educational institutions, as well as for career orientation agents, employers and individuals are considered. Recommendation for employers, policy-makers and employees, as well as future directions, are discussed.

Keywords: overqualified, overeducation, skills' mismatch, labour market, job outcomes.

JEL classification: J21, J24, J28, J31.

Resumen

La sobrecualificación es una forma de subempleo frecuente en los últimos tiempos, que en algunos países afecta a un tercio de la población activa. Definida como un exceso de cualificación (educación, experiencia laboral o habilidades) por parte de los trabajadores en relación con el nivel requerido por su trabajo actual, supone un desajuste entre la persona y el puesto. La investigación reciente acerca de la sobrecualificación permite extraer conclusiones sobre la misma. Este documento resume las evidencias recientes, centrándose en cuatro puntos: los distintos conceptos (sobreeducación, desajuste de competencias) y formas de medir (objetivas vs. subjetivas) la sobrecualificación; los marcos teóricos pertinentes, los motivos que tienen los trabajadores y empleados en asumir empleo sobrecualificado y los antecedentes institucionales e individuales; las relaciones entre la sobrecualificación y los distintos trabajos; y la dinámica de la sobrecualificación a lo largo del tiempo, considerando si se trata de un fenómeno temporal que se supera a medida que los trabajadores ganan experiencia laboral o si la mayoría de los trabajadores sobrecualificados permanecen atrapados durante largos períodos en esta situación. Finalmente, se abordan las implicaciones para el mercado laboral y las instituciones educativas, así como para los agentes de orientación profesional, los empleadores y los individuos, y se discuten las recomendaciones para los empleadores, los responsables políticos y los empleados, así como las direcciones futuras de la investigación.

Palabras clave: sobrecualificación, sobre-educación, desajuste de competencias, mercado laboral, resultados laborales.

Clasificación JEL: J21, J24, J28, J31.

¹ IDOCAL, Universitat de València. ² Ivie. Correspondencia: Jose.Ramos@uv.es.

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1.

Introducción

In recent decades, most developed societies showed increasing levels of educational mismatch, where the level of educations and qualification of job occupants do not fit well with the level of qualifications required by their current jobs. As a result, employees frequently possess more education or qualifications than their current job demands, resulting in overqualified employees. This phenomenon received the interest of social agents and researchers because their high figures and the negative consequences for individuals, companies and the society.

This paper aims to provide an overview of the current shared knowledge about four relevant issues about overqualified (OQ): how it is defined and measured; what are the

main theoretical frameworks used to explain OQ and its antecedents; what are its more relevant consequences and its moderators; and the dynamics of OQ. This contribution is an intentionally-oriented non-systematic review to summarize the consensus about these four concerns from different disciplines. In addition, we pay special attention to the evolution of overqualified workers along their careers, considering overqualified as a trap or as a step-stone. This overview is structured in four sections addressing the abovementioned issues, and a final section including final considerations, future research directions and implications for practice.

2.

Research evidence about overqualified

2.1. The problem of overqualified

Recent research showed that OQ is an extended problem along most developed countries, reaching big numbers of workers of any academic level and characteristics, along all ages, in special among youngsters, and reflecting both overeducation (OE, later on) and over-skilling.

OQ had been analysed using different measures and approaches. Flisi et al. (2017) distinguished between subjective and objective approaches to analyse educational and skill mismatch (see Table 1). Objective measures of OQ could be divided into nor-

mative (comparing job analysis for determining the level of education required to perform the job versus the obtained level of education from the occupant) and statistical measures (comparing the mean or mode of educational level for the job occupants for a specific position versus the obtained level for a specific job occupant). Subjective measures could be obtained by indirect self-assessment (asking directly to job occupants the required level of education for the job and their obtained level, and computing the difference between both variables) or by direct self-assessment or perceived measures (asking directly to job occupants their perceived degree of mismatch between required by the job and obtained education).

Table 1. Measures of overqualified

	OVEREDUCATION	OVER-SKILLING
Objective (normative)	Job analysis of required education vs. obtained level of education	Objective measure of skills possessed vs. skills required (in terms of high/med/low)
Objective (statistical)	Mean or mode of education level for job occupants vs. person's obtained level	Objective measures of skills possessed vs. statistical data for skills required
Subjective (indirect self-assessment)	Workers report both education levels: required for the job and obtained level (difference)	Degree of certain skills utilisation/ need for training

In the same sense, normative measures of over-skilling compare objective data from the job occupant in certain types of skills (for instance, numerical skills from the PIAAC² tests) versus the job-required level of such competences or skills provided by experts or job analysts (for instance, in terms of high/medium/low description from a job description). Statistical measures of over-skilling compare objective measures of job-occupant's skills versus statistical data for skills required for a job. Indirect subjective measures of over-skilling ask job occupants for their need for training in certain skills or the degree of skills utilization, in terms that allows knowing if some skills possessed are not fully utilised into the job. Finally, direct subjective measures of over-skilling ask directly the job occupant their perceptions about gaps or mismatches regarding their skills.

Skill-mismatch and OE are complementary and measure different dimensions of OQ. Education gaps are related to general levels of formal education, but not all jobs demanding the same education level require the same level of competences to be properly performed. Reversely, individuals with the same education level could possess different levels for the different competences required by the job. Formal education seems to act as a proxy for occupational qualification.

Whereas specific competences could be more closely related to job performance than formal education levels, it is not always easy to determine what competences are more relevant for the job, and some of such

skills are difficult to evaluate or even describe, when analysing OQ. Assessing some competences require complex procedures that had reduced their use in empirical research about OQ. Thus, every of such measures (objective/normative vs. subjective, and education-based vs. skill-related) would be more or less appropriate depending on research's goals. Nevertheless, the different focus of every measure is reflected on the disparity of OQ figures. Same individuals could be detected as overeducated but not over-skilled regarding their current job, over-skilled but not overeducated, and in some cases simultaneously over-skilled and overeducated.

Regarding the magnitude of OQ, Barone and Ortiz (2011) found country rates between 4 and 17% overeducated, whereas between 7 and 20% were over-skilled, among university graduates from eight countries. Perceived skill mismatch was found more prevalent than OE. Moderate forms of OE appeared in countries with mass higher education systems (Spain, Norway, Netherlands), and affected more to humanistic field's graduates and vocationally oriented graduates.

Congregado et al. (2016), found rates of perceived OQ of 52% (EU Household Panel 1994-2001 data from 15 EU countries). OQ appears stable among those aged 18-25 and 26-35, and strongly inversely related to age after 36. These rates varied by countries (38% in the Netherlands, 68% in the UK), and were higher among higher educated individuals.

Davia et al. (2017) found 18% of statistically overqualified (EU Survey Incomes & Living

² PIAAC is the Program for the International Assessment of Adult Competencies from OECD.

Conditions 2004-2009 data from 25 countries), with higher levels of OE in regions with greater levels of university enrolment and regions where the level of educated labour supply exceeded demand, reflecting differences in structural macroeconomic factors. Similarly, Wu et al. (2015) found rates of perceived over-skilling of 30,8% (Fifth EU Survey on Working Conditions 2010 data from 9 countries).

Flisi et al. (2017), using PIACC data from 22 countries found substantial differences among countries and different measures of overqualified. Thus, 20% of individuals were solely skill-mismatched, whereas 13% of sample showed solely education mismatch, two measures strong and negatively correlated ($r=-0.78$). Three patterns of countries appeared. First, countries with a high level of education mismatch and a relatively low level of skill mismatch (Italy, Spain and Ireland). Second, countries which showed better performance in PIAAC and PISA surveys and individuals being an adequate level of education but more skills than required (Sweden, Finland, Netherlands, Slovakia, Czech Republic and Poland). Third, countries with well-established vocational educational system that showed intermediate levels of both education and skills mismatch (Belgium, Austria, UK, Denmark, Estonia and Germany).

Verhaest and Omeij (2009) found 50.8% of overeducated (1.67 years of exceeded education) among Flemish tertiary graduates in their first job. Verhaest and Omeij (2010) compared four different measures of OE: A job analysis measure (50.1%), realised matches (a statistically derived measure, 33%), direct self-assessment (21,7%) and indirect self-assessment (21.8%). Job analysis and realised matches are strongly correlated among them (Spearman $\rho=0.727$), but

only moderately correlated with self-assessment measures (from $\rho=0.369$ to $\rho=0.423$). Within the same database, Baert et al. (2013) found a 38% of young graduates that remained overeducated during the period examined, whereas an additional 17% were temporarily mismatched before entering to a matched job. Verhaest et al. (2015) found 58% of overeducated among Flemish secondary school leavers during a period of seven years, that hardly dropped resulting in an incidence to 48% at the end of the studied period.

Béduwé and Giret (2011) analyzed skill, horizontal (field of studies) and vertical (education level) mismatches among French vocational graduates. 15% showed vertical mismatch and 30% horizontal mismatch, and an additional 29% showed both vertical and horizontal mismatch. Nevertheless, OE and skill mismatch showed a low correlation ($r=0.12$). Horizontal mismatch was more prevalent than vertical mismatch, supporting a certain degree of skills transferability from one field to another. Skills mismatch had a more detrimental effect on youngsters' job satisfaction than merely vertical OE mismatch.

More recently, Capsada-Munsach (2019), using data from the REFLEX/HEGESCO database, compared five different measures of OE. Two were based on job analysis using different levels of mismatch, two were based on statistical indicators and the last was a self-assessment of OE. The less restrictive measure of job analysis produced the highest value (38%). Reducing OE to high levels of mismatch, job analysis and statistical measures found rates of 12% and 19%. Self-assessment and statistical measures reflected an OE rate of 29%.

All this evidence shows high figures for OQ, affecting a large number of individuals on

different educational levels and along all ages, but especially among young workers and graduates. Figures differ among countries and depending if OE or skill-mismatch are considered. Most studies showed higher rates of over-skilling than OE, with some exceptions in Southern European countries where OE overcomes over-skilling. Less than a half of overeducated workers are also over-skilled, and both forms of OQ show modest correlation coefficients at best (Green & McIntosh, 2007; Fine & Nevo, 2008; Badillo-Amador & Vila, 2013; McGuinness, 2018; Choi et al., 2020). The severity of OQ as a social problem relies on its high figures, as well as on its consequences on the wellbeing of affected people, inefficiency of the educational system and the waste of public and family investments, among others. Detrimental consequences for individuals and companies are notorious and addressed later.

2.2. Antecedents of overqualified

Different theoretical frameworks tried to explain why a relevant number of employees decide to accept a job under their level of qualification. The simplest answer would be that there are more qualified job searchers than available qualified jobs. However, some theories point that in such case, the number of people acquiring high levels of skills and education will decrease to further balance, suggesting that there are inefficiencies in the labour market and job search processes.

From **matching theories of job search** (Jovanovic, 1979), OE is largely a consequence of poor information and workers will realize over time their error and achieve improved match through repeated job search. From **career mobility theory** (Sicherman and Galor, 1990), some workers will deliberately choose mismatch in order to acquire the necessary skills, through on-the-job training and learning that will enable them to achieve

more rapid career progression in the future. Therefore, these two theories suggest that OE is a step-stone, temporary phenomenon driven by either incomplete information or strategic behaviour, largely unrelated to observable structural factors.

Human capital theory (HCT) (Becker, 1964) stated that workers (and companies) made investments (i.e., in training and education) for getting returns in the labour market. Workers will always earn their marginal product, implying that there will be no under-utilization of human capital in the labour market and that OE will not exist in equilibrium. From HCT, OE could be a short-run phenomenon if the stock of educated labour supply rises. This occurs as a consequence of higher labour market returns, until firms fully adjust their production processes to accommodate the altered nature of labour supply (McGuinness, 2006).

Instead, the **job competition model** (Thurow, 1975) remarks on the importance of job characteristics. Workers are allocated to a fixed distribution of jobs. Individuals invest in education to preserve their place in the jobs queue. OE will arise when the number of graduate workers exceeds the number of graduate jobs. In the same line, **assignment models** (Sattinger, 1993) point out that, during the job allocation process, utility maximization guides workers to choose certain jobs over others. Changes in the distribution of earnings and, by default, OE, will be related to both the distribution of jobs and the characteristics of the workforce. Both frameworks underline the relevance of structural processes and demand-supply unbalances for the appearance of OQ.

Nevertheless, we can address this question asking why people accept to be overqualified and what are their motives for accepting a job under their own capacities. On one

hand, people could choose such jobs for avoiding unemployment because there are no options available for matched jobs or for mobility factors (commuting problems, caring children). On the other hand, based on individual choice (as work is multi-faceted), preferences for certain facets could lead to choose a job under the level of qualification that has other valued features (i.e., work-life balance, permanent contract, full-time job, fewer work pressures). In between, some individuals that need additional job experience, on-the-job training or some specific skills or attitudes could accept being overqualified as a way to fulfil these lacks. In such cases, OQ is only apparent or a temporary phenomenon. Thus, both demand (labour market) and supply (workers' characteristics) aspects could matter.

Reversely, there are some motives of companies for hiring overqualified workers (Verhaest and Omey, 2009; Kulkarni et al., 2015; Thompson, et al., 2015; Verhaest and Verhofstadt, 2016). First, some hired employees could be not actually overqualified, as they lack some specific and relevant competences, experience or job attitudes, despite their general level of education or qualification. Second, companies could prepare the future, hiring a potential bench for future promotion. Third, as overqualified people require less training and supervision, they are a "saving costs" option. In addition, overqualified could possess some valued characteristics (planning, problem-solving, coping strategies for workload) making them a valued resource. Finally, credential's inflation allows companies to ask for more qualification than required by the job because labour market provides an excess of qualified workers. Nevertheless, companies show some reluctance to hire overqualified workers, especially in some Anglo-Saxon countries, because their consistent higher intentions to

quit and lower scores in job satisfaction and organizational commitment could lead to demotivation and lower performance (Harari et al., 2017; Erdogan et al., 2020). In other countries, employers tend to demand more skills than those inferred from a classification of occupations (Brencic & Pahor, 2019), and a field experiment found that employers prefer master graduates to bachelors for jobs requiring a bachelor level (Verhaest et al., 2018).

Feldman (1996) defined a model of relationships between underemployment and its antecedents and consequences that could be applied to OQ. Feldman included antecedents like economic factors, job characteristics, job search strategies and demographic variables, and consequences like job and career attitudes, psychological well-being, job behaviours and performance.

Gender, age, and minority groups are the main studied **demographic characteristics** regarding OQ. **Gender** differences showed a disparity of results. Some studies found more women being overeducated than men (Belfield, 2010; Barone & Ortiz, 2011; Rafferty, 2012; Verhaest et al., 2015; Rohrbach-Schmidt et al., 2016). Other studies found more OE among men than women (Ghignoni & Verashchagina, 2014; Congregado et al., 2016). Robert (2014) found differences only for the first job, and the effect disappeared after controlling for other variables. Moreover, part-time job is related to OE (Belfield, 2010; Ghignoni & Verashchagina, 2014), with women usually had part-time jobs more frequently than men, and with gender differences among productive sectors, with more OE women than men in finance, professional, scientific and administrative activities (Tarvid, 2015). Moreover, women coming back to work after a childcare period have many options to become overqualified (Boll

et al., 2016). Harari et al. (2017) meta-analysis did not find differences by gender in perceived OQ.

Regarding **age**, most studies found higher rates of OE in the first career stages, showing a progressive (but sometimes small) decrease in more advanced careers stages (Green & McIntosh, 2007; Verhaest et al., 2015; Congregado et al., 2016). Other studies did not find tenure related to OE (Belfield, 2010; Verhaest & Omeij, 2010), but the first job is particularly subject to OE and OQ, increasing the likelihood to be overeducated in further jobs (Kiersztyn, 2013; Roberts, 2014; Meroni & Vera-Toscano, 2017). Meta-analysis from Harari et al. (2017) did not find age effects on perceived OQ.

Family background (parent's level of education, social class) had also been considered an antecedent of OQ. Barone and Ortiz (2011), Robert (2014) and Turmo-Garuz et al. (2019) pointed out the relevance of family background on predicting OQ. Gonzalez-Romá et al. (2018a, b) established the relevance of social capital, partially determined by family cultural and economic level. Erdsiek (2016) suggested that family background affects OQ through social capital, differences in career choice and differences in the level of endowments and capabilities obtained by job entrants. Capsada-Munsech (2020, p.232) found that "having a higher educated mother reduces OE likelihood, compared to those with a lower educated mother, while a father's education is practically irrelevant to predict a worker's probability of overeducation".

Finally, **ethnic minorities** showed consistently more OE with regard to ethnic majority groups (Rafferty, 2012; Nieto et al., 2015; Verhaest et al., 2015; Prokic-Breuer & McManus, 2016; Banerjee et al., 2019). These findings are sometimes explained by the lack

of social capital, language proficiency, differences in educational quality and background or imperfect transferability of skills. Rafferty (2020) points out that ethnic, nationality, age and gender discrimination (but sexual orientation, disability or religious beliefs as well) are associated with higher levels of OQ. Nevertheless, Cim et al (2020), using PIAAC data from 11 European countries found that immigrants were more likely to be overeducated than nationals, but they are less likely to be cognitively over-skilled, showing that education credentials do not always correlate with basic competence scores.

Educational characteristics combine demographic and structural factors. Figures of OQ vary as a function of the level of studies, academic achievement and field of studies. Barone and Ortiz (2011) found a higher level of OE among bachelor vs. master graduates, and vocational education graduates vs. university graduates, with more OE for humanistic graduates. Borgna et al. (2019) found a higher risk of OQ among graduates than upper-secondary qualified employees. Nevertheless, Harari et al. (2017) in their meta-analysis only found a small effect of level of education on perceived OQ that was only significant in higher power distance cultures. Poor academic achievement also predicted OE. Congregado et al. (2016) found that tertiary graduates had 23% more likelihood to be overqualified than those with basic education. Flisi et al. (2017) argued that high levels of standardization and stratification in the educational system led to lower rates of OQ among countries, with better results for vocational tracks. Verhaest et al. (2015) stated that vocational education is related to higher OE and OQ, whereas more generally oriented education is related to lower OE and skill mismatch, and study results prevented OE. Green and McIntosh (2007) found that marks in mathematics reduced the likelihood

to be overqualified and science-based subjects are also less likely to induce OE. Turmo-Garuz et al. (2019) found a gap between Humanities and Arts graduates and other graduates, especially from technology areas. Robert (2014) found more job mismatch among graduates in social sciences, humanities, arts and education graduates when compared with engineering, manufacturing and construction graduates in the post-communist societies. In addition, Boll et al. (2016) found relevant differences in the relationship of some demographic aspects between graduates and medium-level educated subjects in West and East Germany, suggesting that OQ operates differently among distinct educational levels.

In sum, being a woman and belonging to an ethnic minority increase the likelihood to be overqualified, youngsters show higher rates of OQ as a relevant part of overqualified increase their job fit as their careers advance, and education level and orientation (more general vs. vocational and practice-oriented) seem to have different implications with regard to OE and over-skilling.

With regard to **economic factors**, different indicators had been associated with OQ prevalence. Davia et al. (2017) found higher rates of OE in countries with higher university enrolment rates, but they conclude that OE is not simply a result of the higher education expansion. Unemployment rates (Robert, 2014), and youth unemployment rates (Ghignoni & Verashchagina, 2014) are positively associated with OE, whereas temporary employment rates are negatively associated (Ortiz, 2010). Reversely, Turmo-Garuz et al. (2019) did not find effects of unemployment rates or economic growth on OE, but they found that the consequences of the economic downturn of 2008 changed the role of career mobility variables in predicting

OE. Sector structure of the economy and the relationships between the education system and labour market has been mentioned as a relevant factor. Knowledge intensive sectors, investment in R&D and a close relationship between education and professional needs reduced OQ (Ghignoni & Verashchagina, 2014; Robert, 2014; Tarvid, 2015; Davia et al., 2017; Flisi et al., 2017; Turmo-Garuz et al., 2019). Moreover, the rigidity of labour market and labour regulations (i.e., employment protection laws) increase the figures of OQ (Green & McIntosh, 2007; Ortiz, 2010; Robert, 2014; Flisi et al., 2017). More recently, McGuinness (2018) found negative correlations of OE with rates of unemployment, temporary employment, women employment and rates of employees in manufacturing, and positive correlations with rates of employees in public administration and university graduates' rates. In the same line, Berlingieri (2019) found less likelihood to be overqualified in large cities, suggesting an effect of aggregation economies. All these findings pointed out the relevance of the labour market structure in the prevalence of OQ, showing that the balance between qualified job availability and the highly qualified labour force is a critical aspect for OQ.

Job and organizational characteristics had been less studied in their relationships with OQ. Belfield (2010) found more OE among firms with more part-time workers, more manual workers and where more male workers were employed. Green and McIntosh (2007) found lower levels of OE among companies with bigger size and higher full-time employment rates. Ghignoni and Verashchagina (2014) found higher levels of OQ in small firms. Lobene et al. (2015) suggested that job repetitiveness made more salient the perception of OQ. Rohrbach-Schmidt et al. (2016) found that occupational

heterogeneity explained a 23% of the differences in the risk of OE, and high skill non-routine analytical tasks reduced the risks of OE and over-skilling. Reversely, cognitive routine tasks and non-routine manual tasks increased the risk of being overeducated, but not over-skilled.

Some evidence suggests that OQ is partly the result of career choices. Artés et al. (2014) found that a secure job, a family friendly job and job mobility moderated the effects of OQ, considering that some people could choose to be overqualified in exchange to job security and work-life balance. Verhaest and Verhofstadt (2016) found job autonomy and quantitative workload associated with OQ. Overqualified workers found higher autonomy and lower quantitative demands than their matched job-mates, but lower autonomy and higher quantitative demands than their matched former classmates.

There is inconclusive evidence about the role of **career history and job search strategies** as OQ antecedents. Time in unemployment was positively related to OQ (Robert, 2014). Nevertheless, individuals taking an overeducated job, faced a strong negative effect in terms of their chances of obtaining a matched job later on, compared to graduates who waited longer in unemployment (Meroni & Vera-Tosacano, 2017). Previous OQ is a relevant predictor of further educational mismatch (Yeves et al., 2013). Scurry and Blenkinsopp (2011) distinguished between voluntary and involuntary OQ, a distinction that relies on career planning. In the same vein, Dar and Rahman (2020) mentioned career stake (if the overqualified situation is considered as a survival job or a career job) as a relevant variable. In addition, OQ (especially, perceived OQ) is related to flexibility, tolerance to OQ and the willingness to accept any job (Ramos & Hernández,

2014; Verhaest et al., 2015). Guerrero and Hatala (2015) found that job search intensity was not directly related to OQ, but financial needs mediated this relationship: job search intensity was positively related to perceived OQ for job seekers with high financial needs. Job search constraints predicted actual and future higher objective OE (Verhaest et al., 2015). Valls et al. (2018) found that personal proactivity predicted career planning that in turns reduced further perceived OQ. Work values and work centrality could affect OQ, as subjects could better tolerate being overqualified if their intrinsic work values and work centrality are low, but such variables are mainly studied as moderators (Maynard & Parfyonova, 2013; Ramos & Hernández, 2014; Erdogan et al., 2018).

Nevertheless, **employability** as a psychosocial resource (Fugate et al, 2004), its dimensions (human and social capital, career identity, personal adaptability) and perceived employability had been analyzed as antecedents of OQ. Yang et al. (2015) found positive and negative effects of career adaptability on perceived OQ. Employees with higher career adaptability have psychological resources to cope with difficulties, new responsibilities and receive more delegated responsibilities from supervisors, promoting their self-determination and competence feelings, and decreasing perceived OQ. Reversely, career adaptability enables individuals to seek new career goals and search for new job opportunities, promoting a sense of perceived OQ. Several studies found significant relationships between employability dimensions and perceived OQ and skill mismatch, like personal adaptability, career identity (direct effect or moderated by core self-evaluations), social capital (through tolerance to OQ or perceived employability), and different indicators of human capital like

degree studied, job experience or postgraduate training (Gamboa, 2013; Yeves, 2015; Hernández et al., 2017; González-Romá et al., 2018a, b). All these results demonstrate the relevance that psychosocial resources as employability, as well as the career goals, work values and career expectations, have in perceiving and understanding OQ.

In sum, both demand and supply factors predicted OQ. Employment opportunities and economic development, labour market structure and regulations and educational system characteristics play a role from the demand side. From the supply side (individual's characteristics), some demographic characteristics as well as employability and career-related variables are relevant antecedents of OQ. Human capital indicators (level of education, field of graduation, postgraduate training, work experience and level of competences) seems to have a critical role on OQ experiences as well.

2.3. What happens to overqualified individuals?

A vast amount of economic research about the effects of OQ on wage and incomes provided consistent evidence of the detrimental effect of OQ on wages, as compared with matched individuals with the same levels of qualification. As wages had a cumulative effect along time, there is a substantial economic loss for overqualified people. Dolton and Silles (2008) found a wage penalty of 35-40% among overeducated in the UK, but they remark that those individuals still earn more than less educated employees. Budría and Moro-Egido (2008) found that strong skill mismatch carried a pay penalty ranging from 13% to 27% in Spain. Brynin and Longhi (2009) found a wage penalty of overqualified workers regarding their classmates performing a matched job, but they also found a wage premium of overqualified regarding

employees in the same job with the right level of education. Badillo-Amador and Vila (2013) found wage differentials better explained taking into account both OE and skill-mismatch measures. Both measures seem to have different and separate effects. Nieto and Ramos (2017) found salary differences for OE, after controlling skill levels, showing that OE penalty is not only due to lack of relevant skills. Pecoraro (2016) found that two thirds of overeducated were only apparently overqualified. Whereas both groups do not receive returns for the level of education pursued, the wage penalty was higher for those who had skills not related to the job. Mateos and Salinas (2018) also found salary differences between real and apparent overqualified, with higher wage penalties for apparent OQ and a wage premium for real (but not for apparent) overeducated with regard to colleagues well matched with lower levels of education levels. Both OE and skill mismatch were associated with lower job satisfaction and lower wage, with bigger effects for OE on wage penalties and stronger effects of skill mismatch on job satisfaction. Kracke et al. (2018) found important wage differences as a function of OQ, the half of such differences attributed to individual heterogeneity among people with the same level of education, and a half of the wage penalties attributed to formal OQ. Johnes (2019) attributed the wage differences found to differences among workers. Finally, Kampelmann et al. (2020) found that OQ had an inverted L effect of statistical OE on firms' productivity that is only partially compensated by the increase in labour costs. Whereas overqualified workers seem to be more productive than their colleagues in the same jobs with matched education levels, their wage is under they should receive accordingly. All these evidences suggest that OQ receive a wage penalty, and this is more evident when not only

received education, but acquired skills overpass the job requirements. Moreover, these results suggest that a significant part of overeducated workers lack some relevant skills to adequately perform their jobs, but a remarkable portion of workers are really overeducated and over-skilled. Thus, heterogeneity among workers with similar education levels, contributes to (partly) explain wage penalties, but OE has a substantive effect on (lower) salary that extends along the overall career.

In addition to income penalties, research had consistently associated OQ with diverse job-related outcomes, like job attitudes, retention, well-being and performance. Different theories aim to explain such relationships.

Relative deprivation theory (Feldman et al., 2002) states that relative deprivation mediates the relationship between underemployment and relevant job outcomes. Overqualified workers feel deprived from some job features that are valued, they are entitled for and they feel deserved for them. As work is a multifaceted phenomenon, deprivation of OQ workers is possible regarding different job features, like opportunities to use their skills, the prestige associated to higher-status job, rewards linked with such jobs or some intrinsic characteristics of jobs that match their qualification. Deprivation leads to negative effects, mainly job (dis)satisfaction, as well as organizational commitment, well-being and turnover intentions, resulting in lower motivation and job performance. This theory recognizes the relevance of individual differences in the experience of OQ, provides an explanation for employees that volitionally choose to be overqualified in exchange of other job features like work-life balance or permanent contract, and gives some rationale to understand why some

people are more or less likely to feel deprived as neurotics or narcissists (Luksyte and Spitzmueller, 2011).

Person-job fit theory (Edwards, 1991) explains the detrimental consequences of OQ as a result of a person-job misfit. Person-job fit refers to the congruence needs-supplies (how well the environment fulfills individuals' goals, values, and aspirations), and demands-abilities (compatibility between employees' knowledge, skills, and abilities and formal job requirements). Person-job misfit leads people to perceive that their psychological needs have been ignored resulting in negative consequences for individuals and organizations.

Equity theory (Adams, 1963) also explains the effects of OQ. Employees will engage in input/output comparisons to determine their sense of fairness. When inputs (e.g., education, skills, and experience) do not match outcomes (e.g., recognition, pay, responsibility), individuals will develop a sense of unfairness. This theory predicts that individuals will respond to this situation either by changing their perceptions of the situation or by taking action such as leaving the situation, reducing their performance, and increasing their outcomes (Erdogan et al., 2011).

Relying on these theories, evidence about the effects of OQ on job attitudes is consistent. Negative results on **job satisfaction** and its dimensions appeared in a long series of studies (Johnson and Johnson, 2000b; Maynard et al., 2006; Fine & Nevo, 2008; Fleming & Kler, 2008; Lobene & Maede, 2013). García-Mainar and Montuenga-Gómez (2020) found that apparently overeducated workers were more satisfied than genuinely overeducated, and unadjusted workers (those matched with the job but finding your education not useful for the job)

were the more satisfied. The meta-analysis of Harari et al. (2017) found a sample size-weighted corrected correlation coefficient of $\rho = -.41$.

Perceived OQ was related to different dimensions of job satisfaction (Johnson & Johnson, 2000b). OQ was negatively related to work satisfaction (Maynard et al., 2006; Lobene & Maede, 2013). Job satisfaction (overall and main job dimensions) among overqualified were lower than those not overqualified, but still high enough (Fleming & Kler, 2008). Perceived cognitive OQ (a less prevalent measure of OQ than the traditional perceived OQ) was strongly correlated with job satisfaction (Fine & Nevo, 2008). In addition, different variables moderate the relationship between OQ and job satisfaction. Negative affect moderated the relationship between one indicator of OQ (no grow) and job satisfaction (Johnson & Johnson, 2000a). Empowerment moderated the OQ-job satisfaction relationship, which was only significant for employees with lower levels of empowerment (Erdogan & Bauer, 2009). OQ was negatively related to intrinsic, extrinsic and social dimensions of job satisfaction, with work experience moderating the relationship between OQ and extrinsic satisfaction (Peiró et al., 2010). Career stage (if the employee was yet studying) and previous OQ also moderated this relationship (Hernandez et al., 2012). The importance of competence and growth as a work value marginally moderated the negative effect of perceived OQ on job satisfaction (Maynard & Parfyonova, 2013). Leader-member exchange and team cohesiveness reduced the detrimental effects of OQ on job satisfaction, pointing out the role of interpersonal relationships at work as key moderators (Alfes et al., 2016). The type of employment is also relevant, with greater decrease on job satisfaction for private overqualified workers than

for public workers and self-employed (Congregado et al., 2016). Voluntary overqualified showed higher levels of job satisfaction than those of involuntarily overqualified, pointing out that voluntariness to accept OQ matters (Steffy, 2017). Verhaest and Verhofstadt (2016) found a mediation effect of job autonomy: overqualified workers had more job autonomy and less quantitative demands than their adequately matched workmates, suggesting an interesting positive way to cope with the lowered job satisfaction among overqualified workers. Reversely, the study of Zheng and Wang (2017) did not find a significant relationship between perceived OQ and job satisfaction. Arvan et al. (2019), in a sample of employees from a US public university developed a three-wave panel study, founding that job dissatisfaction predicted perceived OQ, whereas OQ did not predict further job dissatisfaction.

Thus, overqualified seems to be consistently related with lower job satisfaction, but some variables moderate such relationship, like positive affect, work values (in special, competence and growth), career stage, empowerment, interpersonal relationships, voluntariness of being overqualified and job characteristics like job autonomy.

Negative effects of OQ on **organizational commitment** has also found consistently but in a fewer number of studies (McKee-Ryan & Harvey, 2011). Organizational commitment is negatively related to perceived cognitive OQ (Maynard et al., 2006; Lobene & Maede, 2013). Harari et al. (2017) meta-analysis, with only three independent samples, found size effects of $\rho = -.38$ for affective commitment, and $\rho = .12$ for normative commitment, whereas a non-significant value of $\rho = .15$ was found for continuance commitment. Work values, organizational learning

and power distance were found as moderators of such a relationship, whereas voluntary vs involuntary part-time has no significant moderating effects. Lower decrease of commitment was found among overqualified that give less value to competence and growth as compared with overqualified who valued more competence and growth (Maynard & Parfyonova, 2013). OQ was related to affective commitment only when organizational learning is high, but not in companies with low levels of organizational learning (Zheng & Wang, 2017). OQ only reduced commitment among low power distance cultures (Harari et al., 2017).

OQ has been found significantly related with **turnover intentions** (Lobene & Maede, 2013; Steffy, 2017; Ju & Li, 2019), individual and collective turnover (Park & Shahiri, 2015; Mitchel & Zatzick, 2015) and job search (Maynard & Parfyonova, 2013). Harari et al. (2017) meta-analysis found OQ positively related to turnover intentions ($\rho=.37$) and job search ($\rho=.30$). But these relationships appear sometimes moderated by other variables. The relationship between perceived cognitive OQ and turnover intentions was stronger for involuntary part-time workers (Maynard et al., 2006). OQ was associated with intentions to remain and voluntary turnover, but these relationships were attenuated among more empowered employees (Erdogan & Bauer, 2009). Employees with higher OQ levels and high expectations of a better fitting job were less prone to stay in their jobs (Hernandez et al., 2012). Genuine overeducated workers (both overeducated and over-skilled) being more likely to quit their jobs than apparent overeducated (overeducated but skill matched) (Park & Shahiri, 2015). Age-discriminated workers were more prone to quit when they are overqualified, compared with no overqualified employees (Triana et al., 2017). Job insecurity

employability mediated the relationship between OQ and turnover intentions, moderated by perceived employability and self-efficacy, before the economic downturn of 2008, but no mediation nor moderation was found after the economic downturn in 2011 (Ramos et al., 2015).

OQ predicted active job search behaviours and voluntary turnover six months later, partially mediated by job satisfaction and affective commitment, and moderated by the work value "competence and growth" (Maynard & Parfyonova, 2013). Nevertheless, Erdogan et al. (2011) claimed for more research because findings are inconclusive to answer if overqualified workers are more likely to quit their jobs than their education-matched co-workers are. Thus, it seems that overqualified workers are more prone to quit their companies, but some moderators provide nuanced information about the intentions to change the job, like interpersonal relationships, the meaning that individuals give to their experience of OQ (work values, career stage) and personal resources like empowerment. More research is needed to fully understand the psychological mechanisms that lead from OQ to turnover intentions, beyond the mediation of job satisfaction and commitment.

Regarding the relationship between OQ measures and indicators of **health, stress and wellbeing**, there is consistent evidence but some non-coincident results. There are findings on the negative relationship between educational mismatch and mortality in a very large longitudinal study (Garcy, 2015), between overs-killing and work life conflict, through job satisfaction (Shevchuk et al., 2019), between OE and life satisfaction, but such relationship attributed to job characteristics (Artes et al., 2014), between OE and depressive symptoms (Wasserman &

Hoppe, 2019), between perceived OQ (Johnson and Johnson, 1991) and a combined measure of OE, over-skilling and over-experience (Johnson & Johnson, 1996) with five dimensions of wellbeing (psychosomatic stress, depression, frustration, hostility, and insecurity), and between perceived OQ and life satisfaction, positive and negative affect and career satisfaction, through perceived deprivation (Erdogan et al., 2018). In addition, Harari et al. (2017) meta-analysis found a significant relationship between perceived OQ and psychological wellbeing ($\rho = -.26$), but not for physical well-being ($\rho = -.09$, non-significant), nonetheless they suggest an indirect effect of OQ on physical wellbeing through psychological wellbeing. Reversely, Friedland and Price (2003), did not find significant relationships of skill mismatch with health indicators (subjective health, functional health chronic disease), neither life satisfaction and depressive symptoms. Hultin et al. (2015) only found a significant relationship between OE and self-related health among women, but not among men, neither for psychological distress between men and women. Chen et al. (2019) found OE positively related to happiness in a sample of Taiwan employees, moderated by age: OE has no effects on happiness for people aged 42 and above, (attributed to the major relevance of religious beliefs among this group), and a positive effect among people from 32 to 42 via social network channel, and among people from 18 to 32, but no mechanism is found to explain this effect.

However, most research considered different moderator variables, which could explain this diversity of results. Wu et al. (2015) found a significant negative effect of OQ on subjective wellbeing, buffered by job autonomy but only among individualistic cultures. Overqualified new employees generally experienced less work-related positive affect

and perceived less job autonomy when beginning their jobs than not overqualified counterparts, with a buffering effect of proactive personality (Simon et al., 2017). Two objective measures of OQ and depressive symptoms were negatively related, with more detrimental effects in countries with higher unemployment rates or where unemployment rates increased recently (Dudal & Bracke, 2019). The relationship between OQ and work alienation was moderated by psychological resilience (Wang et al., 2019). The relationship between OE and life satisfaction was moderated by optimism (Wasserman & Hoppe, 2019). Finally, close social ties and the prestige of employing organizations could buffer some of the detrimental effect of OQ, as perceived OQ were related negatively to perceived career performance and life satisfaction when organization's external prestige was lower, but the relationship was nonsignificant when the perception of the external prestige was higher (Gkorezis et al., 2019). All these evidences suggest that OQ has detrimental effects on life satisfaction, psychological wellbeing and health, but different variables, specifically job characteristics, personal resources (like optimism, resilience or proactive personality), career centrality, and labour market conditions, seems to moderate such relationship. The effects of OQ on physical health seems to be mediated by psychological wellbeing and are found less frequently.

Finally, OQ had been related to different indicators of **performance**, with less consistent findings compared with other job outcomes. Bashshur et al. (2011) summarized previous evidence, pointing out that the effect of OE on task performance is quite small, as only four empirical studies showed significant effects on task performance. Erdogan et al. (2011) concluded that OQ is negatively related to self-based scores of

performance, but it is positively related to supervisory- and peers-rated measures of performance, as well as objective measures. Harari et al.'s (2017) meta-analysis did not find a significant effect of perceived OQ on task performance self-assessment and supervisory ratings of performance, both in high and low power distance cultures. Regarding organizational citizenship behaviours (OCB), perceived OQ was not significantly related to supervisor ratings of performance, but was negatively related with self-perceived assessment of OCB ($\rho = -.25$). Perceived OQ was positively related with self-rated scores of counterproductive behaviours ($\rho = -.16$), without available data for supervisor-based ratings. Finally, their meta-analysis did not find significant results for the effect of OQ over innovative performance, using supervisor-based ratings (no results for self-rated innovative behaviours).

Nevertheless, a number of studies found significant relationships, in most cases, with relevant moderators or mediators. Regarding task performance, Erdogan and Bauer (2009) found better sales performance (rated by supervisors) among overqualified salespeople in Turkey. Empowerment moderated the relationship between OQ with other job outcomes, but not with performance. Alfes (2013) found that overqualified perform better as peer-group perceptions of OQ increase. The authors explain that in a group where most people are overqualified, their performance could increase. Lobene and Maede (2013) did not find a direct effect of OQ on job performance. Nevertheless, among people with high "calling" orientation (a work orientation focused on fulfilment, when individuals attempt to make the world a better place), OQ lead to lower levels of performance, whereas among people with low "calling" orientation, OQ lead to higher performance. Zheng and Wang (2017) found

a positive effect of perceived OQ on task performance, only when the level of organizational learning was low, but effects were non-significant when the level of organizational learning was high. Li et al. (2019) found a mediated effect of OQ on task performance through perceived status and organization-based self-esteem. OQ had a negative effect on perceived status as well as organization-based self-esteem, variables that are positively related with task performance. Interpersonal relationships moderate the self-perceptions about the personal value in the organization, that lead overqualified people to lower decreases in task performance. Hu et al. (2015) found a positive effect of OQ on task performance and OCB through task significance and person-group fit, in special when peers are overqualified too, but also when the peers have lower levels of OQ. Deng et al. (2018) analysed the relationship between perceived OQ and three indicators of performance (in-role, interpersonal altruism and team-member proactivity). OQ was related with social acceptance, moderated by higher interpersonal influence, and in turns, social acceptance led to higher in-role performance, more interpersonal altruism and more proactivity towards team members.

Regarding to extra-role behaviours, Agut et al. (2009) found that OQ was negatively related with career-enhancing strategies and job content innovation, and moderated by personal initiative for job content innovation. Overeducated youngsters were involved in more job content innovations when they exhibit high personal initiative. Moreover, high levels in both personal initiative and intrinsic work values lead to more career-enhancing strategies among overeducated workers in comparison with employees with low levels in both individual variables. Lin et al. (2017) found an indirect positive effect of OQ on

both organizational citizenship behaviours and creativity through task crafting, stronger for higher levels of organizational identification, that decays for very high levels of OQ. Erdogan et al. (2020) found that perceived OQ was negatively related to OCB and voice, but the negative effects on voice disappeared for high person-organization fit. In addition, when the overqualified workers perceived low person-organization fit, their centrality in advice network (the frequency they are looked for receiving advice) was reduced through lower levels of OCB.

With regard to creativity and innovative performance, in addition to the Lin et al. (2017) study, Luksyte & Spitzmueller (2016) did not find a direct effect of OQ on creative performance, but employees who feel overqualified become creative when they feel organizationally supported and appreciated. In addition, developmental i-deals and the opportunity to be mentors made more creative the overqualified workers. Moreover, Wu et al. (2017) found that OQ was negatively related to adaptive behaviour. Employees who feel overqualified are less likely to respond to and support change than employees who do not feel overqualified. However, higher job autonomy attenuated this relationship. Job autonomy presumably provides autonomous motivation for overqualified workers to apply their capacities to adapt to change. Dar and Rahman (2020) found that OQ was positively related to creativity among teachers in Pakistan when they were in a career job, but negatively related when they were in a survival job. The way people give meaning to their own employment situation seems to be very relevant regarding how they experience job attitudes and behaviours.

Regarding counterproductive work behaviours (CWB), Liu et al. (2015) found that OQ

was indirectly related to CWB through organization-based self-esteem and anger towards employment situation. Thus, overqualified tend to be angrier regarding their employment situation and expressed lower self-esteem (based on organizational belonging), which in turns lead to higher levels of self-rated CWB. Only anger towards the employment situation showed a significant effect on supervisor-rated CBW. Fine and Edwards (2017) found that perceived OQ was positively related to minor, organizational and interpersonal CWB, but not for serious counterproductive work behaviours. Dar and Rahman (2020) found that OQ was negatively related to deviant workplace behaviours among teachers in Pakistan when they were in a career job, but positively related when they were in a survival job.

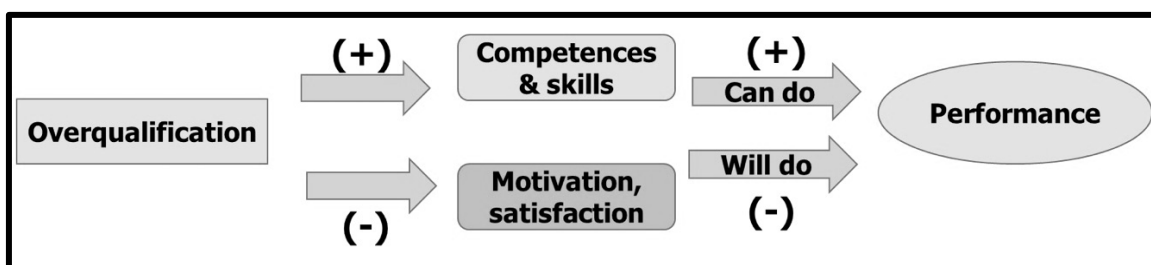
In sum, OQ relationship with performance indicators is mixed. Task performance was found positively related to OQ, but some studies found a negative relationship or no relations at all. Peers OQ, empowerment, "calling" work orientation and interpersonal relationships (status, organization-based self-esteem negatively and supervisor-subordinate quality of relationships) appeared as significant moderators, and task significance as a positive mediator. A few studies found negative relationships between OQ and extra-role behaviours (self-rated), with personal initiative and intrinsic work values as moderators, and task significance and task crafting as mediator. More agreement is found among for the negative relationship between OQ and CWB: organization-based self-esteem and anger toward employment situation appeared as moderators. Finally, the relationship of OQ with creative and innovative performance is blurred. Direct effects seem to be not significant (with one exception), but task crafting appears as a posi-

tive mediator, whereas job autonomy, supervisor support and opportunities to development and enrichment at job had a positive or buffering effect.

This divergence regarding the results about OQ and performance relationships has two potential explanations (Erdogan et al. 2011; Bashshur et al. 2011), as reflected in figure 1. First, OQ could affect performance through two alternative ways, providing opposite results. On one hand, overqualified employees have the skills, knowledge and competences to perform well their tasks, even above their matched colleagues in the same jobs. Thus, they can perform well at jobs where they are overqualified. On the other hand, as main theories on performance explain, motivation affects performance. In this sense, relative deprivation of valued job features or person-job misfit among overqualified have a potential demotivation effect. In other words, overqualified workers can do their tasks, but this does not mean that they will do their

best in a job that is demotivating because the low opportunities to use own skills. The second potential explanation has to do with the boundary conditions that allows individuals to be motivated. The focus of research shifts to investigating what variables (the meaning given to current employment situation, personal characteristics, job features, organizational practices, labour market conditions) could drive overqualified to perform at their best. Previously mentioned studies suggest some of the conditions which motivate overqualified workers to do their best, but the list of potential moderator variables that would buffer the demotivating effects of OQ on performance and other job outcomes remains open and under scrutiny. Thus, "overqualified workers could make valuable contributions to organizations, when they are motivated to use their potential. This is not to say that all OQ workers will make valuable contributions" (Erdogan et al., 2011, p.223).

Figure 1. Double path from OQ towards performance: Qualification vs. (de)motivation (Based on Erdogan et al., 2011)



2.4. The dynamics of overqualified: stepping-stone or trap?

One relevant issue about OQ relies on its dynamics, how this phenomenon evolves along time for each individual. This concern refers to how long individuals remain being overqualified or reversely, when they get a job that fits well with his/her level of competence, skills and education. Moreover, it is relevant not only the duration of OQ but also how people understand this experience and if the meaning they give to being overqualified changes along time. Abovementioned studies showed high rates of employees remaining overqualified for a long time. OQ is a persistent problem for many young people. Kyersztyn (2013) found that more than 50% of overqualified still remained overqualified five years later. Around one in ten were persistently overeducated along the study's 20-years period. Overeducated were about four times more likely to be overqualified in the subsequent panel wave, with the stronger association during economic prosperity. Verhaest et al. (2015) found that nearly 40% of graduates remained overeducated for almost the entire seven years period after labour market entry. Congregado et al. (2016) found that predicted probability of remaining overqualified after one year is approximately 94%. In the same line, García-Castro (2017) studied graduate trajectories along with at least three different jobs, and the 36% of workers remained slightly or strongly overeducated at the end of this sequence. Baert et al. (2013) found that that OE strongly retards the transition to adequate employment, even among long-term unemployed youngsters. Many individuals remain overeducated for long periods. By accepting a job for which one is overeducated rather than only accepting a matched job, monthly transition rates into adequate employment

fall by 51– 98%, depending on unemployment duration (Baert et al., 2013). That is, accepting an overeducated job strongly reduces the chances to be matched at a job in the short term.

Nevertheless, a notorious percentage of overqualified employees obtain a better-fitted job in a relatively short period. In this sense, some researchers have considered that OQ is a step-stone in the career of job entrants, as some individuals look for or accept jobs under their level of education or skills as a temporary stage in their careers. Gaining experience, obtaining practical knowledge and skills, increasing social capital or entering in a company as a way to be promoted in the near future. In addition, some economic theories (e.g., human capital theory, career mobility theory), consider that OQ is produced by temporary failures in the labour market, due to lack of information or deficient decision-taking process. Despite this is not exactly saying that OQ is a step-stone career stage, these theoretical frameworks assume that OQ is a temporary situation.

However, some individuals could choose a job under their own education or qualifications "in exchange" of receiving valued job features not available otherwise (for instance, permanent contracts, work-life balance, reducing commuting costs, working in a prestigious or preferred company, fewer work pressures or responsibilities, etc.). In such cases, the acceptance of being overqualified is not always a step-stone stage on career, neither a trap. Some individuals could accept such conditions in a permanent voluntary basis, whereas other could accept OQ in a temporary basis, while expecting their personal circumstances to change or maintaining the job in the meanwhile they find a job which fits their qualifications and other

valued characteristics. Some of them could be trapped on OQ, for some OQ could be a step-stone, and for others OQ could be a permanent chosen situation. Finally, some job entrants could be forced to accept a job under their qualification simply for avoiding unemployment.

Several studies analyzed the incidence of changing the job from an overqualified situation. McGuinness & Wooden (2007) found that only 20% of voluntary leavers were job-matched four years later. Robert (2014) found that leaving the first occupation slightly decreased vertical mismatch, but not horizontal mismatch. Boll et al. (2016) stated that an employer change seldom proved to be a suitable strategy to reduce OQ over time. Reversely, Hernandez et al. (2011) analyzed employees with a sequence of employments and found that when employees changed jobs voluntarily, OE shown in the last job were significantly reduced regarding previous jobs. Nevertheless, the time spent being overqualified in the first job had an effect on the reduction of OE from the first until the last job. Maynard and Parfyonova (2013) found that 48% of employees who voluntarily left their jobs from time 1 to time 2 reported lower levels of perceived OQ in time 2, vs. only a 26% among those who did not leave. This means that voluntarily changing the job provides bigger opportunities to escape from OQ than inside promotions, but the 52% of voluntary leavers did not reduce OQ in a new job.

Meroni and Vera-Toscano (2017) found that accepting OQ in a first job substantially increased chances of ending the career in an unmatched job, being a trap for most overqualified. They found cross-national differences, with Southern and Eastern European countries showing the more detrimental effects. In the UK, the trap is only for those who

accepted the first job immediately after graduation. In Scandinavian countries, there was a stronger detrimental effect for apparent OQ, whereas the effect was the opposite among Continental European countries. Two factors could explain these cross-national differences: the relation between the supply of educated workers and labour market demand, and the strictness of employment protection policies. Thus, graduates entering a narrow and competitive labour market are much more likely to remain trapped in OQ, whether apparent or genuine, given the competitiveness with other well-educated candidates (which increases match insecurity), and labour market protection policies (which discourage mobility) (Meroni & Vera-Toscano, 2017, p. 132). They conclude that it is preferable to wait for a matched job than accepting job offers under the own level of qualification.

Acosta-Ballesteros et al. (2018) found evidence supporting that OQ is a trap for most overqualified workers, neglecting the hypotheses from career mobility theory. Work experience did not help overqualified to find a better-matched job, rejecting that OQ is a good strategy to gain experience and increase human capital. Overqualified in the first job had 40% more likely to remain overqualified in a later one than those who were not. Thus, the pure effect of being overqualified is much bigger than the effect of worker's characteristics. In the same vein, Borgna et al. (2019) with data from 16 European countries found that economic conditions have a strong effect on OQ, in special among "movers", employees that cannot maintain the job because of economic recession. Thus, there is some indirect support for the idea that OQ is mainly a non-voluntary situation.

Groleau and Smith (2019) found evidence that neglected most of the assumptions from human capital theory. In their study, only a narrow group of postsecondary graduates that were overqualified moved to a match. For the more talented and mobile candidates, OQ can be a stepping-stone rather than a trap, but this group is only a minority of the overall sample. Analyzing different groups of mismatched workers, Wen and Maani (2019), only found occupational advancement among under-educated (regardless of whether or not they are skills matched). A lower likelihood of upward occupational mobility is found among overeducated-and-over-skilled workers and also among workers who are overeducated but skill-matched. Overeducated-and-over-skilled workers who leave their current jobs suffered a great disadvantage with respect to wage growth, compared to similarly overeducated-and-over-skilled workers who do not leave their employment during a three-year period. Even when they resign from their current employment, they suffer considerable disadvantage in wage payment in their new employment. All these results neglect hypotheses from the career mobility theory, reinforcing the idea that OQ is more a trap than a stepping-stone. Reversely, Turmo-Garuz et al. (2019) found that seniority in the firm reduces OQ. They point out that OQ is a structural phenomenon, beyond the incidence of demand and economic factors. In addition, they suggest that social capital seems to be very relevant to career advancement, as well as some aspects of human capital, like a field of study, academic performance and level of training. The authors interpret their results as some support for career development and signaling theories.

In sum, most evidence supports the trap hypothesis, at least for most overqualified

workers. Nevertheless, OQ could be a stepping-stone phase of career for some specific groups of overqualified workers, but only in specific conditions of economic and labour market variables and individual characteristics (social background, field of study, previous job experience in the field of studies, talent and mobility). However, put together, previous findings seriously criticize the hypotheses from human capital and career mobility theories. Abovementioned authors suggested different motives to explain why overqualified workers remain trapped:

- **SIGNALLING:** Persistent OQ is externally signalled as poor performance or other desired features, discouraging employers to hire people so long overqualified. Reversely, some specific characteristics of overqualified could allow them to upward to a matched-job (i.e., work experience in a specific field, or credentials to some prestigious university).
- **DOWNGRADING:** employees that remain so long overqualified could suffer from progressive de-skilling, as they remain under-using their skills, as well as cognitive decline. In addition, overqualified workers show lower participation in on-the-job training.
- **AWARENESS:** some overqualified workers could suffer from apparent forms of OQ, being rather job-matched on skills. These workers could be aware of their real level of mismatch and adjust expectations regarding their further career advancement. Using subjective measures of OQ, they will express better person-job match along time.
- **HABITUATION** to current job conditions: overqualified employees could be habituated to their (mismatched) job

conditions, losing their interest for advancement. Misuse of skills could contribute to the habituation process.

- **Less JOB SEARCH initiatives:** people with a mismatched job could have less time for job search, less motivation to searching for alternatives, and fear to lose their current position in the company and their actual benefits, thus reducing turnover intentions (continuance commitment).
- **RESIGNATION:** mismatched employees could enter in decision-making process, balancing pros and cons of remaining. After a period of being shocked, some overqualified could feel that being overeducated has relatively low costs. Lack of opportunities or failing attempts for advancing could lead overqualified to be resigned with their current work situation.

Overqualified individuals could experience one or more of such motives, that lead them to reduced opportunity to advance in their career as a result of adjusting their expectations, reducing their job search behaviours and decreasing the interest of employers to hire them.

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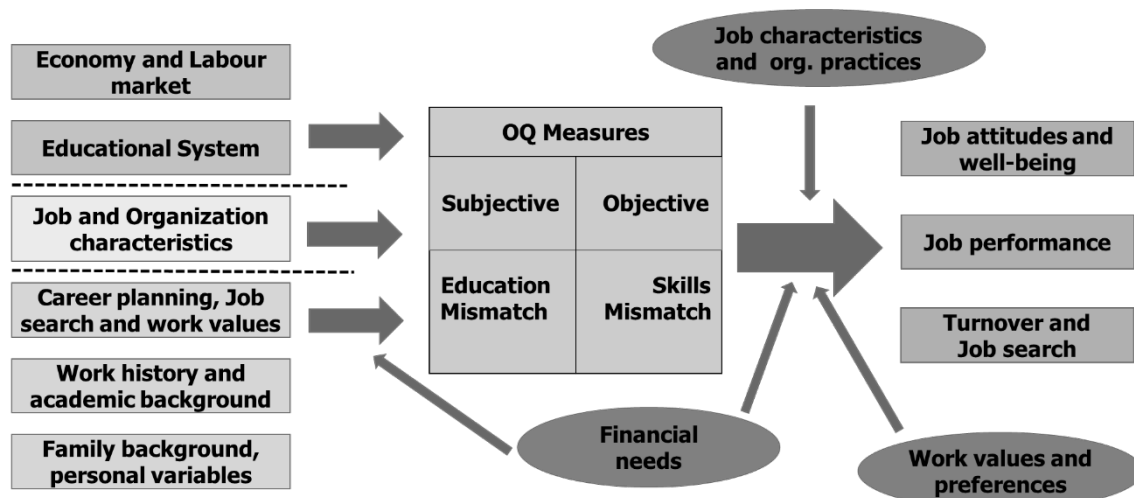
Discussion

The vast amount of recent research on OQ allows for some conclusions. OQ is a person-job mismatch on education, experience or skills that affects to high rates of educated individuals, especially among youngsters. Figure 2 attempts to reflect the main agreed evidences. Rates of overqualified workers reach from 1/10 to 1/3, depending on groups (age, education), countries and the different measures of OQ (subjective vs. objective measures, skill-mismatch vs. overeducation, etc.). Thus, OQ is a relevant, extended and persistent phenomenon along most countries.

OQ reflects a lack of adjustment between labour market demand (quality of jobs offered) and supply (labour force available), producing inefficiency of resources (individ-

ual and family investments, educational expenditures, labour market inefficiencies). OQ negatively influences job attitudes and behaviours, wellbeing and career variables, resulting in negative outcomes for both people and organizations. Individuals accept a job under their level of qualification as a way to avoid unemployment, in cases of reduced job opportunities, in exchange of other valued job features, or as a strategy to gain a competitive advantage in the labour market. In contrast, employers could be interested in hiring overqualified workers because reduced training costs, for preparing future candidates for upward mobility inside the company, for taking profit of some advantages from overqualified (decision-making, problem solving skills, etc.), or as selection bias allowed from the labour market (credential's inflation). Nevertheless, some

Figure 2. Overqualified: mapping previous research agreements



empirical evidence suggests higher turnover intentions and mixed results about performance from overqualified workers, reducing the potential benefits of hiring overqualified people. Different theoretical approaches had been used to explain OQ (human capital, assignment models, job competition, career mobility theories, matching theories of job search), but the empirical evidence is mixed regarding such theoretical frameworks, specifically with some research providing support and other studies neglecting human capital theory as well as career mobility models.

A wide array of variables appeared as antecedents of OQ. First, some demographic data showed consistent relationships with OQ. Being woman and belonging to an ethnic minority increase the likelihood to be overqualified, youngsters show higher rates of OQ as a relevant part of overqualified increase their job fit as their careers advance. Education level and orientation (more general vs. vocational and practice-oriented) seem to have different implications with regard to OE and over-skilling, as well as family background. In addition, career history and job search strategies play a role for experiencing OQ, and employability as a psychosocial resource (human and social capital, career adaptability and career identity) and perceived employability had a relevant influence on OQ. However, job and organizational characteristics (job variety, autonomy, company size), and more specifically economic and labour market conditions had been considered relevant antecedents of OQ. The development and opportunities offered by the labour market, R&D investments and technological development, sectors, employment protection laws, and unemployment rates seem to play a role in the increase or decrease of OQ figures. Alto-

gether, it seems that both supply (characteristics of qualified job entrants) and demand (characteristics of jobs available in the labour market) contribute to the existence, prevalence and persistence of OQ. This suggests that interventions to reduce it could address both sides of the demand-supply unbalance that causes OQ.

Moreover, the level of agreement about the effects associated to OQ is stronger than that about antecedents. Overqualified workers had a serious penalty in terms of wages and job satisfaction, regarding their classmates well matched at job, but it seems they have a premium regarding their workmates with the appropriate level of qualification. Relative deprivation theory, person-job fit theory and social exchange theory had been advocated to explain such detrimental effects that are extended to organizational commitment, turnover intentions and some indicators of psychological well-being. Overqualified workers earn lower salaries and lack some valued job features (use of possessed abilities and skills, a social status commensurable to the qualification acquired, expected autonomy and challenge, and maybe social relationships different than expected), leading to a lower job satisfaction (both intrinsic, extrinsic and social dimensions). The detachment from the company and the propensity to leave the organization could follow the experience of misfit, deprivation and inequity. Nevertheless, relationships between OQ and job outcomes appear moderated by a number of variables, making valuable to analyze what elements could reduce the detrimental effects of OQ, and even transforming the negative consequences of OQ in positive outcomes, as some of the aforementioned studies had found. Regarding performance, two different paths of relationships with OQ had been proposed. Over-

qualified are well-equipped in terms of competences and skills, so they could perform well through the “qualification track”. Reversely, they are not always motivated enough for performing well, as a result of their less positive job attitudes. Thus, overqualified workers can perform well, but this does not mean that they will to perform well. Beyond personal characteristics, work values and career history, variables that help to explain how individuals make sense of OQ experiences, there are different interventions that could be developed to ameliorate the consequences of OQ, in terms of job attitudes as well as performance. Among others, we can mention changes in job characteristics and job design, giving opportunities to growth at work (job-crafting, empowerment, opportunities to be mentor, i-deals). Providing organizational support and promoting warm social relationships at work, including group composition in terms of competences and skill match, supervisor-employer relationship and interpersonal influence among colleagues, could be valuable interventions. The human resources practices and organizational characteristics (status and prestige) could be other factors that matter to shift OQ from a bad experience to an acceptable employment condition. Under certain conditions, overqualified workers could show positive job outcomes and performance.

Finally, the present review addressed the question of OQ as a stepping-stone career phase or a trap for overqualified employees. Despite some overqualified individuals experience a fast career advance towards a fitted job, research findings suggest that OQ is a trap for most overqualified that remain so long in an unmatched job, in special among young job entrants. Nor previous work experience, neither voluntary turnover ensures overqualified workers to escape from OQ.

The high rates of trapped overqualified suggest that some demand factors (economic and labour market conditions, education system outputs) could be determinant variables, in addition to psychosocial processes of overqualified (resignation, habituation, de-skilling and being outdated, demotivation for job search, awareness of real qualifications). Nevertheless, a critical research question is to know what characteristics, strategies and attitudes could lead some overqualified to escape from a mismatched employment and lead others to remain trapped in OQ. By now, we know the period of entering the labour market is crucial and that accepting any job that does not match the own qualification could be the first step to remain overqualified for a long time. Thus, vocational orientation plays a determinant role in preventing OQ.

Research implications

In the last two decades, research on OQ increased substantially, reaching agreement over some issues, and discovering several research gaps. First, discrepant results regarding the use of different measures of OQ claim for additional research. Nevertheless, advancement about what measures could be preferable, the association between different measures, and some biases attached to each kind of measures are noticeable. Surprisingly, subjective measures not always produce the higher figures, neither skill mismatch are systematically preferable to overeducation to analyse OQ. However, the combined use of more than one measure is a strongly recommended research guideline.

Second, despite the existence of several theories about OQ (both for understanding its antecedents and explaining its effects), future research requires to be more theoretically oriented. In special, when considering

moderating variables in the relationship between OQ and its consequences. Relative deprivation and person-job fit are useful to understand the detrimental effects of OQ, and probably both theories have strengths. Nevertheless, the broad range of moderating variables not always fit well with these theoretical frameworks. A more person-centric approach that make sense of the personal experience of OQ could be useful. Future research needs to consider why people “accept” to be overqualified and focus on career theory, from not only the point of view of qualifications acquired and its relationship with the labour market, but deep analysing work values, career paths and career planning.

Third, more advancement regarding the step-stone vs. trap issue is required. More longitudinal research is required to analyse the career tracks of young people entering the labour market, the progress made during the first years in employment, and deep analysing why a big number of people remain overqualified for so long.

Implications on Policies and Practices

Cumulated evidence on OQ suggest some practical implications regarding the **education system and the labour market**. First, OQ relies partly on the qualifications required by jobs. Thus, we need to stimulate companies and social agents to move into higher added-value products and services to increase skills requirements in jobs, to increase the investments in R&D, make efforts aligned to technological advancement and reinforce economic sectors that provide more skilled jobs. Second, labour market flexibility facilitates job mobility, that in turns contribute to reducing OQ. In special in some countries, labour flexibility should be stimulated, without reducing the employment protection laws. It seems that labour

market characterised by both labour rigidity and protection laws increases OQ. Consequently, stimulating labour flexibility instead of stability, while maintaining employment protection appears as a promising strategy.

In addition, previous research suggests some trends for the education system. Encouraging the development of skills and competences into the educational system, in line with the Bologna Agreements from the European Higher Education Area is imperative. A relevant part of OQ around Europe is derived from overeducated people that are not over-skilled. In the same line, education systems need to promote training and education related to the economy of the future, and the flows of students among the different modalities, levels and fields of study would be reoriented in the same direction. As research demonstrates, the modality and field of study are strongly related to OQ.

In parallel, on-the-job training should be encouraged in its different forms, and work-experience directly linked with the content of the studies should be promoted. Regarding a more vocational vs. general orientation, the results are less clear, and differences among countries seem to be relevant. However, education authorities and agents would be interested in strengthening the links between future labour market demands and the competences developed through education. This does not mean that theoretical content, general qualification and critical thinking would be dismissed. Nevertheless, some educational systems reflect a substantial gap between education and training offered and the level and kind of competences and qualifications required by the labour market.

Research of OQ also suggest different lines of intervention regarding **career planning and vocational orientation**. First, the education systems need to provide a stronger

and high-quality career information that should include knowledge and evidence about OQ. Young job entrants need to know what is OQ, what are its potential effects, the variables that play a role in its appearance, and need to receive qualified vocational counseling to prevent and reduce overqualified. Two different periods for career orientation are particularly useful, when facing transitions into education cycles, and just before entering the labour market. Career orientation would include information about the labour market, training and education opportunities, job search competences, but also about career planning and employability as a psychosocial resource. Promoting employability, balancing strong career identity, higher human and social capital and career adaptability, and job search skills could facilitate job entrants to avoid OQ. Moreover, career orientation could prevent against quick and unthoughtful patterns of insertion in the labour market, and offer alternative resources to resist financial pressures that lead to urgent decisions. Accordingly, the employment services could develop active employment policies oriented to reach better person-job fit, not only through job search policies or training opportunities but also through on-the-job experiences related to the field of study of candidates. Employment and orientation services need to focus on fostering the relationships between job experiences and the education field of job searchers.

Finally, research on OQ provides some practical implications for **organizational stakeholders** (companies, HR professionals, job

designers and/or managers). First, research evidences suggest that companies should offer realistic job previews and avoid credentials inflation. Organizations should be aware about the pros and cons of hiring overqualified individuals, and make decisions about OQ regarding their own HR strategy. Second, when detecting OQ among their staff, organizations could develop different interventions and practices to diminish negative effects of OQ (for both the employees and the company), and to stimulate the potential positive effects. Offering different opportunities for training and development to overqualified employees (just against the evidence of reduced participation in training), considering opportunities for promotion, facilitating the use of skills and competencies, enhancing practices like job crafting, employee empowerment, job autonomy and control, decision-making, and offering opportunities to overqualified workers for growing their job descriptions (delegation, mentoring...) or allocating them together. In parallel, companies need to fight against stigmatisation of overqualified workers, including them on high commitment HR practices (performance appraisal, strategic recruitment, merit-pay, equity policies, etc.), giving them the opportunities for motivation and personal growth. Previous research showed that OQ could demotivate people at work, but some evidence provides insights to stimulate motivation, reduce the detrimental effects and enhance its potential positive effects.

4.

Conclusions

Overqualified is an increasing phenomenon in most developed countries, affecting big figures of qualified employees that had more skills or formal educational background than the required by their jobs. Despite differences in magnitude depending on the measures employed (over-skilling vs. over-education; objective vs. subjective measures), it seems a big concern for social agents because the detrimental consequences that overqualified has on the job attitudes, well-being and even in rewards for the overqualified, as compared with matched employees in terms of qualification. In addition, overqualified becomes a long-lasting situation for many affected workers, whereas only a part of them live overquali-

fied as a step-stone in their career. Both supply and demand factors play a relevant role on OQ, including the education system and labour market structures, HR strategies and policies from companies, demographic and educational characteristics of employees, as well as career variables and job attitudes. Nevertheless, the effects of overqualified appear moderated by a vast array of variables that could mitigate its negative effects, and even turning OQ into some positive effects. Multidisciplinary research points out future strategies that social agents from Education and Labour bodies, the career counselling system, the trade unions and companies (in special HR departments) could implement to reduce the social costs that resulted from overqualified.

5.

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Event

Event Budget for Event : EXPENSES

[Date]

	Estimated	Actual
and hall fees	\$500.00	\$300.00
airs	\$100.00	\$100.00
	\$200.00	\$100.00
	\$300.00	\$500.00
	\$1,100.00	\$1,000.00

Actual Cost Breakdown

	Estimated	Actual
	\$200.00	\$500.00
	\$900.00	\$400.00
	\$500.00	\$600.00
	\$300.00	\$800.00
	\$400.00	\$200.00
	\$2,300.00	\$2,500.00

	Estimated	Actual
	\$500.00	\$800.00
	\$100.00	\$200.00
	\$600.00	\$500.00
	\$2,000.00	\$1,500.00

	Actual
Site	\$600.00
Decorations	\$400.00
Publicity	\$600.00
Miscellaneous	\$400.00
Refreshments	\$2,000.00
Prizes	
Program	

Estimated vs. Actual

