

Higher Education Expansion and
Graduate Labour Market Outcomes in Spain:
Overqualification and its Discontents



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Abstract

This is a mixed methods study about graduate¹ educational and skill mismatch in Spain. The study examines the evolution of graduate mismatch at the macro level, investigating changes in the number of tertiary graduates vis-à-vis-the number of high-skilled jobs in the economy. The proliferation in the share of graduates unable to find high-skilled jobs in Spain has accentuated policy concerns that the number of graduates has increased faster than the number of high-skilled occupations available. Graduates are consequently “bumped down” the occupational ladder and forced to take up lower-skilled jobs, a situation defined in this thesis as occupational drifting down.

The first part of this thesis is dedicated to exploring the determinants of graduate labour market mismatch, with focus on the influence of educational track² and field of study on the probability of graduate employment and occupational drifting down. Drawing on the Spanish Labour Force Survey for 2006 and 2012, this study provides an original analysis of the determinants of employment and occupational drifting down among Spanish graduates, employing logistic models to evaluate the influence of personal, educational and occupational characteristics.

The fact that these graduates are employed in jobs that one generation ago were occupied by non-graduates, however, does not automatically indicate that the demands of these occupations has remained the same. Since job content is not

¹ At the tertiary level including ISCED 5a (theory-based general programmes leading to a bachelor's or master's degree), 5b (vocational tertiary degree) and ISCED 6 (advanced research at least three years long and leading to a PhD or equivalent) using ISCED-97.

² Vocational tertiary versus university tertiary

fixed, the quantitative methods employed in this thesis alone are insufficient to determine the skill requirements of occupations and changes in job content over time. This study, therefore, uses the multiple-case study approach to investigate changing skill requirements within occupations. To this end, 50 in-depth interviews with senior managers and graduates in the retail banking and retail trade industries were conducted in Spain between January 2015 and March 2016.

In gaining proximity to the real-life context of graduate mismatch in the workplace, this study seeks to advance scholarship on graduate skills utilization and hiring trends at the sectoral level, providing novel insight into the changing skill requirements of two industries in Spain. In this way, this study fills a research gap, as sectoral case studies are sparse in the literature (Caroli et al., 2008; Elias and Purcell, 2004; Mason, 2002; Green and McIntosh, 2002, Knights and McCabe, 1998, Mason, 1996), particularly for Spain.

Chapter 1 | Introduction

The supposed advent of the knowledge economy and the projected increase in the supply of high-skilled jobs spearheaded expansionary higher education (HE) policies worldwide to meet the needs of this new economy. This “massification” of higher education systems began taking shape in industrialised countries in the 1960s (Schofer and Meyer, 2005) and in Brazil, Russian, India and China (BRIC) in the 1990s (Carnoy et al., 2013). The “Spanish university boom”³ began in 1978 with the decentralization of the tertiary education system to the autonomous communities.

Since then the number of universities has quadrupled in Spain from only 19 universities in 1970 to over 84 universities in 2016. The number of private universities alone multiplied eightfold over the past three decades alone, to reach 34⁴ universities in 2015-2016 (see Table 1.1).

Table 1.1 Spanish university expansion (1985-2015/6)

Number of universities	1985	1995	2007	2015/2016
Public	30	46	50	50
Private	4	10	25	34
Total	34	56	75	84

Source: Own elaboration based on data from OECD

The rapid expansion in tertiary education has led to significant differences in educational attainment levels between new entrants to the labour force, or younger adults (25-34 year-olds) as defined by the OECD,

³ <http://universidad.es/en/spain/spains-universities/spains-universities>

⁴ <http://www.lamoncloa.gob.es/espana/eh15/educacion/Paginas/index.aspx#sistemauniversitario>

and the older cohort (55-64 year-olds). The share of tertiary graduates⁵ among younger adults in the working-age population consequently exceeded 40%, reaching almost double that of the older cohort in 2012 (LFS, 2012).

The policy discourse that accompanied Spanish HE expansion was focused on galvanizing universities to play a more active role in driving the knowledge economy. In Spain as in other industrialised countries with an expanding HE sector, the idea was that investment in high skills would encourage companies to invest in research and development (R&D), new technology and training. In this way labour market demand would absorb this high-skilled labour market supply, allowing economies to break from the “low-skill equilibrium”⁶ to the “high-skill path”, and subsequently improve their global competitiveness (Finegold, 1993). To this end, the Spanish University 2015 Strategy⁷ introduced a “social pact” between universities, the government and civil society, placing universities at the heart of the “knowledge triangle”, built on research, education and innovation.⁸ According to the University Strategy (2010), the transition to a knowledge-based economy was contingent upon the modernization of the Spanish university, described as the designated “engine” for a new economic model (p. 27). To

⁵ The share of younger adults in the WAP reached 40.4% in 2012 compared to 19.4% among the old cohorts.

⁶ A “low-skill equilibrium” is one where companies are not producing innovative new technology nor are they sufficiently investing in the training of their managers or employees, rendering them unable to produce innovative new technology. Finegold (1993) specifically used the word “equilibrium” to emphasize a state of interdependency of decision-making to invest in high skills between individuals and companies.

⁷ The University Strategy was approved by the Council of Ministers on 30 January 2009. It is a joint strategy between the Government of Spain, the autonomous regions and universities themselves.

⁸ <http://www.lamoncloa.gob.es/espana/eh15/educacion/Paginas/index.aspx#sistemauniversitario>

this end, the University Strategy explicitly stated that economic progress “can only come about through modernized universities” (Ibid, p. 168).

The Strategy made clear that the “conventional” role of the Spanish university had changed, and a new “innovative or entrepreneurial university” was better suited to meet current needs (Ibid, p. 62). The conventional university was described as home to knowledge creation and transfer, whereas it was only the entrepreneurial university that was able to lead on technology transfer, generating spin-offs that “convert knowledge into innovation, using R&D findings to make the productive sectors more competitive” (Ibid, p. 63).

Under this new Strategy, universities were expected to play a new role in a changing economy. This new role, the document referred to as “a third dimension”, which entailed partaking in innovation. In taking up their new role or “third dimension”, universities were required to focus on not merely generating knowledge, but using knowledge as an input for innovation, which in turn was key to growth. The Spanish Strategy for Science, Technology and Innovation 2013-2020 also cited the role of R&D in economic growth, with the Strategy listing the rigidity of university governance as one of the hurdles impeding universities playing their full role in promoting innovation. The text of Organic Law 8/2013⁹ further confirmed the inherent assumption in Spanish public policy that improving educational outcomes “opens the doors to high-

⁹ <http://www.lamoncloa.gob.es/espana/eh15/educacion/Documents/LOMCE%208.2013.pdf>

skilled jobs”, which in turn advances economic growth.¹⁰

The expectation inherent in this discourse about the knowledge economy was that the radical shift in labour market supply would be accompanied by a parallel shift in labour market demand. In other words, jobs would accommodate and utilise graduate skills, and the share of high-skilled jobs would increase in proportion to the increase in the supply of graduates in the labour market. This is enshrined in the standard human capital approach that more education would, in fact, prove beneficial for both the individual and society concerned, with the US spearheading the “idea that the ‘wealth of nations’ would be embodied in its human capital stock” (Goldin and Katz, 2007).

However, the expectation that the knowledge economy would triumph at the end, creating jobs that would demand graduate skills, proved disconnected from the realities of the Spanish labour market. In Spain, less than 60%¹¹ of those aged 20-64 were employed in 2012, a percentage share significantly lower than the European average of 69% (European Commission, 2010), and just over 19% were unemployed. Among university graduates, just over 76% were employed, whereas nearly a quarter of graduates were unemployed (11.5%) or inactive (12.2%) in 2012. As for those who did have jobs, far from being employed as knowledge workers,

¹⁰ “Mejorar el nivel de los ciudadanos en el ámbito educativo supone abrirles las puertas a puestos de trabajo de alta cualificación, lo que representa una apuesta por el crecimiento económico y por un futuro mejor.”

¹¹ 68.7% in 2006.

over one fifth¹² of Spanish university graduates among the working-age population (15-64), and close to one third¹³ of young graduates (20-29 year-olds) were found in medium and low-skilled occupations in 2012. In fact, the majority of jobs (over 66%) available in the Spanish economy in 2006 and 2012 respectively were medium and low-skilled occupations.

That the knowledge economy has not transformed the occupational structure, with the majority of jobs remaining medium and low-skilled, is not unique to Spain. In his seminal book *Demanding Work*, Green soberly pointed out that some non-routine unskilled jobs, particularly in the service sectors, whether it was the garbage collector or the cashiers in the supermarket, were likely never to become extinct in any country (2006). And so, “the truth, which should be obvious to anyone who is not so keen to see change around every corner, is that there is a very substantial continuity in the mix of skills used in the jobs required in modern industries” (Green 2006, p. 172). Highlighting the “heterogeneous” nature of graduate labour market outcomes (Green and Zhu, 2010) confirms the importance of labour market demand, to in the first place require graduate qualifications, and in the second place utilise graduate skills in the labour market.

To investigate graduate labour market outcomes in Spain, two main hypotheses are tested in this study. The first hypothesis is that with HE expansion, graduates of less occupation-specific fields of study and less

¹² Using Spanish labour force survey data, the percentage share of graduates in medium and low-skilled occupations was 22.0% in 2006 and 22.8% in 2012.

¹³ The percentage share of youth in medium and low-skilled occupations was 31.4% in 2006, and 29.5% in 2012.

technical subjects have become more likely to find themselves in medium and low-skilled occupations¹⁴ that one generation ago did not require their university credentials and skills. The second hypothesis is that higher education expansion has allowed employers in the services sector in Spain to increase educational requirements for entry-level jobs, without sufficiently upgrading job content to fully utilise graduate skills in turn. If this is true, then HE expansion would have just made it more challenging for graduates to reach essentially the same occupational place, allowing employers to “create more hoops through which they [graduates] have to jump to reach much the same destination” they would have reached without their qualifications pre-expansion¹⁵ (Mayhew, Deer and Dua, 2004, p. 73).

To test these hypotheses, this study employs mixed methods. It uses quantitative methods to capture the share of graduates entering medium and low-skilled occupations that traditionally did not require a university degree, and to capture the prevalence of graduate labour market mismatch over time. For the purposes of this thesis, education mismatch is defined as having more or less education than that required to acquire the job, with overqualification or overeducation indicating possessing higher educational attainment levels than those required to get the job. Skill mismatch, on the other hand, is defined as having more or less skill than is needed to do the

¹⁴ ISCO Major Groups 4, 5, 6, 7 and 8

¹⁵ Reference in this article is to the UK specifically with supply of graduates equal to mid-1960s level.pre-expansion,

job, with overskilling defined as having more skill than is required to carry out the tasks the job entails.

The study employs econometric methods drawing on the Spanish Labour Force Survey to examine the determinants of graduate labour market mismatch with a focus on the effects of fields of study and educational track.¹⁶ The quantitative methods employed in this thesis, however, do not indicate whether graduate skills are underutilised in these low and medium-skill jobs, or whether job upgrading has taken place. Since quantitative methods, on their own, are insufficient to determine changing skill requirements, this study also employs qualitative methods, drawing on fieldwork in two service industries, retail banks and retail trade, to get closer to the realities of educational and skill mismatch in the workplace. The objective behind using the in-depth field interview with senior managers and graduates as the key method of inquiry is to understand from those who directly represent supply and demand in these industries whether job content in those graduatised occupations indeed has changed so as to require and utilise graduate skills.

Ultimately, the concern with graduate labour market mismatch in this thesis is essentially a concern for graduate skill utilization in the workplace, and graduate capabilities in the labour market. Mismatch is an indicator of job quality, which itself is significant because, as French sociologist Georges Friedman argued, without quality jobs that provide the opportunity for growth, workers in fact risked “objective alienation” (Gallie, 2012, p. 326).

¹⁶ Vocational versus university tertiary education

Furthermore, when left unused, the skills of overskilled workers “can become obsolete or atrophy over time” (OECD, 2013, p. 36), skills atrophy itself a cause for policy concern.

The chief worry in public policy debates over HE expansion and overqualification is whether a socially optimal level of education is being achieved (whether privately or publicly funded).¹⁷ This decision is contingent upon the evaluation of the social returns to education, defined as the social value¹⁸ of the extra output produced net of social cost. Social returns include the externalities or spill-overs, outlined in the literature in the form of: (i) more informed citizenry better able to engage in the democratic and civic process; (ii) “positive production externalities,” namely the influence of better educated workers (inter alia lower quitting rates, less likelihood to shirk from job responsibilities etc.) on the conduct of others in the firm (Blundell, Dearden, Meghir and Sianes, 1999).

Outline of this study

Chapter 2 presents a critical review of the literature on labour market mismatch in the workplace. The chapter surveys the main labour market

¹⁷ Notwithstanding the difficulties in measuring rates of return and establishing causality, a pure pecuniary analysis of the financial returns to investment in higher education has consistently proven that average private financial returns, despite increasing variance, are high enough to make the investment financially viable to any student investor. This positive private rate remains true irrespective of whether education is serving as a vehicle for more productivity in the workplace or merely acting as a signal/ticket to advance one’s place in the queue to employment.

¹⁸ This overlooks the unrealised private returns that comprise part of the social return. The argument is that if the causal wage returns from investment were higher than the costs of expansion, some valuable investment is not taking place. In this case, the role of government is to correct whatever market failures are making this the case.

theories that underpin the literature on education and skill mismatch. Most important to this analysis are human capital theory (HCT) and job competition theory, which may be distinguished based on the different weights they place on education supply and labour market demand in determining wages and graduate labour market outcomes. The chapter subsequently explores the various methods employed in the literature to identify “graduate” jobs in order to evaluate graduate mismatch. Indicators of graduate jobs utilised in the literature include broad occupational classifications, subjective self-reports, job analysis, the statistical method and trends in the graduate wage premium, each of which is explored in turn. The chapter then proceeds to survey sectoral case studies that have been employed to study sector specificities in graduate skill utilization and hiring trends. The final section surveys the literature on job quality, exploring in this context the application of the human capability approach to (HCA) to the workplace and mismatch debate.

The literature on “overeducation” has been criticized on several fronts. First “overeducation” as a term has not been consistently defined in the literature. Richard Freeman first used the term to describe a mismatch between educational supply and aggregate labour market demand in the US. An excess supply of graduates from a rapidly expanding HE sector, led to a sharp decline in income among new graduates in the 1970s, a phenomenon Freeman refers to as “overeducation”. Since Freeman first coined the term, however, it has occasionally been used to analyse education supply and skill demand in the labour market at the macro level, and other times to examine

qualification and/or skills mismatch at the micro level. Even just at the micro level, overeducation has been used in the literature to refer to a number of scenarios, including (i) graduates performing non-graduate jobs, sometimes referred to in the literature as graduate “underemployment” (Chevalier, 2003; Green and Henseke, 2016) or occupational “drifting” down (Berg, 2003) or “filtering” down (Knight, 1979); (ii) graduates performing jobs for which they have more skills than is required to do the job, typically referred to as over-skilling; (iii) and graduates having more education than is needed for the job, often synonymously used with overqualification to indicate the same situation of having more qualification than necessary for the job (Duncan and Hoffman, 1981; Dolton and Silles, 2008; Green and Zhu, 2010; Tsai, 2010). To compound the ambiguity, it is still often not entirely clear whether an individual has more education than is needed to assume the job, sometimes specified in the literature as “hiring standards” (Halaby, 1994), or more education than is needed to perform the tasks of the job.

For the purposes of this study, education mismatch is defined as a situation where the education level of candidates does not correspond to the qualification level required for recruitment into the job, leading to graduate overeducation or “overqualification”, used interchangeably for when a graduate has more education than is necessary to get the job. Skills mismatch, on the other hand, is when the skill level of candidates does not correspond to the skill level of the job, leading to graduate overskilling if the graduate has more skills than is needed to perform the job. Occupational

drifting down is when tertiary graduates are employed in medium and low-skilled occupations that traditionally, or as recently as one generation ago, did not require their tertiary credentials.

The central argument that this chapter puts forth is that by emphasizing the wage premium, the economics of education field has served to limit the discussion to what is quantifiable in looking at education and skill mismatch. This has disproportionately focused much of the overeducation literature on the pecuniary benefits of education and the gap between graduate and non-graduate wages. The chapter argues that the human capability approach (HCA) provides a broader evaluative framework for analysing education and skill mismatch that widens the scope of analysis, from a focus on pecuniary benefits and the wage premium to a focus on what graduates are “able to do and to be” in the labour market (Sen, 1993). The chief concern in moving away from a narrow human capital to a human development paradigm is to shift the focus on individuals as the ends, rather than as the means, of the development process. The basic premise is that “human beings are not merely a means of production, but also the end of the exercise” (Sen, 1999, p. 296). Though such an analysis would necessarily include pecuniary benefits, it would broaden the scope to consider not just individual pecuniary but individual non-pecuniary benefits as well.

Chapter 3 outlines the main research questions and methods used. The chapter first provides the rationale for using mixed methods. It proceeds to briefly introduce the basic logistic models employed in the quantitative

analysis of the effects of fields of study and educational track on the probability of employment and the likelihood of being placed in a medium or low-skilled occupation, discussed in more detail in Chapter 4. After describing the logistic regression model used, this chapter then turns to the case study approach adopted in the industry studies described in chapters 5 and 6. It explains the multiple-case sampling method used to select the organizations participating in the two case studies, as well as the methods used for analysis. In describing the methods used, the chapter also delves into the terminology and main classifications employed throughout this study, including the International Standard Classification of Occupations (ISCO) and the International Standard Classification of Education (ISCED).

Chapter 4 explores the influence of fields of study and educational track on the probability of employment and occupational drifting down. This chapter focuses on the occupational drifting down of tertiary graduates, with the underlying assumption that individuals make their educational choices based on occupational aspirations, and with specific “occupational returns” in mind in terms of job positions (Wolbers, de Graaf and Ultee, 2001). In the absence of data providing subjective self-reports of overskilling in the Spanish Labour Force Survey (LFS), this thesis relies on occupational drifting down (ODD). The assumption made is that ODD captures one clear aspect of graduate overskilling that is of the most concern from a policy perspective, since these graduates are occupied in medium and low-skilled occupations for which a tertiary degree may not be the most efficient mode of training.

After introducing the EU LFS, this chapter analyses graduate educational choices and labour market outcomes, before delving into logistic models used to analyse the determinants of employment and occupational drifting down.

Professional, managerial, and associate professional occupations are occupations that are associated with tertiary degrees following the International Standard Classification of Occupations (ISCO).¹⁹ They are also occupations that the models discussed in this chapter have shown to be associated with a number of job characteristics that are also frequently cited in the literature as indicators of the quality of employment or “decent work” (Burchell et al., 2014). These include work autonomy, employment security²⁰ and freedom from underemployment in terms of involuntarily working fewer hours than desired.

Since associate professional occupations were not traditionally considered graduate jobs, and since ISCO-08 associates the latter with tertiary vocational rather than university qualifications, two variations on the logit model are run. In the first model, professional, managerial and associate professional occupations are classified as high-skilled occupations, whereas in the second model, only professional and managerial occupations are considered as high skilled.

Both models confirm that fields of study and educational track significantly influence the risk of being found in a medium or low-skilled

¹⁹ Associate professional posts are associated with ISCED 5b not ISCED 5a and 6.

²⁰ Both in terms of full-time employment and tenure.

occupation, even after controlling for personal, workplace and household characteristics. The chapter shows that with reference to social science, business and law (SBL) graduates, university graduates from all other fields of study (except services) are at a significantly lower risk of being found in a medium or low skill occupations. The risk of labour market mismatch also differs by educational track, with vocational tertiary graduates more than six times as likely to be found in a medium or low-skilled occupation than university graduates.

Chapter 5 presents the retail banking case study, which investigates the drivers behind the increasing substitution of graduates for non-graduates in retail banks in Spain. The study examines changes in the content and education requirements for entry-level posts in retail banks. It is based on 33 semi-structured interviews with senior management and human resources directors, as well as managers and deputy managers of retail bank branches and young graduate employees. Interviews were carried out in Spain between January 2015 and March 2016.

Employers interviewed for this study articulated four main drivers for the graduation of entry-level posts. The first was that the entry level-jobs had been upskilled and had become more complex due to heavier regulatory requirements, more complex technology, more sophisticated clients, as well as a shift from sales to the provision of financial advisory support in the branches. The second rationale used was that banks were reliant on internal labour markets, and were in fact selecting their future managers when

recruiting fresh graduates for entry-level posts. The third rationale was that banks preferred graduates for the characteristics they associated with them, including their ability to learn faster and hit the ground running. The fourth reason employers provided was simply that there was an oversupply of graduates in the labour market, making the graduate labour queue too long for non-graduates to stand a chance.

This chapter argues that the tipping-point that led to the conclusive upgrading of educational requirements in retail banking came less in response to job upgrading than to HE massification, which rendered the hiring and training of non-graduates unnecessary. The reality remains that commercial managers are primarily tasked with selling a number of financial products and services, and are in fact unable to provide financial advice outside the scope of these products. The study does not deny that a “different level of ‘salesmanship’” (Grugulis, 2007, p. 81) is now required on the job, but only that salesmanship remains a medium-skill job, and until a graduate is promoted to the post of specialised commercial manager, itself only an associate professional occupation, graduate skills are likely underutilised in the workplace.

The second half of this chapter examines graduate trajectories within retail banks, looking at how the latter have diverged from the typical career trajectories of non-graduates who had occupied these posts just one generation before. This section explores delayed graduate school-to-work

transitions and their implication on graduate labour market outcomes in Spain.

Chapter 6 presents the retail industry case study. In light of this high prevalence of graduates employed in medium and low-skilled occupations in the retail industry, this analysis employs the case study approach to investigate job upgrading in graduatising occupations in the retail industry. This industry analysis is based on 17 in-depth semi-structured interviews with senior human resource managers and directors, as well as younger graduates representing three large retail companies in Spain. Two of the retailers surveyed are among the top 10 largest retailers in the country (see Table 1).²¹ The other is a smaller multinational retailer, with over 1,000 employees in Spain proper, specialised in providing restaurant services for travellers.

The study suggests wide discrepancies in recruitment patterns and graduate trajectories between core positions in headquarters and at the points of sale, thus confirming the “core-periphery” divide²² (Ainley, 2016). The study also suggests that even recruitment trends at the points of sale have been impacted by HE expansion. Rapid HE expansion has allowed employers in the retail firms sampled to require university degrees for traditionally non-graduate jobs in managerial posts in the points of sale (outlets and warehouses) when recruiting externally to fill these vacancies. These posts had in the past always prized experience and tenure on the job

²¹ <http://www.retail-index.com/Countries/ToprankingretailersinSpain.aspx>

²² The divide between headquarters and other locations

through an internal recruitment process over academic credentials. Furthermore, whereas in the past these jobs were not open to external recruits and incumbents had to climb through the ranks, today some of these vacancies are in fact filled with young graduates, who are able for the first time to compensate for lack of experience and tenure with a university degree. Therefore, according to some of the sampled employers interviewed, these university graduates are able to use the skills acquired through higher education as a substitute for experience and tenure on the job, elaborated in more detail in Chapter 6.

The final chapter explores the policy implications of the massification of HE on graduate labour market outcomes in Spain. Results from both sectoral case studies suggest that firms in the retail banking and retail industries are not as agile in their ability to adapt their production processes to accommodate the availability of a more skilled workforce. Instead the characteristics of the job have largely determined skills utilization and remuneration in the firms surveyed, with education playing its most significant role in allocating graduates their positions in the queue for high-skilled jobs. In this way, the cost of this structural mismatch at the macro level seems to have been mainly borne by graduates themselves, who have been the primary victims of “prolonged, uncertain and precarious” transitions from university education to their first graduate job, assuming they do succeed in securing a high-skilled job at all (Ainley, 2016, p. 111).

Chapter 2 | Overeducation: A critical review of the literature

Context

The US spearheaded the supply-driven “idea that the ‘wealth of nations’ would be embodied in its human capital stock” (Goldin and Katz, 2008), with its investment in human capital in the 20th Century, rendering it the “American Century” (Acemoglu and Autor, 2012). European nations shortly followed suit, pursuing the same HE expansionary policies in the 1960s and 1970s (Trow, 2000), so that HE expansion became part and parcel of a modern nation-state’s legitimacy. The BRIC countries followed in the last decade of the past Century, until the very “definition of a modern nation-state” came to connote massive expansion at both the secondary and tertiary levels (Carnoy et al., 2013, p. 298). Confirming this trend, between 2000 and 2011,²³ the world witnessed a ten-percentage point increase in the proportion of adults with tertiary-level qualifications (OECD, 2013).

A “new ideology”, which positioned education at the heart of economic development, provided the backdrop against which enrolment in higher education proliferated in industrialised countries since the 1960s (Schofer and Meyer, 2005; Ginzberg,²⁴ 2003). A group of scholars including Theodore Schultz, Jacob Mincer, Milton Friedman, Sherin Rosen and Gary Becker, all associated with the University of Chicago heralded what came to be known as the “human capital revolution” (Becker, 1993; Berg, 2003). These theorists

²³ Between 2000 and 2011

²⁴ In foreword to Berg (2003).

suggested looking at individual choices, such as the choice to pursue education and training or enhance health, as investments in human capital, similar to the way individuals or firms might invest in physical capital (Becker, 1993). This supply-driven approach to higher education expansion was not seriously challenged until the 1970s,²⁵ when two seminal books were published, namely *Education and Jobs: the Great Training Robbery* by American sociologist Ivar Berg from Columbia University, and *The Overeducated American* by American economist Richard Freeman from Harvard University.

Richard Freeman first used the term “overeducation²⁶” to describe a mismatch between educational supply and aggregate labour market demand in the US. An excess supply of graduates, amidst a rapidly expanding higher education sector, had led graduates in the 1970s to take non-graduate jobs, a phenomenon Freeman referred to as “overeducation”. In employing this term “overeducation”, Freeman wanted to draw attention to a new situation, one “in which the economic rewards to college education are markedly lower than has historically been the case and/or in which additional investment in college training will drive down those rewards” (Freeman, 1976, pp. 4-5). In

²⁵ The warning that HE expansion may potentially lead to overqualification dates back to even before World War II. A New York Times article from the 1930s already spoke of the “exaggerated overvaluation of schooling,” quoting German trade associations warning of “over-crowding in the engineering profession,” as a consequence of the expansion in the number of students enrolled in engineering programs in German universities. The article concluded that as a result of this expansion, “a sterile, educated proletariat is being produced without a chance of gainful occupation while millions are wasted on its training” (quoted in Schofer and Meyer, 2005).

²⁶ For the purposes of this project, and to avoid any ambiguity, the term overqualification and overeducation are used interchangeably to indicate educational mismatch.

emphasizing the falling graduate wage premium or difference in average earnings between those with college degrees and those without, Freeman was effectively the first to question whether college education remained a "good investment". The intention in emphasizing returns was not to depict individuals, to quote Freeman, as "a mythical species of homo economicus, who like Scrooge McDuck, views life strictly in terms of the almighty dollar" (Freeman, 1976, p. 56). Rather it was to emphasize that students' educational choices were investment choices, as well as consumption choices. This process heralded the emergence of a whole subfield within the economics of education, specializing in "the economics of overeducation".²⁷ The chief concern in this field remained the same as that of Freeman, namely to question whether a new situation was emerging, that of a declining college wage premium. If that were the case, then investing in education is rendered "like investments in other mature industries or activities, a marginal rather than highly profitable endeavour" (Freeman, 1976, pp. 4-5).

From sociology and around the same time, Ivar Berg's path breaking book *Education and Jobs: The Great Training Robbery* was published in 1970, preceding Freeman's by six years. Berg also criticized the "education craze" with its overt focus on "deficiencies" in individual human capital, namely education, at the expense of examining deficiencies in labour market

²⁷ The majority of the most-cited peer-reviewed journal articles from this sub-field (Dolton and Silles, 2008; Robst, 2007; Rubb, 2003; Groot and van den Brink, 2000; Dolton and Vignoles, 2000; Hartog, 2000; Duncan and Hoffman, 1981; Rumberger, 1981) have been published in the *Economics of Education Review* (Leuven and Oosterbeek, 2011).

demand and job creation (Berg, 2003²⁸, p. 29). The disproportionate emphasis on the supply side led to “educationally upgraded” jobs in terms of entry requirements (Berg, 2003, p. 66), with Berg observing that employers were increasingly using education as a “screening device” to discern ability and ensure “hiring ‘promotable’ employees” (Berg, 2003, p.16). This process effectively changed the relationship between what educational attainment levels the population had and what levels jobs required, leading to a “surplus of college graduates who presumably drift down to fill the deficit at the next lowest level” (Berg, 2003, p. 58). Berg warned that this kind of “credentialing” process would “isolate” and cause a schism between those with education and those without (Berg, 2003, p. 60).

Even though overeducation was at the centre of policy debates in the 1970s in the US, the increase in the returns to a higher education degree in the 1980s shifted the policy debate away from overeducation to educational attainment and quality of education provision instead (Becker, 1993, p.17). The returns to a graduate degree also peaked in the 1980s, with several authors²⁹ also empirically challenging the accuracy of Freeman’s prognosis of a falling graduate premium in the US in the 1970s. Notwithstanding these developments, overeducation came to be analysed for the first time, not at the macro level with focus on the supply of graduates and aggregate labour market demand leading to a reduction in the wage premium as described by Freeman, but at the micro-level. Rumberger (1981) was the first to investigate

²⁸ 2003 edition

²⁹ Smith and Welch (1978), Hammack (1978) and Levin (1977)

overeducation at the individual level, comparing graduates who were well matched to graduates whose skills were underutilised on the job (Leuven and Oosterbeek, 2011; Kucel, 2011). Rumberger (1981) defined overeducation as having more education than was required for the job, ascribing the increasing incidence of overeducation between 1960 and 1976 in the US to education supply outpacing labour market demand. Similarly Duncan and Hoffman, during the same year, also introduced a model to empirically measure the micro-level wage effects of overeducation.

Even though the declining wage premium may not have materialised in the US as per Freeman's prognosis, more graduates were increasingly placed outside of the high-skilled occupations traditionally associated with university degrees. In this way, education became a prerequisite to compete for increasingly scarcer full-time permanent positions, sometimes described as "core" jobs, in the decades post-expansion in many industrialised societies (Ainley, 2016, p. 34). Degrees, in fact, became the "foundation for [social] closure", creating gated high-skilled occupations from which non-graduates were increasingly excluded. In her book *Pedigree*, Rivera (2015) showed heterogeneity in labour market outcomes even between graduates, describing "higher education and employment [as]... two interlocking systems of economic stratification" (Rivera, 2015, p. 274). Rivera made the case that even though the competition for high-skilled jobs in prestigious elite professional services (EPS)³⁰ firms had been formalised and they were

³⁰ Prestigious investment banks, law firms and management consulting firms.

technically open to all graduates in the US, the “signals elite gatekeepers [employers] value[d]” effectively just served to reproduce the same elite (ibid, p. 265). This was because positions in these elite firms over which there was high competition among graduates remained “largely closed” to other graduates who had “not attend[ed the same] prestigious schools [universities]”, according to Rivera (2012, p.1004).

As higher education expanded and degrees became more common, graduate “closure” extended to associate professional posts, previously the remit of non-graduates. In this way graduates maintained their competitive advantage, effectively ensuring continued “closure” through tapping into social, cultural and material capital, alongside academic credentials (Tholen, 2016). Employers, for their part, sought graduates, if not for the skills they might have acquired in HE, then for other graduate characteristics including *inter alia* determination, promotability, trainability and adaptability (Berg, 2003; Tholen, 2016).

In this way, and particularly in economies where supply outpaced demand, the changing role of education in the labour market made “the ‘transition’ from education to the workplace and from youth to adulthood much more prolonged, uncertain and precarious, changing the nature of both youth and adulthood” (Ainley, 2016, p. 111). In these economies, these prolonged transitions were not the fault of the younger generation that was more educated than any generation that preceded it but the fault of an economy that was not creating high-skilled jobs in the numbers necessary to absorb the

share of graduates post-expansion. This left graduates in a situation, where they were “running up a down-escalator” (Ainley, 2016, p. 2). And so what went wrong with the human capital prognosis that there is instead an increasing concern with graduate underutilization subsequent to HE expansion?

In answering this question, this chapter provides a critical review of the literature on overeducation. “Overeducation” as a term in the literature has continued to be a fuzzy term, sometimes used to analyse education supply and skill demand in the labour market at the macro level, and other times to examine qualification and/or skills mismatch in the workplace. Even just at the micro level, overeducation has been used to refer to a number of scenarios, including (i) graduates performing jobs for which they have more skills than is required to do the job, typically referred to in the literature as overeducation or overqualification (Duncan and Hoffman, 1981; Dolton and Silles, 2007; Green and Zhu, 2010; Tsai, 2010) or over-skilling. Graduates performing non-graduate jobs is also sometimes referred to as graduate “underemployment” (Chevaliar, 2003; Green and Henseke, 2010) or occupational “drifting” (Berg, 2003) or “filtering” down (Knight, 1979); (ii) graduates having more education than is needed to get the job, sometimes specified in the literature as “hiring standards” (Halaby, 1991). The term “overqualification” or “overeducation” in this context remains ambiguous as it is not entirely clear whether the individual has more education than is needed to get the job, or more

education than is needed to perform the tasks of the job, with education serving as a proxy for skill needed to do the job.

For the purposes of this chapter, and in line with the rest of this thesis, education mismatch is defined as having more or less education than that required to assume the job, with overqualification or overeducation indicating possessing higher educational attainment levels than those required to get the job. Skill mismatch, on the other hand, is defined as having more (less) skill than is needed to do the job, with overskilling defined as having more skill than is necessary or required to perform the tasks of the job.

This chapter is structured as follows. The first section provides an overview of labour market theories of relevance in explaining graduate labour market mismatch. The second section explores the various methods employed in the literature to identify “graduate” jobs and subsequently evaluate graduate mismatch. Indicators of graduate jobs utilised in the literature include broad occupational classifications, subjective self-reports, job analysis, the statistical method and trends in the graduate wage premium, each of which is explored in greater detail in this chapter. The chapter argues that the disproportionate interest in the returns to college education and the wage premium or gap between graduate and non-graduate wages in the overeducation literature has come at the expense of investigating a broader notion of returns, one that puts graduate freedoms, including economic freedoms, at its centre. This is because the primary interest has been to calculate the economic returns, rather than delve into the realities of graduate

skills utilization in the workplace, and more broadly job quality of which skill utilization and mismatch is but part. To address these shortcomings, many of which are due to data limitations, a strand of the literature has employed qualitative methods to investigate sector specificities in graduate skill utilization and hiring trends, surveyed in the third section of this chapter. The fourth section explores the literature on job quality, which itself is contingent *inter alia* on the quality of the match and graduate skill utilization in the workplace. The last section explores the application of the human capability approach (HCA) to the education and skills mismatch debate. This chapter argues the HCA broadens the evaluation of HE expansion to capture the multidimensional returns to higher education, that are broader than merely the financial returns. The normative proposition that the capability approach puts forth is that “social arrangements should be primarily evaluated according to the extent of freedom people have to promote or achieve outcomes or functionings they value. Put differently, progress or development or poverty reduction, occurs when people have greater freedoms” (Alkire, 2008, p. 28). Evaluating graduate labour market outcomes in this way suggests that more education is useful only if it expands graduate freedoms, including in the labour market.

Theoretical framework

Education is valued not only as an end in itself, but also for the opportunities it opens up in all spheres of life (Nussbaum, 2011). In making their academic choices, individuals choose their level of education in relation to opportunities they wish to pursue, including education required to achieve the occupational or social status they aspire to reach. Much of the literature on overeducation has focused on returns to overeducation,³¹ investigating whether returns to years of surplus schooling, defined as schooling additional to that required for the job,³² are equal to, or lower than, returns to years of required schooling. Whereas supply-driven labour market theories emphasized the importance of years of schooling in determining the graduate wage premium, demand-driven theories singled out education required by the job in determining the premium.

At the supply end of the spectrum, Gary Becker's seminal book *Human Capital* (1964) introduced a new notion of capital, one that regarded any investment that potentially increases productivity in the labour market as human capital. In Becker's view, education and training are by far "the most important investments in human capital" (Becker, 1993, p. 17), this forming the basic tenet of what has been commonly referred to in the literature as Human Capital Theory (HCT). The main model used in the economics of education literature to empirically evaluate the effects of human capital

³¹ Defined as overskilling in this thesis.

³² Be it "to get" or "to do" the job.

investments on earnings is the traditional Mincerian human capital earnings equation (Mincer, 1974), specified as:

$$\ln w_i = X_i \delta + \beta_o S_i^a + \varepsilon_i \quad (1)$$

where the dependent variable is log of earnings.³³ X is a vector of control variables and S_i^a is the highest educational level attained, expressed in terms of years of schooling, or highest educational level attained. Accordingly, the only relevant schooling variable in the earnings equation is schooling acquired, and the returns to all years of schooling, both acquired and required, are equal. In this way, the Mincerian wage equation does not take into account surplus years of schooling to those required for the job, assuming that the returns to all years of schooling are equal, and that all skills produced by those years are required and utilised on the job. The rationale is that workers' wages are based not on the characteristics of their jobs, but on their own productivity, which itself is determined by human capital acquired through on-the-job training or formal education. From this supply-driven perspective, firms will customize or upgrade their production processes to accommodate changes in the supply of labour and utilise the human capital available to them (McGuinness, 2006).

³³ The advantages of using log of earnings as the dependent variable is that coefficients in the independent variables could be multiplied by 100, and read as a percentage change, rather than an absolute increase in the dependent variable for a one-unit change in the independent variable, *ceteris paribus* (Woolridge, 2009). The second reason is for goodness of fit, so that positively skewed distributions take on more of the normal distribution shape (Princeton). A third reason, is that using log of wages renders the errors homoskedastic, and allows for capturing the proportionate increase in earnings accompanying each additional year of schooling (Cameron and Trivedi, 2005).

An alternative approach is the job mobility hypothesis. According to this hypothesis, graduates may voluntarily take up jobs for which they are overqualified as a stepping-stone to acquire skills for higher-level jobs (Sicherman and Galor, 1990; Frenette, 2004). By taking up a job for which they are overqualified, graduates correct for other human capital deficits, namely lack of work experience and on-the-job training (Dolton and Silles, 2007), that would in turn allow them to transition to a job that better utilises their skill. Whereas some studies (Sicherman, 1991) have provided evidence illustrating that graduates indeed were able to correct for human capital deficits by initially taking up jobs for which they were overqualified which enabled their upward career mobility, this did not hold true in other country contexts outside the US. Groot (1996) showed that overeducated UK graduates in fact had less of an opportunity to transition to a job that better utilised their skill due to longer job tenure. Buchel and Mertens (2004) also showed that in Germany, overeducated workers were less likely to transition to a job that utilised their skills and that provided them with above average wage growth relative to matched workers.

Labour market institutional rigidities, or the inability of institutions to quickly adapt their production techniques in view of changes in relative labour market supply, may compromise full skill-utilization by firms (Green, McIntosh and Vignoles, 1999). To this end, HCT and other supply-driven approaches have been empirically critiqued, as job characteristics cannot be assumed to be entirely endogenous in the analysis of the impact of education on

earnings.

On the other end of the spectrum are demand-driven theories, such as the job competition model, that instead argue that it is job characteristics that determine wages. Thurow (1975), who first developed the job competition model, described the labour market not as “a bidding market for selling existing skills but [as] a training market where training slots must be allocated to different workers” (p. 76). This model assumes that workers acquire their skills on the job, more through on-the-job training than through formal education. Based on their educational attainment levels, individuals are placed in a queue for jobs, and ranked according to the estimated relative training costs required from the firm. This, in turn, determines a person’s relative position in the competitive queue for jobs, with the highest-ranking job going to the first in queue.

The role education plays in this model shifts from education increasing marginal productivity on the job as per HCT, to education becoming a “positional good”, capable of changing the order of a graduate’s position in the queue for jobs (Wolbers et al., 2001; Hirsch, 1977). Such a scenario, if it were to prove true, would encourage all individuals to study for as long as possible, hence potentially leading to credential inflation, where the same degree today no longer secures the same job it did in the past. If individuals are already able even before pursuing further studies, than these formal credentials are merely “signalling” mechanisms for graduates to indicate ability (Spence, 1973).

From a job competition model standpoint, the return to a year(s) of education not required to get the job is projected at zero, with wages determined solely by formal education required to get the job (McGuinness, 2006), such that:

$$\beta_o = \beta_u = 0$$

In this way, wages are fixed in relation to jobs not workers, and the returns are contingent on one's position in the queue for jobs (Alba Ramirez 2000). Various studies (Hartog and Oosterbeek, 1988; Alba-Ramirez, 1993; Kiker et al., 1997; Sloane et al., 1999) have contested this demand-driven perspective enshrined in the job competition model, arguing, in line with assignment theory, that wages are neither entirely dependent on the job nor individual human capital alone, but are instead determined by the match between individual and job characteristics (McGuinness, 2006). In this way, assignment theory allows for the coefficients for years of required schooling (β_r), overeducation (β_o), and undereducation (β_u) to be different and not equal to zero, such that:

$$\beta_r \neq \beta_o \neq \beta_u$$

In contrast to supply-driven theories that view overeducation as a temporary phenomenon, assignment theory attributes overeducation to a disequilibrium between the supply of skilled jobs and that of skilled workers. The theory assumes a hierarchy of jobs by skill level, and a hierarchy of workers in terms of their skills, with the most skilled workers allocated to the most complex jobs in terms of skills. When workers are not accordingly

matched, it is because the number of skilled jobs and skilled workers do not match (Allen and van der Velden, 2001). Consequently as with the job competition model, returns to schooling will depend on the positioning of the graduate in this hierarchy and the match itself.

Methods of measuring overeducation

One of the major concerns in the overeducation literature is how to distinguish “graduate jobs” from non-graduate jobs in order to evaluate education and skill mismatch. Whereas this thesis defines overeducation as having more education than is required to get the job, and overskilling as having more skills than is needed to do the job, much of the overeducation literature does not draw this distinction, using education as a proxy for skills and often conflating the two. To this end, methods of measuring overeducation commonly used in the literature include:

(i) Indirect self-report (subjective method): For the indirect self-report, workers may be asked about the level of formal education required to get a job like theirs, or the level of skills required to do their job. Self-assessment techniques are then employed, which seek to compare the minimum requirements of the job with the individual’s own education credentials or skill levels (indirect self-assessment) to capture education or skill mismatch respectively (Groot and van den Brink, 2000);

(ii) Direct self-report (subjective method): For the direct self-report, individuals are directly asked whether they are overqualified (direct self-

assessment), having more years of schooling than that required to get their jobs, or overskilled, having more skills than necessary to do the job. Oftentimes, however, this distinction between education/qualifications and skills is not made and the question is ambiguously phrased. In the European Community Household Panel, for example, this question was formulated as “Do you feel that you have skills or qualifications to do a more demanding job than the one you have now”?

When accurately specified, subjective self-reports are relevant as we can learn through them whether graduates feel their skills are underutilised when occupying traditionally non-graduate occupations. They are also more up to date than the job analysis method, which tends to be considerably more costly, and so is conducted less frequently than self-reports. Such self-reports, however, may be imperfect measures, since graduates’ own subjective interpretation of what it means to have more skills or perform a more demanding job may be biased. This bias or inaccuracy may stem from people generally thinking they have more (less) skill than they actually have or that their jobs require more(less) skills than they actually do (CIPD, 2015).

Subjective self-reports may also be misleading since the question sometimes used in self-reports is number of years of schooling required for recruitment on the job concerned, when in fact employers might have indicated educational attainment levels instead. Furthermore, when the self-reports directly ask about overeducation, without inquiring about years of schooling, the self-report only captures whether the employee is

overeducated, without allowing for the calculation of the extent or number of years of overeducation.

(iii) Job analysis (objective method): A job analysis normally objectively assesses the skills required to do a job. A job analyst usually leads this process, using an occupational classification³⁴, which determines the required level of skills, and subsequently level of education required per job title. Even though conducting a job analysis is more objective, it is also more costly, with implications for the currency and reliability of information provided.

(iv) Statistical method: For the statistical method, typically the International Standard Classification of Occupations (ISCO) at the three-digit level is used to derive education required for the job (Verdugo and Verdugo, 1989), without a clear indication as to whether this refers to hiring or skill requirements.³⁵ Following the Verdugo and Verdugo method, an individual is classified as over(under)educated, if their years of schooling are more(less) than one standard deviation above(below) the mean level of education within their respective occupation (McGuinness, 2006; Verdugo and Verdugo, 1989). A variation on this method uses the mode instead of the mean in an attempt to reduce the impact of outliers. In this case, the most frequently repeated years of schooling per occupational sub-group are used, instead of the mean educational level per occupation, as the benchmark to then measure

³⁴ Such as the Standard Occupational Classification System in the UK or the Dictionary of Occupational Titles in the US.

³⁵ ISCO is an international classification, under the responsibility of the International Labour Organization (ILO), classifies jobs into clearly defined sets of groups according to the tasks and duties of each job. The basic criteria used to define the system of major, sub-major, minor and unit groups are the “skill level” and “skill specialization” required to competently perform the tasks and duties of the occupations” (ILO, 2008).

overeducation (Kiker, Santos and de Oliveria, 1997). The use of a range of years of formal schooling (most commonly one or two standard deviations away from the mean years of schooling) required per occupation introduces a rather arbitrary cut off point, where some individuals who are away from the modal years of schooling, but still within the range for that sub-group of years of schooling, are not classified as overeducated (Cohn and Khan, 1995).

In the absence of data directly surveying individuals about educational requirements for their jobs, and because job analysis is a relatively costly process, the literature has by and large relied on the statistical method (objective method). Even though the different methods outlined above have produced over-all similar results in terms of estimates on the returns to schooling (Battu et al 2000, Groot and van den Brink 2000, Rubb 2004, McGuinness 2006), none of these proxies are without their weaknesses, with the statistical method being a particularly weak proxy when used to capture skills required to do the job.

The statistical method is premised on the assumption that individuals working with the same job titles perform similar tasks, when, in fact the same job title may entail entirely different tasks, with employers retaining the prerogative to define tasks differently for jobs sharing the same unit group. The statistical method also does not distinguish between graduates from different educational tracks³⁶ and fields of study, nor does it account for quality of schooling, counting all years of schooling as equal.

³⁶ Between tertiary vocational and tertiary university graduates for example.

Another major challenge with using the mean or mode is that an increase in the share of graduates in an occupation over time may effectively increase the mean educational level, even if requirements of the job have not at all been adjusted (Hartog, 2000). Because the mean itself is not fixed, it changes relative to the share of graduates per occupational group. The mean educational level will, therefore, continue to increase over time as more graduates enter an occupation, irrespective of whether any upgrading in job content has taken place.³⁷ Relying on the mean or mode in conducting this analysis may, therefore, fail to capture any occupational drifting down that may have occurred over time in the occupation as a whole.

Furthermore, and as Sicherman (1991) pointed out, “schooling requirements for a specific job might differ from the occupation mean”. This is particularly the case when technological change leads to an abrupt change in the level of education required for the job. Even though the change in recruitment practice is immediate, so that all new recruits are now graduates, the shift in the mean years of schooling for that job will happen gradually over time, as more new graduates are recruited to replace older generation, less-educated colleagues, who eventually proceed onto retirement.

³⁷ Explored in more detail in Chapter 4.

Incidence of overeducation³⁸

The academic literature investigating overeducation and its effects on wages has been predominantly concentrated in the US, UK and Netherlands. More recently, other studies have emerged covering other European countries and Australia, but by and large, and mainly due to the absence of data availability, the reach of such research has rarely expanded to include any of the non-OECD countries.³⁹

The incidence of overeducation generally cannot be directly compared across countries in the literature, due to the different measures of overeducation used,⁴⁰ varying socio-demographic groups chosen as the focus of research and different years of study.⁴¹ The literature indicates the highest percentage of overeducation in the US across subjective and objective measures used to capture mismatch (McGuinness 2006). Duncan and Hoffman (1981), who were first to use the subjective measurement of overeducation, showed an incidence level as high as 42% in the US.⁴²

Among European countries, the incidence of overeducation, with education used as proxy for skills mismatch, was estimated to be highest in

³⁸ By this thesis's own definitions, overeducation as used in the literature is overskilling. Unless otherwise indicated, in reviews of the literature where education is used as a proxy for skill to assess skill mismatch, this thesis uses the term "overeducation" as employed in the literature.

³⁹ There is a study on over-education in Hong Kong (Cohn, 2000)

⁴⁰ Explored in more detail in chapter 4.

⁴¹ That said, some international bodies including CEDEFOP and the ILO do produce broadly comparable data from which measures of overqualification can be directly compared.

⁴² Data from 1976

the UK, Spain and Sweden⁴³ (Quintini, 2011). The UK is the most studied, with research indicating an upward rise in overeducation between 1992 and 2006 (Green and Zhu, 2010). Green and Zhu's study, where overqualification was defined as having more qualification than was required to get the job, estimated that approximately 23% of graduates were formally overqualified for their jobs in 2006 (Green and Zhu 2010).

The incidence of overeducation, however, did not necessarily translate to a case of skill mismatch and overskilling, an issue not as investigated in the literature on overeducation as educational mismatch, primarily due to lack of data. Green and Zhu (2010), for example, showed that despite the increase in formal graduate overqualification in the UK, less than 10% of graduates were also overskilled for their job. The most recent study by Green and Henseke (2014) indicated that about 30% of graduates in the UK were employed in non-graduate jobs where their skills were underutilised, even though the proportion of graduates had increased from 32% of the total labour force to 42% between 1997 and 2001.

From among European countries, Spain had one of the largest percentages of overeducated workers, even before the financial crisis (Nieto, 2014). Drawing on the Living and Working Conditions Survey in 1985, Albaráñez (1993) used the subjective measure of overeducation considering education acquired and required for the job as self-reported by the employee.

⁴³ Quintini estimated the average incidence of overeducation reported in all studies that were conducted between 1990 and 2000, covering the general population even when the studies used different measures of overqualification.)

In analysing overqualification measured using the modal educational level per occupational group, Spain proved to have the highest incidence of both overeducation and undereducation. Whereas the unweighted OECD average reached 25.3% for overeducation and 22.2% for undereducation, Spain surpassed 30% for both groups (Quintini, 2011).⁴⁴ Dolado et al. (2013) further measured overqualification using the subjective method and drawing on data from the *Encuesta de Condiciones de Vida en el Trabajo* (ECVT) between 2006-2010. They based their subjective measure on the ECVT question, “Do you consider that you occupy the right job given your preparation?” Individuals were classified as overqualified if they responded, “the job is below my qualification”, and underqualified if they said, “the job is above my qualification”. Based on the subjective method, over 35% of university graduates reported being overqualified for their job between 2006-2010.

Measuring the wage effects of overeducation

The driving question underpinning much of the literature on overeducation has been do graduates get returns to additional years of schooling equal to those of required years of schooling? To answer this question, the literature draws on the traditional Mincerian model, or an augmented form of it as in the Duncan and Hoffman and Verdugo and Verdugo models, elaborated in more detail in subsequent sections.

⁴⁴ Quintini (2011) relied on data from the International Social Survey Programme (2004,2005) and the European Survey of Working Conditions (2005) and conducted her analysis at the ISCO two-digit level

The traditional Mincerian earnings equation is based on the assumption that “productivity is fully embodied” (Groot, 1996), and subsequently independent of the job. At the aggregate level, trends in the graduate wage premium are taken as an indicator of labour market demand absorbing and utilizing the supply of high skills. If there is a high return to university education, then the individual is assumed to be employed in a graduate job.

The first reason to question the premium as a sufficient proxy for graduate skill utilization is that changes in the wage premium may, in fact, tell different and often clashing stories, that cannot be disentangled by analysing the premium alone. Since wages serve as a proxy for productivity, if the graduate wage premium does not drop with the expansion of higher education, this suggests that graduate relative productivity has not decreased over time despite graduates being bumped down the occupational ladder. One possible explanation for this is that graduate skills are actually not underutilised in these low and medium-skill jobs, as job upgrading is in effect. Alternatively, it could also be that the graduate wage premium has remained constant due to a decline in the absolute wages of non-graduates alone, or both non-graduates and graduate wages, as could be the case when graduates push non-graduates out of the best paying formerly non-graduate jobs. If both drop equally, the gap between them could remain constant, rendering the premium “uninformative” (Mayhew and Holmes, 2015). In either scenario, the graduate wage premium alone is insufficient to determine the

utilization of graduate skills in graduatised occupations, graduatisation defined in this study as jobs for which historically a university degree was not required, but is today to obtain a job.

The second reason to question the sufficiency of the graduate wage premium to capture graduate skill utilization is the problem of endogeneity or omitted variable bias, which biases the estimates of returns to schooling. As amply discussed in the literature, the Mincerian equation is often run without controlling for cognitive ability, quality of education or family background.⁴⁵ The latter are all important unobservables, whose omission, often due to lack of data, potentially biases the estimates of a traditional Mincerian model. The idea is that education and ability are positively correlated, and “abler persons invest more in themselves” (Becker, 1993, p. 171), in this way having more education. Consequently, as a result of this omitted variable bias, it could well be argued that those who are more able, in the first place, will perform better in the workplace, proxied by increase in productivity or wages, and it is precisely those who have pursued a university education. In other words, because they are more able to begin with, these individuals are the ones who will perform better both in the academic world, obtaining degrees, and in the workplace, being more productive and therefore gaining higher wages. Ability, therefore, even if unobserved by the researcher, is observed and rewarded in the labour market. Their higher wage is, therefore, not a result of higher

⁴⁵ Family background has sometimes itself been used as an instrumental variable for education or to control for natural ability (Card, 1999).

education but of superior ability, which is a key reason not to use wages as the primary mode of analysis in exploring the relationship between education and jobs. Following this argument, it may well be that the graduate premium reflects the innate ability of a graduate irrespective of academic achievements and credentials, therefore undermining the importance of the premium itself.

Other concerns with the traditional Mincerian equation, and the most pertinent one to this study, is the assumption that all years of education are equal and that each year of additional schooling has the same proportionate effect on wages (Card, 1999). This is particularly problematic considering that years of schooling, as a variable in itself, fails to distinguish between individuals with the same years of schooling or amount of education but some with diplomas and others without, described in the literature as the “sheepskin” or “diploma” effect (Woolridge, 2006). The schooling variable also fails to capture heterogeneity between graduates stemming from differences in educational track, the quality of educational institutions and fields of study.⁴⁶ It also fails to capture generational differences, taking into consideration when the degree was obtained, and whether it was obtained by actually attending university or through distance learning. Accordingly, the implicit assumption is that all years of schooling are equal, which is made even more problematic when measures of required education for the job are then derived from it. This has led some authors to conclude that, “All effort

⁴⁶ This becomes all the more problematic considering recent reports that Oxbridge students for instance earn 42% more than other students on their first job in the UK, and that medical students earn more than engineering students who in turn earn more than graduates of design and creative arts (de Vries, 2014).

spent on measuring required education is wasted if the measurement for attained education is poor” (van der Meer, 2006).

In addition to qualitative differences between different years of schooling and heterogeneity among individuals with the same educational levels, not all years of schooling are equally utilised in the workplace. The assumptions of the traditional Mincerian earnings equation that all years of schooling are equal, thereby suggesting economic benefit to years of overschooling equal to that of required schooling is contested in the overeducation literature. Instead the overeducation literature has reemphasized the relevance of job characteristics in determining wages (McGuinness, 2006), re-specifying the Mincerian wage equation to take into account labour market demand and education required to do the job. To this end, two extended specifications of the Mincerian wage equation, namely the Duncan and Hoffmann (1981) model and the Verdugo and Verdugo model (1989), have been proposed to measure the wage effects of overeducation. These models diverge from the traditional Mincerian equation in that they seek to account not only for education acquired, but also education required for the job. The dependent variable in both the basic earnings equation and the augmented equation is the natural logarithm of earnings.

The Duncan and Hoffmann Model (1981), also referred to as the ORU (Overqualification, required education, and undereducation) earnings function, decomposes the education variable into three new variables as illustrated below:

$$\ln w_i = X_i \delta + \beta_r S_i^r + \beta_o S_i^o + \beta_u S_i^u + \varepsilon_i$$

(2)

Where X is a vector of control variables, and S^r S^o S^u are the three new schooling variables introduced to the traditional Mincerian equation that effectively act “as proxy” for skill required to do the job (Verdugo and Verdugo, 1989). S^r is years of education required for the job, S^o is surplus years of education or years of overeducation that the individual has in comparison to those required for the job and S^u is years of undereducation. Years of overeducation and undereducation are calculated as per below:

$$S^o = S^a - S^r \text{ if } S^a > S^r$$

$$S^u = S^r - S^a \text{ if } S^r > S^a$$

Where S^a denotes total years of schooling acquired. If $S^a < S^r$, then S^o takes the value of 0 in calculating overeducation. Similarly if $S^r < S^a$, then S^u takes the value of 0 in calculating undereducation. If the return on each year of schooling continues to increase with years of schooling irrespective of the job occupied, and whether these are years of required schooling, overschooling or underschooling, as human capital theory projects, then the coefficients on all three schooling variables would turn out to be equal (Tsai, 2010; Cohn, 1992).

The second model, also frequently cited in the overeducation literature, is the Verdugo and Verdugo Model. It employs years of acquired schooling, capturing the amount of education completed, instead of years of required schooling as in the ORU function (Tsai, 2010). This is in turn compared to the

mean or mode educational attainment level per occupational group to capture overeducation. Individuals having an education level that exceeds the mean level of education per their occupation (at the ISCO three-digit level) by one standard deviation are classified as overeducated. According to Verdugo and Verdugo, including the education variable in the model allows for the latter to illustrate the specific effects of mismatch, whilst controlling for the effects of education on earnings (Verdugo and Verdugo, 1989). The Verdugo and Verdugo model is specified as per below:

$$\ln w_i = X_i \delta + \beta_a S_i^a + \beta_o S_i^o + \beta_u S_i^u + \varepsilon_i \quad (3)$$

where S^a represents years of schooling attained, and S^o and S^u represent overeducation and undereducation respectively.

Overqualification is generally negatively associated with wages, with some suggestion in the literature that overqualified workers earn less than their adequately matched counterparts (Hartog, 2000; Rubb, 2003; Duncan and Hoffman, 1981). Rubb (2003) in a meta-analysis estimated the average return from required years of education at 9.6%, with the wage premium on overeducation estimated at 5.2%. Groot and Maassen van den Brink (2000) estimated those at 7.8% for required years, and 3% for surplus schooling.

As with the traditional Mincerian equation, the augmented wage equations are not immune from the same endogeneity problem and omitted variable bias (Leuven and Oosterbeek, 2011). The wage premium in the

augmented Mincerian equations is also not sufficiently informative of changing job content (CIPD, 2015) so as to capture graduate skill utilization and evaluate mismatch, particularly that one of the methods most commonly used in the overeducation literature to capture education required to do the job is the statistical method.

Classification of occupations

Questions as to the sufficiency of trends in the wage premia to indicate graduate skill utilization in the workplace have brought to the fore the more complex question regarding what constitutes a graduate occupation or “graduateness”. To answer this question, some studies have adopted broad occupational classifications, in line with the hierarchy of occupations indicated in the International Standard Classification of Occupations (ISCO). According to this “normative” approach (Quintini, 2011), “traditional graduate jobs” are the professional occupations, namely ISCO major group 2. Over time, this classification has also come to include the managerial occupations, ISCO major group 1 (Green and Henseke, 2014; Walker and Zhu, 2005). More recently, the definition of graduate jobs has also extended in the literature (Green and Zhu, 2010) to include technicians and associate professional occupations (ISCO major group 3), in line with the International Labour Office’s (ILO) own classifications of the skill level of major occupation groups.

In its mapping of major occupational groups to skill and formal education levels, the ILO defined only managerial, professional and

technician and associate professional occupations as graduate occupations associated with a tertiary education degree. In introducing four skills levels to occupations, the ILO assigned the highest skill level,⁴⁷ associated with a tertiary university degree (ISCED 5A and 6), only to managers and professionals.⁴⁸ Those employed as technicians and associate professionals⁴⁹ were assigned the second highest skill level,⁵⁰ requiring a non-university first level tertiary education degree (ISCED 5B). All other medium-skilled occupations⁵¹ received a score at level 2 and elementary occupations,⁵² level 1, as explored in greater detail in Chapter 3 (ILO, 2011).

Other methods for measuring skill required to do the job are based on the qualitative evaluation of the skill required in each occupational unit group. Elias and Purcell (2013) investigated the skill requirements of occupational unit groups (at the four-digit level), classifying experts, orchestrators and communicators as “graduate occupations” in the Standard Occupational Classification (SOC) 2010. In a method similar to job analysis, they qualitatively assessed how much specialist “knowledge expertise”, “orchestration” and “communication” skills, considered knowledge usually developed in higher education, was required to do the job in each unit group. Unit groups of SOC(HE) 2010 were classified as graduate, if they required specialist expertise, orchestration or communication skills acquired at the

⁴⁷ ISCO major group 3

⁴⁸ ISCO major groups 1 and 2

⁴⁹ ISCO major group 3

⁵⁰ Level 3

⁵¹ ISCO major groups 4, 5, 6, 7 and 8

⁵² ISCO major group 9

undergraduate level. Scoring on a scale of 1- 9 was based on tasks associated with these posts, rather than the education level usually associated with incumbents on the post. In this new classification, only two occupations outside of the first three ISCO major groups, namely national government administrative occupations (4112) and local government administrative occupations (4113), were classified as graduate jobs, in line with the ISCO classification of major groups 4-9 as medium and low-skilled occupations. Elias and Purcell classified both occupations as requiring an orchestrator role. Using SOC(HE) based on SOC2010, Elias and Purcell's study (2013) showed approximately 21% of graduates between the ages of 22 and 34 were employed in non-graduate jobs occupations in 2011/12.

This study followed from an earlier study by Elias and Purcell (2004), in which they identified four types of graduate jobs, which they described as traditional, modern, new and niche graduate occupations. "Traditional graduate jobs" were occupations graduates historically occupied, including doctors, solicitors, and scientists. Under the new SOC(HE) 2010 (Elias and Purcell, 2013), these were the occupations that required a high level of expertise. "Modern graduate occupations", on the other hand, were occupations that graduates were increasingly entering with the expansion in higher education. Those included senior managerial posts in large organizations, IT professionals, primary school teachers, authors, writers and journalists. Under the new SOC(HE) 2010, these were the occupations that required primarily expertise, but also for some jobs communication skills. In

contrast, “new graduate jobs” were jobs in which there was scope for the utilization of graduate skills on the job. These included employment as occupational therapists, quantity surveyors, medical radiographers, PR officers management accountants, marketing and sales managers and physiotherapists. Under the new classification (Elias and Purcell, 2013), new graduate jobs required expertise or communication skills. “Niche graduate jobs”, on the other hand, were those jobs predominantly occupied by non-graduates, but within which there existed groups of occupations that required degrees or provided room for graduate-level skills. These included leisure and sports managers, hotel accommodation managers, planning and quality control engineers, hotel and accommodation managers, retail managers, nurses and midwives. Almost 45% of niche graduate jobs were re-classified as non-graduate under the new classification.

Green and Henseke (2014) also coded occupational groups by required skill levels in order to differentiate graduate from non-graduate jobs. They used five measures of high-skilled jobs to evaluate whether a job utilised graduates skills. The first measure included a direct self-report, where individuals themselves report whether their education is required to get and do the job. The second measure looked at educational requirements in similar jobs within the same minor occupational group (3-digit level). The third measure relied on the skills intensity index, comprising six generic skills. Like Elias and Purcell (2013), Green and Henseke also listed specialist knowledge and communication skills as part of graduate skills required in graduate jobs,

in addition to advanced writing and literacy skills, self-planning, having a supervisory role and continuous learning. All six aforementioned generic skills formed the “skills intensity index” that measured the extent of graduate skill utilization. In addition to the index, Green and Henseke also included a dummy variable for the importance and “high level” utilization of computers in the workplace which constituted the fourth measure. The fifth measure to evaluate graduate utilization was a dummy variable for long-term (over two years) formal training. From these five measures, Green and Henseke devised a “summary measure” evaluating whether the job utilised graduate skills.

Even though a clear hierarchy of occupations simplifies any analysis of education and skill required, as Green and Henseke (2014) pointed out, labelling entire major groups as graduate or non-graduate fails to take into account the heterogeneity within groups. For example in their assessment of graduate jobs, some jobs within assumedly high-skilled occupations⁵³ did not require graduate skills, whereas others in assumedly none high-skilled occupations⁵⁴ did require high skills. The heterogeneity within, rather than across, occupational groups brings to the fore one of the main weaknesses inherent in measures of skills mismatch commonly used in the literature. Despite its shortcomings, however, establishing a hierarchy of occupations in terms of educational and skill requirements does protect against jobs becoming “graduate jobs” for the sheer fact that the majority occupying these

⁵³ Major group 1 in their classification.

⁵⁴ Major group 3 in their classification.

posts is now graduate, one of the main shortcomings of the statistical method.

Qualitative methods

Since the graduate wage premium alone is insufficient to capture graduate skill utilization in the workplace and broad occupational classifications do not sufficiently address heterogeneity within occupational groups, some studies have resorted to qualitative methods using interviews with graduates and employers to investigate changing skill utilization subsequent to the transition to mass higher education. Scholarship on graduate skills utilization and hiring trends at the sectoral level have remained sparse in the literature, and predominantly focused on the UK (Caroli et al., 2008; Elias and Purcell, 2004; Mason, 2002; Green and McIntosh, 2002, Knights and McCabe, 1998, Mason, 1996).

In their book *The Mismanagement of Talent*, Brown and Hesketh (2004) interviewed six private and public organizations, in addition to sixty graduates, investigating the recruitment and human resources strategies of these firms, as well as graduate strategies for coping with the intensifying competition for managerial and professional jobs. The book ascribed graduate underutilization in part also to universities who were accused of “dumbing down’ their degrees in order to attract growing numbers of less able students” (Ibid, p. 2018). In large part, however, the book found that graduate underutilization was a direct result of organizational policies where firms responded to massification by increasing “ their barriers to entry”

beyond the requirements of the job itself. In this way, massification culminated in a “legitimation crisis”, raising the question as to what distinguished the more talented from the rest (p. 195). The book, therefore, concluded that more graduates in the labour market necessarily implied more heterogeneity among graduates in terms of their own talents and graduate labour market outcomes. “More means different”, rendering it “misleading to generalise about the economic returns to higher education”, the book argued (p. 218).

Mason (1996) investigated graduate recruitment and skill utilization in British industry in the aftermath of massification, looking specifically at the steel and financial services industries. Mason argued that even though an increased share of graduates was occupying jobs that traditionally did not require a university degree, their skills were not underutilised unless they also did not receive a salary premium relative to non-graduates occupying the same post, and the job itself was not redesigned or upgraded to utilise graduate skills. Interviews with employers in both industries, confirmed a lower quality of 18 year-olds who opted for entering the labour market rather than pursuing tertiary education studies. Increased demand also played a role in increased graduate recruitment in British industry, with both an increase in the number of traditionally high-skilled occupations and an increase in new upgraded positions. In the steel industry, Mason found that about one third of all new recruits in the steel plants sampled were graduates, the majority vocational graduates. In financial services, large companies with over 5,000

employees also witnessed a sharp increase in the recruitment of graduates “on mainstream graduate entry programmes”. The largest difference, however, between the two industries was in the dispersion of salaries between the lowest and highest salaries offered to new graduates. Whereas the differential reached £10,000 in finance, it did not exceed £2,800 in steel. Mason (1995) ascribed the wider dispersion of salaries in finance among graduates to the “multi-tier recruitment strategy”, where some graduates were recruited for mid-clerical jobs with very different starting salaries and career prospects to graduates recruited on “mainstream graduate entry programmes”.

As in the financial sector, James et al. (2012) also reported a similar trend in the real estate sector in the UK, where one fifth of agents had become graduates even though both employers and graduates agreed a tertiary degree was not required to do the job.⁵⁵

Knights and McCabe (1998) also investigated the financial services industry in the UK, taking two banks and two insurance companies as case studies. To conduct their research, they relied on documentary investigation and participant observation in addition to interviews. Even though the focus of their study was to assess the success of implementing organizational innovations (OI) within financial services, rather than graduate skill utilization, their study illustrated a trend within financial services in the UK toward a

⁵⁵ Cited in James et al. (2013)

“sales-oriented culture” echoed in retail banks in Spain and elaborated in more detail in Chapter 5.

In interviewing graduates and managers in the retailing, computer services and transport and communications sectors in the UK, Mason (2002) pointed to an increased share of underutilised graduates in the labour force in the aftermath of massification. This trend was particularly prevalent in large services sectors including retailing (clerical, sales and other occupations), and transport and communications, with the only exception to this trend seen in the computer services industry.⁵⁶ Mason’s study found that graduates were more likely to improve their skill match by changing employment and quitting their low-skilled occupation for a higher-skill job, than by skill upgrading. But even when graduates did succeed in making the transition from a lower to a higher-skill “graduate level employment, it ...[was] hard for them to catch up with the head start in salaries and training opportunities which mainstream graduates ...received”. This suggests not only that skill upgrading is not in effect when graduates do take up lower-skill jobs, but in their so doing, this choice also impacts their salary and training opportunities in the long run as well.

Job quality

Considering the disproportionate concern with economic returns in the overeducation literature (Berg, 2003; Bukodi and Goldthorpe, 2011), and due

⁵⁶ The only exception to this trend was in the computer services industry.

to the insufficiency of wages to determine changes in job content, the literature on job quality has widened the scope of interest to look at a broad set of pecuniary and non-pecuniary indicators that together determine job quality. These include not only wages, but also the quality of the match and skills utilization in the workplace, work effort and job intensification, discretion and job control, as well as job security or lack of fear of job loss (Green, 2006).

There is robust evidence in the literature that enhancing discretion or work autonomy is positively correlated with individual wellbeing, performance and creativity in the workplace (Lopes et al., 2014, Gallie, 2012). The literature on job quality also suggests (Gallie, 2012) that job satisfaction is positively correlated with job discretion, the latter dependent on the ability to establish one's own effort levels and choose one's work tasks, including the methods and quality standards for completing those. Notwithstanding the influence of work autonomy on job satisfaction, there seems to be a downward trend in work autonomy across European countries, with the exception being in Scandinavian countries. Using the European Working Conditions Survey, Lopes et al. (2014) found that work autonomy in fact decreased across Europe between 1995 and 2010, the only exception being in Scandinavian countries, where it either remained the same or increased.⁵⁷

⁵⁷ The European Working Conditions Survey proxied job control through three indicators: choice of sequence of tasks, work modalities and work efficiency or speed. It is also sometimes referred to in the literature as task discretion, seeking to gauge whether employees are able to influence which tasks to take up at work and how, determining quality standards and work effort (Felstead et al., 2007).

Recent studies have further emphasized the importance of work autonomy by showing that even though job intensification is typically associated with negative health and job satisfaction outcomes, when this intensification is accompanied by high autonomy, this negative effect is somewhat reversed. According to the “strain hypothesis” if the work is of high intensity but the employee’s autonomy is low, this will result in poor mental health outcomes and will negatively impact job satisfaction. Conversely, and according to the “activation hypothesis”, if the work is of high intensity but the employee has high work autonomy or job control, it does not lead to the same adverse health indicators and negative impact on job satisfaction. On the contrary, it could, in fact, provide a learning experience for the worker. Recent studies (Felstead et al., 2007, Lopes et al., 2014), however, seem to indicate that it is precisely the first trend that has been on the rise in Europe, with jobs intensifying without job control and work autonomy increasing in turn. This phenomenon has resulted in declining job satisfaction in the UK (Green, 2006) and across Europe. Scandinavian countries have proved the only exception to this trend, where Scandinavian workers have been experiencing higher work intensity accompanied by higher, instead of lower, levels of work autonomy (Lopes et al., 2014).

In a survey that looked at job quality across Europe, Gallie (2003) found that the quality of work tasks, in terms of diversity of tasks, provision of opportunities for learning and skill development, participation in decision-making and influence over the course of work tasks, was far higher in

Scandinavian countries such as Denmark and Sweden than in the EU-15. The Netherlands, on the other hand, scored just below average, whereas Spain's penultimate rank was surpassed only by Portugal. Sweden and Denmark also came in the lead in terms of organizational participation, which measured employee voice and representation in influencing organizational changes. In terms of job security, another aspect of job quality that measured how easily employers could dismiss employees if they were deemed to be performing unsatisfactorily, Spain ranked lowest. Here the Scandinavian countries, with the exception of Denmark, again demonstrated the highest level of protection or security from dismissal.

Non-wage penalties of overqualification

A sub strand of the literature specifically concerned itself with the non-pecuniary effects of graduate underutilization, a key element of job quality, on mental health and well-being and job satisfaction in the workplace (Elias, Hogarth and Pierre, 2002). In considering the effects of overeducation on job satisfaction, some studies (Green and Zhu, 2010) have emphasized the need to distinguish between educational and skill mismatch, providing evidence that it is the latter that has a greater impact in determining job satisfaction. Green and Zhu (2010) highlighted the importance of distinguishing "real" and "formal" overqualification, the former referring to educational mismatch alone, and the second accompanied by skill mismatch as well. Their findings revealed that job dissatisfaction was greater among those in the real

overqualification category, i.e. where educational mismatch was accompanied by skills mismatch. In contrast, where employees were formally overqualified without being overskilled, job satisfaction was not as negatively impacted. In another study, Green and McIntosh (2002) also found that it was not having more qualifications, but rather more skills than was required to perform the job that negatively impacted job satisfaction. Defining overeducation as a situation where graduates occupied non-graduate jobs, Chevalier (2003) also distinguished between “genuine” and “apparent” overeducation using job satisfaction as a proxy for skill underutilization. He concluded that only job dissatisfaction, with the match reflecting skills underutilization, constituted a case of “genuine” overeducation on the job. In the same vein, Allen and van der Velden (2001) argued that skills mismatch appeared to influence job satisfaction much more strongly than educational mismatch. Johnson and Johnson (2000) suggested it was “lack of fulfilment in work expectations associated with perceived overqualification” that was at the heart of individual job dissatisfaction.

The literature provides evidence for not merely reduced job satisfaction but reduced life satisfaction as a result of educational and skill mismatch. The rationale is that “the overeducated may have raised, but unmet, expectations due to their education, another potential cause of dissatisfaction” (Piper, 2014). Bracke et al. (2013), in fact, reported diminishing mental health returns among well-educated individuals, with a greater incidence of depression among the overeducated. By way of explanation, Offer (1996) argued that

satisfaction was primarily about achieving a balance or congruence between aspirations and outcomes (Offer, 1996), and was, therefore, relative. Winefield, Tiggemann, and Goldney's (1993) longitudinal study of the psychological impact of unemployment in Australia further revealed "the psychological damage due to unsatisfactory employment was comparable to that due to unemployment" (p. 149). The reason for job dissatisfaction in the study, however, was unexplored and overqualification was just one of many reasons that could be leading to it.

Wu, Luksyte, and Parker (2015) further showed that even though overeducation negatively impacted subjective wellbeing in the workplace in accordance with relative deprivation theory, job autonomy could play a "moderating role". The authors argued that overqualification was not merely about having more education than that required for the job, but also entailed "no-growth", which they equated with the inability to deploy one's skills in the workplace. Johnson and Johnson (1996) had similarly shown that perceived mismatch, which they measured as overeducation as defined in this thesis, combined with subjective reporting of no-growth in terms of lack of possibility for skill utilization and growth within the organization, was positively correlated with both depression and stress. Taking the emerging importance of growth into account, Wu et al. (2015) argued that if overqualified employees were allowed the autonomy to design their jobs and take agency to "enhance the meaning of [their] work", this would lessen the negative impact of overqualification on "subjective well-being at work".

This directly suggests that in fact employee subjective perceptions of the quality of their job match is multidimensional and is not merely related to education and skill mismatch alone, or the maintenance of a premium in the case of overqualification. Illustrating this, Wu et al. (2015) showed that changing job design rather than the quality of the job-education match may in fact be sufficient to compensate for the negative effects of overqualification.

In addition to negatively impacting job satisfaction, the literature also provides evidence that overeducation is positively correlated with higher rates of worker turnover and mobility (Robst, 1995; Sicherman, 1991; Alba-Ramirez 1993, Battu, Belfield & Sloane, 1999). Allen and van der Velden (2001) showed that if job content did not correspond to ability, workers were more likely to look for other jobs better suited to their abilities. Tsang et al. (1991) also found that overeducated workers were generally less satisfied with their jobs and therefore more likely to quit. These non-pecuniary costs of overqualification suggest the necessity of a multidimensional approach to mismatch, one that is broader than the pecuniary returns to human capital alone and that is not amply covered by only considering wages.

Applying the Human Capabilities Approach to debates on graduate mismatch

In his seminal book *Demanding Work: The Paradox of Job Quality in the Affluent Economy*, Francis Green (2006) proposed the application of the notion of capabilities, defined by Amartya Sen as “the various combinations of

functioning's (doings and beings)" (Sen, 2009, p. 5) that a person is able to choose from, to the evaluation of job quality. In this way, "the capability to achieve well-being [in the workplace]... can be thought of as depending on the extent to which the job enables the individual to pursue personal goals" (Green, 2006, p. 14). In this way, the literature on job quality begins to address the "capability to achieve well-being [in the workplace]" (Ibid, p. 14).

This analysis argues that using the capabilities approach as the evaluative framework to assess job quality, of which education and skill mismatch is but one dimension, provides a theoretical framework that allows for broadening the focus from expanding economic returns to expanding graduate capabilities, including in the workplace. The CA refocuses the evaluation, from whether economic returns to additional years of schooling are maintained in the age of massification, to whether graduates have more economic freedoms, in the form of labour market choices, to achieve labour market outcomes they value. In this way, the key question becomes do individual freedoms expand in proportion to the increase in educational attainment levels? Or are individuals deprived of "the agency to transform their realities" (Flores-Crespo, 2007, p. 56), in this case work realities, when placed on jobs in which their human capital is effectively underutilised because of the imposition of a "ceiling" on their productivity (Allen and Van der Velden, 2001)?

The CA's emphasis on "combined capabilities", defined by Nussbaum as "not just abilities residing inside a person but also the freedoms or

opportunities created by a combination of personal abilities and the political, social and economic environment” (Nussbaum, 2011, pp. 20-21), if applied to the evaluation of HE expansion, highlights the importance of labour market demand. Building on Nussbaum’s definition, the opportunities or “freedom to achieve” graduate labour market outcomes⁵⁸ that are of value to graduates depends not only on the innate abilities and acquired skills university graduates have, but also on labour market demand and factors outside of labour supply (Sen, 1992, p. 6). In this way, by introducing the concept of “combined capabilities”, the CA approach, in line with job competition, provides the framework to consider not just human capital acquired, as per HCT, but also the labour market opportunities available to put these skills to use.

The HCA also provides a different lens to human capital if applied to the workplace. Heterogeneity among graduates with the same educational levels, for example, is hard to capture precisely because skills endowment is independent of formal education. Using the human capability framework can elucidate this point. Amartya Sen argued that individuals with equal resources do not enjoy equal capability to function because they operate from different starting points. In other words, individuals are not able to convert resources into functionings at the same rate. This debate on resources is relevant because similarly individuals with the same levels of formal educational

⁵⁸ Or “functionings” to use the capability approach terminology. Alkire and Black replace the term “human functioning” with “human flourishing,” arguing that the latter terminology better encapsulates the potentiality of human experience, providing the “dimensions of human development (Alkire and Black 1997).”

attainment do not enjoy equal capability to function, because they operate from different human capital starting points. Just as people need to consume different amounts of food, for instance, to be equally nourished, an example Sen used, individuals with different natural abilities may require different amounts of education and training to attain the same human capital, functioning, or capability to function in the workplace. Put differently, if it were a race, those with natural ability already have a head start, and individuals are not equally positioned in “transforming’ goods into functionings” (Sen, 1985). Similarly in the workplace, it may be precisely those who are more able to attain higher education levels who are also more productive, and thus gain higher wages in so far as wages reflect higher marginal productivity. This suggests that the initial driver may not be more schooling, which in turn bestows individuals with more cognitive skills as per the human capital model. Rather it is natural ability or more “capability to function” that has driven both schooling and productivity, consequently leading to higher wages in the workplace.

In introducing the notion of conversion factors, or the ability to “transform” educational credentials into labour market outcomes, the capability approach provides a normative framework with which to analyse and capture skill heterogeneity in the workplace. This skill heterogeneity is also discussed in the overeducation literature where “workers may qualify for similar jobs by having different levels of schooling but similar levels of total human capital” (Sicherman, 1991). In other words, workers “compensate”

through on-the-job training, ability and work experience, with a clear “trade-off” between “schooling and other forms of human capital” (Sicherman, 1991). As described by Sicherman (1991), this results in a situation where “many combinations of education and training/experience can produce a given amount of total human capital. Therefore the observation that a certain fraction of workers are undereducated or overeducated does not by itself imply an inefficient use of resources”. Skill heterogeneity within the same education level suggests a more complex process at work, one that cannot simply be measured by reducing human capital to years of schooling acquired and required for the job. As a result, some authors go as far as to argue that we cannot infer from mere incidence of surplus schooling, the underutilization of skills. This led Halaby (1994) to conclude that the measures used to capture overeducation, in fact, “lack content validity for skill mismatch”.

For Sen, the capability space is the evaluative space. If we only look at functionings or achievements without considering the freedom to achieve, we may arrive at erroneous conclusions. Perceiving skills mismatch from the capability perspective implies a shift from primarily investigating the graduate wage premium to emphasizing graduate labour market outcomes and job quality in the work place. As Sen argued, the convergence is not necessarily identical. “The correspondence is not one to one between primary goods/commodities and freedoms. Primary goods are means to freedom, whereas capabilities are expressions of freedom themselves” (Sen, 2009, p. 7). Translated to the workplace, this is the freedom to choose and pursue the

kind of jobs graduates aspire for, where jobs create the space for graduates to employ their skills and utilise their human capital in a way they value.

In this way, the HCA allows us to shift the focus from education for private returns and economic growth to education to expand opportunities or “capabilities,” including in the labour market (Nussbaum, 2010). The application of the human capability approach to the workplace broadens the analysis in order to consider the effects of labour market mismatch not merely in terms of wages, but also in terms of graduate skill utilization and placement in graduate quality jobs, in line with the literature on job quality. As Flores-Crespo (2007) explained, “While human capital theorists suggest assessing the benefits of education by considering income levels or national output, Sen primarily proposes focusing on what a person is able to be or to do, that is, on his/her functionings, which eventually will form his/her capabilities or, as he [Sen] also calls them, ‘freedoms’”. To this end, the premium from investing in human capital is expanded capabilities, widening the spectrum of what a graduate is able “to do and be”, in this way broadening the “alternative functioning combinations” available to graduates in and outside the labour market (Quote from Sen in Nussbaum, 2011, p. 20).

In the literature on graduate mismatch, overskilling is implicitly described as a capability deprivation, that “imposes a limitation to the utilization of skills. The lower level of the job in effect imposes a ceiling on the worker’s productivity, resulting in lower wages” (Allen and Van der Velden, 2001). This “ceiling on the worker’s productivity” is precisely a ceiling on the

freedom to achieve. The lack of real opportunity or freedom to apply one's acquired human capital or skills, if one wishes, is in this context considered a capability deprivation, depriving individuals from pursuing workplace functionings that they value (Dreze and Sen, 1995, p. 14). Some of these workplace capabilities have already been described in the job quality literature and include *inter alia* the opportunity for graduate skill utilization.

“The central feature of well-being is the ability to achieve valuable functioning”, according to Sen (1985). Conversely, the inability to achieve valuable functionings in the workplace including the inability of graduates to utilise their skills on the job can be considered a capability deprivation, or a contributing factor impeding well-being, if the HCA is applied to the workplace. This is echoed in the literature with overschooling defined by several authors as frustrated graduate expectations in the workplace. Rumberger (1981), for example, defined the phenomenon as “unrealised expectations concerning the labour-market benefits of education” that students faced once graduated. Tsang and Levin (1985) also described it as the “underfulfilled expectation of the educated with respect to their occupational attainments”. Although Sen would not agree to rank functionings, including workplace functionings, it would not be far-fetched to assume that in pursuing a university degree and higher studies, graduates will seek to access quality jobs in which they are able to utilise their graduate skills.

Building on the above, the value added of bringing human capability into the debate on education and skill mismatch is because all evidence to date in the literature suggests that wages are, in fact, an insufficient determinant of human capability. There is consistent evidence in the literature that surplus years of schooling do continue to hold a premium in comparison to those are well-matched on the same job, alongside evidence that skill mismatch is negatively impacting the job satisfaction, and mental health of those who are experiencing it. These two strands of literature rarely come together. As a result, there is very little research on whether the wage premium on surplus years of schooling in fact offsets the non-pecuniary costs of education and skill mismatch, including its effects on job satisfaction, health and well-being. This is particularly problematic given that using the graduate wage premium as the only proxy for graduate skill utilisation is itself misleading since it tells contradictory stories. If the graduate wage premium drops with the expansion of higher education, for example, this implies that graduate relative productivity has decreased over time suggesting that graduates are bumped down the occupational ladder. Conversely, if the graduate wage premium does not drop, this suggests that job upgrading is in effect in medium and low-skilled occupations where graduates skills are increasingly utilised. Alternatively, the graduate wage premium could also remain constant due an equal drop in both graduate and non-graduate wages rendering the signal of the premium misleading at best (Mayhew and Holmes,

2015). Changes in the graduate wage premium are therefore insufficient to determine the utilisation of graduate skills in graduatised occupations.

The overeducation literature also does not begin to address whether the non-pecuniary benefits of pursuing higher education, including in a graduate's private, social and cultural life, do not in themselves offset employment in a job below one's education level and skill potential. The value-added of applying the CA approach to the workplace is that it returns the focus on human capabilities, and not just their existence, but also the freedom of their deployment, in this way emphasizing "combined capabilities" (Nussbaum, 2011, p. 96).

The HCA literature acknowledges that the Capability Approach itself does not explicitly or sufficiently address education (Unterhalter, 2008). However, the capability literature does offer some guidance. In discussing human capital and human capability, Sen (2009) argued, "the benefits of education thus exceed its role as human capital in commodity production. The broader human capability perspective would record and value these additional roles" (p. 35), rather than provide an "alternative" to the human capital approach (p. 36). Francis Green (2006) in his seminal book *Demanding Work: The Paradox of Job Quality in the Affluent Economy*, already proposed the application of the HCA to the workplace. Building on this literature and on efforts (Bryson, 2013; Flores-Crespo, 2007; Green, 2006) already underway to bring human capability into the skills debates, this chapter has argued that applying the human capability approach to the

evaluation of higher education expansion in the context of graduate labour market outcomes is not only welcome, but necessary for an evaluation that will place individual freedoms at the heart of policy interventions.

Analysing education and skills mismatch from a human capability approach refutes the assumption inherent in human capital that HE expansion and the supply of high skills will create its own demand, subsequently leading to the utilization of graduate skills in the labour market (Grugulis, 2007). The utilization of graduate skills is contingent on there being a “market for particular skills” that are not “the product of societies,” and that do not “reflect prejudice in their pricing” (Grugulis, 2007, p. 17-18). The overeducation literature, however, provides consistent evidence that more skills, proxied by years of schooling exceeding those required to do job, do not yield equal returns as required years of schooling (Duncan and Hoffman, 1981; Sicherman, 1991; Alba-Ramirez, 1993; Groot, 1996; Groeneveld and Hartog, 2004). Several studies in fact estimated the return to a year of surplus education to be approximately half that of a required year of schooling (Duncan and Hoffman, 1981; Alba-Ramirez, 1993; Rubb, 2003).⁵⁹ These

⁵⁹ Rubb (2003), in a meta-analysis of ORU⁵⁹ studies, confirmed that returns to required years of schooling are greater than returns to surplus years of education, even though the wage premium on overeducation remained positive (Rubb 2003). The meta-analysis estimated the average return from required years of education at 9.6%, in comparison to 7.8% in the previous meta-analysis conducted by Groot and Maassen van den Brink (2000) comparing the US and European countries. Rubb found that the wage premium on overeducation (estimated at 5.2%) almost equaled that of the penalty on undereducation (-4.8%), whereas Groot and Maassen van den Brink estimated those at 3% and -1.5% respectively. Despite the wage penalty to overeducated workers in comparison to workers with the same education who were adequately matched, returns to years of overeducation remained positive, and that to undereducation negative, as observed repeatedly in the literature. This persistent pattern of positive returns to overeducation confirmed that even when “surplus education [was] ... unused,” it was “not necessarily unrewarded” (Rumberger, 1981).

empirical findings suggest that the labour market is not as flexible, nor are firms as quickly able to adjust their production processes and upgrade their tasks so as to utilise graduate skills (Duncan and Hoffmann, 1981; Sicherman 1991; Sloane et al, 1996; Kiker et al., 1997; Sloane et al, 1999; Battu et al., 2000).

This study, in fact, argues that the disproportionate focus on expanding education rather than expanding jobs is because in the inequalities debate, education or deficiencies in individual human capital are easier to address and tackle than structural changes to the economy and job creation. In this way, graduate unemployment is portrayed as an individual shortcoming rather than a structural failure of the economy to create high-skilled jobs in the sufficient numbers. Similarly poverty is ascribed to inequalities in individual human capital, which could be remedied through broadening access to education (Berg, 2003, p. 9). Broadening the evaluative framework from an emphasis on wage premiums to one of increased graduate capabilities in the labour market can help refocus the discussion, challenging the prevalent policy discourse in many industrialised countries that supply would create its own demand. More education may become less in the education-jobs debate, if the focus of any evaluation of higher education expansion does not shift from broadening HE to expanding capabilities and freedom to achieve functionings graduates value in the workplace.

Chapter 3 |Research design: A mixed methods study

Introduction

According to Yin (2009) research design presents the effective map that will lead the researcher from their research question to their research answer(s), the researcher's own way of "getting from here to there" (p. 26). This chapter outlines the research design used in this thesis, and the rationale for selecting mixed methods. It also introduces the basic concepts, classifications and definitions that will be used for the rest of this thesis.

Mixed methods

Traditionally the selection and use of methodology is seen as a reflection of a research paradigm representing a certain underlying worldview. The positivist paradigm, which underlies much of the quantitative approach to research, presents itself as "objective" and "neutral", and remained the dominant paradigm throughout the first half of the 20th Century. Post-positivism emerged between 1950 and 1970, in response to some of the inherent difficulties with the pure positivist paradigm. But it was not until the 1970s that alternative qualitative research approaches were proposed. Rooted in constructivist paradigms, these qualitative approaches adopted a more "subjective, culture-bound and emancipatory approach" to research (Tashakkori and Teddlie, 2003, p. ix).

Against this backdrop, mixed methods research effectively provides a "third methodological movement" (Tashakkori and Teddlie, 2003, p. 24),

refuting the incompatibility of methods and espousing the pragmatist paradigm instead. The pragmatist paradigm denies the claim that quantitative and qualitative methods are incompatible. Instead, it supports their use in the same research study if this combination allows for a better tackling of the research question. In this way, “pragmatists consider truth to be ‘what works’” (Creswell & Clark 2008, p. 16), with mixed methods research defined by Creswell and Clark (2008) as studies that are the “products of the pragmatist paradigm and that combine the qualitative and quantitative approaches within different phases of the research process” (p. 22).

The central premise is that every research method sheds light on the problem differently. The more methods can be juxtaposed and used in tandem, the more light can be shed on the problems being investigated. Accordingly, mixed methods approaches combine data sources and techniques from both the quantitative and qualitative research traditions, depending on which method works best to answer the question at hand. In this way, the “mixing and matching of design components” allows the researcher to complement the weaknesses of one method with the strengths of another. This, in turn, allows for a richer analysis that is “more than the sum of its qualitative or qualitative or quantitative components” (Tashakkori and Teddlie, 2003, p. x).

The mixed methods approach is adopted in this thesis for two main reasons. First this study shares the pragmatist view that research findings are “provisional” rather than absolute truths, which may be refuted or changed in

light of new empirical findings. Second, this thesis also adopts the view that it is the choice of research question, rather than choice of world viewpoint, that should dictate the choice of methods (Johnson and Onwuegbuzie, 2004). This approach is in line with what Tashakkori and Teddlie refer to as “the dictatorship of the research question” (2003, p. 21). Since the focus of this study is graduate skills utilization in the workplace, and since quantitative methods alone are insufficient to determine whether skills upgrading is in effect in occupations where graduates have drifted down, this study has employed both quantitative with qualitative methods.

Mixed methods in this study

The over-arching research question for this study is:

How has the rapid expansion of higher education in Spain impacted graduate labour market outcomes and the ways in which graduate skills are utilised in the workplace?

To answer this question, this study adopts mixed methods, out of a belief that the combination of methods provides for a more comprehensive analysis of graduate labour market outcomes than could be provided by a single approach alone. First, a quantitative approach is employed to investigate the determinants of occupational drifting down. The second phase then employs a case study approach to investigate trends in hiring practices, graduate skill utilization and education and skill upgrading in two sectors in Spain.

I. Quantitative analysis

Educational and skill mismatch

This thesis distinguishes between educational and skill mismatch. Educational mismatch is defined in this study as having more (less) education than is necessary to be hired on the job. If an individual has more education than is required to obtain the job, he/she is defined as overqualified or overeducated for the job. Skill mismatch is defined in this study as having more (less) skills than is needed to perform the tasks of the job. Where an individual has more skills than is needed to do the job, he/she is defined as overskilled for the job.

As outlined in Chapter 2, there are four main methods commonly used in the overeducation literature to measure skills (or education used as a proxy for skills) required for the job, namely (i) job analysis, (ii) the subjective method including either an indirect or direct self-assessment and (iii) the statistical or objective method, which compares the mean education level for a range of occupations or the mode (McGuinness, 2006; Verdugo and Verdugo, 1989); (iv) broad occupational classifications of occupations. These measures, and their main shortcomings, are explored in greater detail in Chapter 2.

Even though this study presents the prevalence of mismatch using both the statistical method and occupational drifting down (Chapter 4), only occupational drifting down, elaborated upon in the section below, has been used in running the logistic models.

Occupational drifting down

Occupational drifting down, sometimes referred to in the literature as underemployment or occupational filtering down, is used in this study to refer to a situation where a tertiary education graduate is not employed in a high-skilled occupation, but instead occupies a middle or low-skilled occupation. Traditionally, and as recently as one generation ago, these medium⁶⁰ and low-skilled⁶¹ occupations contained a low share of graduates in Spain, as they did globally.

To identify tertiary education graduates, this thesis uses the International Standard Classification of Education, known as ISCED 1997. ISCED provides an internationally recognized and comparable classification of education levels based on internationally agreed definitions. ISCED distinguishes between two types of tertiary education graduates, as outlined in more detail below:

- Academic (ISCED 5A & 6): Though not exclusively offered at universities, tertiary type A programmes are theory-based general programmes designed to prepare students for advanced research or high-skilled professions. First degrees are better known as bachelor's degrees, *licenses* or *diplomes* in the English, French and German-speaking worlds respectively. The duration of these programmes is at least three years full-time. Second degrees under ISCED 5 are master's degrees or the

⁶⁰ ISCO Major Groups 4-8

⁶¹ ISCO Major Group 9

maitrise. ISCED 6 is the second stage of tertiary education on the academic track, leading to an advanced research qualification. These degrees are at least three years long and lead to doctoral degrees or equivalent.

- Vocational (ISCED 5B): Tertiary type B programmes are vocational programmes, usually shorter in duration than type A programmes, and more focused on practical, technical and occupational skills tailored to the labour market. They are at least two years long (OECD Handbook, 2004).

This thesis uses ISCED 1997 terminology since the Spanish Labour Force Surveys, which are the primary data sources used, all employ this version of ISCED (until 2012). In line with ISCED definitions, tertiary education graduates are those individuals who have completed ISCED 5A, 5B or ISCED 6 programmes. University graduates, on the other hand, are those who have completed ISCED 5A or 6 programmes.

To identify high-skilled jobs, this thesis uses the International Standard Classification of Occupations (ISCO), elaborated by the International Labour Organization (ILO), to identify the skill-level of occupations. ISCO-08 defines a job “as a set of tasks and duties performed... by one person”. It defines an occupation as “a set of jobs whose main tasks and duties are characterized by a high degree of similarity” (ILO, 2008).⁶² ISCO classifies jobs into clearly defined groups according to the “skill level” and “specialization” required to competently perform the tasks and duties associated with it (ILO, 2008). In

⁶² <http://www.ilo.org/public/english/bureau/stat/isco/docs/resol08.pdf>

this thesis, both ISCO-88 and ISCO-08 are used, in line with the Spanish Labour Force Survey. Table 3.1 illustrates the ISCO major groups, alongside the education and skill levels associated with each group, as defined by the ILO, and used in this study.

Table 3.1 Mapping of ISCO-08 major groups to skill and formal education levels

Major groups	Education level (ISCED-97 Groups)	Skill level
1 Managers	6 (second level of tertiary) 5A (first stage tertiary education, first degree) 5b (first stage of short or medium-term tertiary education)	High-skill
2 Professionals	6 (second level of tertiary) 5A (first stage tertiary education, first degree)	
3 Technicians and associate professionals	5B (first stage short or medium-term tertiary education)	
4 Clerical support workers	4 (post-secondary non-tertiary), 3 (upper secondary), 2 (lower secondary)	Medium-skill
5 Service and sales workers	4 (post-secondary non-tertiary), 3 (upper secondary), 2 (lower secondary)	
6 Skilled agricultural, forestry and fishery workers	4 (post-secondary non-tertiary), 3 (upper secondary), 2 (lower secondary)	
7 Craft and related trades workers	4 (post-secondary non-tertiary), 3 (upper secondary), 2 (lower secondary)	
8 Plant and machine operators and assemblers	4 (post-secondary non-tertiary), 3 (upper secondary), 2 (lower secondary)	
9 Elementary occupations	1 (primary education)	Low-skill

Source: Author's own elaboration, based on ILO tables (2011)

Using the ISCED and ISCO measures described above, this study has then been able to measure the changing share of tertiary education graduates entering medium and low-skilled occupations, defined in this study as occupational drifting down (ODD). Using micro data from the Spanish Labour Force Survey, logistic models are run in Chapter 4 to evaluate the influence of personal and educational characteristics on the probability of tertiary graduate employment and occupational drifting down. The dependent variable is a

dichotomous variable that takes the value of 1 if a graduate has occupied drifted down, and zero otherwise. This thesis investigates the determinants of occupational filtering down, in light of the absence of data asking respondents about the educational and skill requirements of their jobs, and also the absence of job descriptions from which to extract this information. The term “drifting down” is used in the same way as defined by Ivar Berg (2003) in his seminal book *Education and Jobs*, to refer to a situation where the surplus supply of graduates has culminated in a situation where graduates find themselves placed in traditionally non-graduate jobs.

The main advantage of using ODD is that it protects against the potential classification of graduates as well matched through merely investigating the share of graduates in each occupation. Instead, ODD restricts graduate mismatch to only medium and low-skilled occupations, assuming that managerial (ISCO Major Group 1) and professional (ISCO Major Group 2) are high-skilled jobs. In a broader definition of high-skilled jobs, also used in this thesis, technical and associate professional occupations (ISCO Major Group 3) are also considered high-skilled occupations associated with a tertiary degree, as per the International Standard Classification of Occupations (ISCO-08). The assumption made is that graduates with tertiary degrees have relatively higher skills, and so are well suited for managerial, professional and technical and associate professional occupations that require higher skills relative to other ISCO major groups. Conversely, all tertiary-degree holders working as clerks;

service workers and shop market and sales workers; craft and related trade workers; plant and machine operators; and assemblers⁶³ and those in elementary occupations⁶⁴ are classified as traditionally non-graduate jobs.

Aside from the relative occupational privilege attached to high skill occupations and their associated educational & skill levels, this distinction between high-skilled and other occupations also draws on the fact that, traditionally, and as recently as one generation ago, these medium and low-skilled occupations did not require a tertiary education degree (CIPD, 2015). In fact, traditionally only professional jobs were considered “high-status” (Green and Henseke, 2015), thereby excluding even managerial and technical and associate professional jobs (ISCO Major Group 3), which are considered high-skilled jobs in ISCO.

In rigidly classifying major occupational groups in this way, ODD may indeed fail to take into account any skills upgrading that may have taken place in traditionally non-graduate jobs (Green and Henseke, 2016). In making this assumption, however, this analysis does not discount the possibility that medium-skilled occupations may have also become more complex over time. For this reason associate professional posts were also classified as high skilled. Rather the ODD classification questions the assumption that a university degree is also the most efficient route to prepare individuals to take up these increasingly more complex roles in medium and low-skilled occupations.

⁶³ ISCO Major Groups 4-8 classified as medium-skilled occupations.

⁶⁴ ISCO Major Group 9 classified as a low-skilled occupation.

The incidence and determinants of occupational drifting down, however, do not tell us anything about the job content of occupations for graduates who are bumped down the occupational ladder. They also do not tell us anything about the changing content of some occupations in ISCO major groups 1 and 3, classified as high-skilled using the ISCO, but where graduates one generation ago did not form the majority. To investigate the changing skill content of occupations in which graduates now constitute the majority share, this thesis resorts to qualitative case studies, as explained in more detail below:

II. Qualitative analysis: The case study approach

The case study approach is used in this thesis to investigate how HE expansion has changed recruitment patterns and graduate skills utilization in the workplace at the sectoral level. It is employed in the tradition of instrumental case studies to understand broader changes in education required to obtain the job, and skills required to perform the job (Stake, 1995). Cases are used as “instruments” to examine if graduate skills, gained through university education, are indeed required to perform the tasks of the job in occupations that just one generation ago did not require graduate credentials (Eriksson et al. 2008, p. 119). In this way, the case study method is employed to ensure “proximity to the studied reality,” and to get “feedback from those under study” (Flyvbjerg, 2006). The exercise is “not in the hope of proving anything, but rather in the hope of learning something” (Flyvbjerg, 2006)

Yin (2009) stipulated three conditions to justify the validity of using the case study approach. The first is that the research question driving the analysis is not a “what” question, but a “how” or “why” question. The second is that the researcher is an external observer who does not exert any direct influence on the subject of study. The third is that the scope of the research, namely graduate labour market mismatch, is not a historical event, but a contemporary one that can be investigated “within a real-life context” (Yin 2009, p. 2). Since all three conditions apply, this research proceeded with a multiple-case study analysis, choosing to focus on two sectors, namely retail banking and wholesale and retail trade.

The case or “unit of analysis” for this study is the industry or sector as whole, where “case” has been defined following Miles, Huberman and Saldaña (2014) as “a phenomenon of some sort occurring in a bounded context” (p. 28). Miles et al. suggested five case studies as a minimum for a multiple-case study. To this end, this thesis targeted the ten largest retail banks and the ten largest retailers in Spain. Multiple organizations were selected from each industry, instead of an exclusive focus on just one, in order to check that the phenomena experienced by one organization were not entirely idiosyncratic to it.

In selecting organizations, the thesis relied on multiple-case sampling, which involves strategically and intentionally, rather than randomly deciding, which organizations to interview (Miles et al. 2013, p. 32). The thesis sought the participation of large firms in the targeted sectors. Following the checklist

proposed by Miles, Huberman and Saldaña (2014), the criteria used for the selection of cases included:

1. **Relevance:** One of the key criteria for selecting companies was the relevance of the company to the research questions posed.
2. **Coverage of the phenomenon being studied:** Since this study investigated changing hiring requirements and mismatch, it was important that the organizations interviewed had well-developed and thought-out human resources policies, as many of the questions asked were about precisely these policies. For this reason, this thesis focused on large organizations, to the exclusion of smaller ones.
3. **Feasibility:** Feasibility of the interview in terms of time, access to the company and location was another key criterion for selection.
4. **Ethical consent:** No interviews were conducted before informed consent was granted.

Semi-structured interviews as the main method of inquiry

The aim of adding a qualitative dimension to this research is born of the belief that qualitative methods supplement and can sometimes elaborate on quantitative findings (Greene, 2012). In this way, they allow us to learn more and go further with the analysis, shedding light on more complex aspects of the phenomenon being studied that often fall through the cracks of quantitative analysis.

Qualitative methods allow us to “go to where the participants are in order to study them in their own environment” (Greene, 2012, p. 219). In this way, the unit of analysis is no longer reduced to a series of variables in a data set, but returns to being in the words of Greene, “the whole study, or field, is [now] the unit of analysis” (Greene, 2012, p. 220).

The objective behind conducting sectoral case studies has been to capture hiring trends and educational and skill mismatch from both an employer and employee perspective. This in turn has allowed for “capturing data on the perceptions of local participants from the inside” (Miles et al., 2014, p. 9). Fieldwork involved a visit to the company that included semi-structured interviews with senior management and young graduate employees in the surveyed firms (Appelbaum, Bailey, Berg and Kalleberg, 2000). The main method for data collection used was the semi-structured in-depth interview (Eriksson et al., 2008). Secondary sources of empirical data included web materials, media clippings and internal firm-specific documents, including annual reports, which were provided by respondents during the interview process.

Bingham and Moree (1959) defined the research interview as “a conversation with a purpose”. The main purpose of conducting semi-structured interviews in each workplace surveyed was to gain an understanding of job content and changing skill requirements within occupations. In this way, the interest was in “understanding particulars rather than generalizing to universals” (Maxwell 2002, p. 56). According to Miles,

Huberman and Saldaña (2014), qualitative research methods “with their emphasis on people’s lived experiences, are fundamentally well suited for locating the meanings people place” (p. 11) on the events that happen around them. This thesis has focused on locating the meanings graduates and employers alike placed on the expansion of higher education, and the implications of the latter on hiring trends and graduate skills utilization in the workplace.

This research sought to conduct at least three interviews in each participating organization, one with a member of senior management, one with the human resources manager or senior officer and the third with a graduate employee under the age of 35. The questions were first drafted in English then translated into Spanish (see Annex 3 for the questionnaire). They were formulated to ensure “neutrality”, so that the method of inquiry did not bias or shape participants’ answers. Interview questions also largely avoided jargon, avoiding usage of terms like “overeducation”, “overskilling”, “job upgrading”, and “skills mismatch”, or any direct reference to the theories being tested, such as “human capital” or “job competition theory”. Interviews took place in the offices of the participants. They were conducted in English where the respondent expressed preference for English, or in Spanish, or a mix of the two languages, where the respondent was not fully fluent in English. Interviews were audio recorded with the consent of interviewees and later transcribed verbatim.

The questionnaire for the semi-structured interviews was edited and

revised based on feedback from supervisors, as well as from an HR manager in a retail bank outside of Spain on whom the semi-structured questionnaire was then` tested. A pilot was not conducted in Spain due to difficulties in gaining access to conduct additional interviews. Instead, the initial set of interviews with the first participating firm in each sector was considered as a pilot, through which the length, wording and sequence of questions was tested in the Spanish context to ensure suitability. The pilot in each sector confirmed that the wording and sequence of the questionnaire necessitated little or no subsequent change. The pilot also confirmed the suitability of the choice of a semi-structured format, where depending on time constraints, the semi-structured format allowed for the flexibility to still cover all the main elements outlined in the questionnaire.

Gaining access

The difficulty in gaining access to companies in organizational research, though a substantial difficulty, is rarely discussed in the literature (Smith, 2014). Gaining access to companies in this study was not a straightforward endeavour, particularly that participation entailed conducting at least three interviews in each firm, as outlined in the formal letter initially sent out to all participating companies. Formal invitations to participate were sent out in soft and hard copies in English and in Spanish to all banks and retail firms approached. These formal letters were followed up by e-mails and phone calls. In parallel, some human resource directors and senior

executives were individually approached and sent the formal invitation through LinkedIn. Other HR directors were approached directly through personal contacts, who worked in the industry and agreed to share contact names and coordinates. Many firms simply did not respond to the invitations, whereas several large firms declined for varying reasons. Two banks declined as they were busy with restructuring and deemed it an inappropriate time for such interviews. Several large retail firms declined on the pretext that they received innumerable such requests per year and could not attend to all of them. Several firms interviewed did not permit further interviews with additional employees, also due to time constraints and difficulty in organizing these meetings. For the same reasons, a few banks declined interviews with employees in the branches. Instead the majority of interviews with graduates that were granted in these banks were interviews with graduates working in HQ, many of them graduate trainees. In an effort to work around these hurdles, all individuals nominated by the HR Department to participate in this study was interviewed out of the belief that all interviews with graduates employed in the firm at entry-level were relevant. Further interviews with employees in retail branches and the points of sale were also secured, visiting employees at their work location and conducting interviews during employees' lunch break or at any other time convenient to them.

Interviewing senior managers

Senior managers who were chosen for inclusion in this research project were selected because of the senior position they held within their organizations. The assumption was that by virtue of their seniority and title, they were also key players in setting human resource strategies and recruitment practices in their respective firms. Navigating “research relationships” (Aldred, 2008) with senior managers in the corporate world proved distinct from other kinds of interviews for various reasons. These are elaborated upon in the literature for interviews with elites, but are equally relevant to this study, as outlined below:

1. First, the research relationship between interviewer and interviewee is different when senior managers in large firms are the subjects of research. Whereas in other fields, such as psychological research and education, the subject of study is the student or a patient who may be vulnerable, power relations differ when it is senior managers on the other end of the table (Bell and Bryman, 2007). Senior managers, because of their seniority, may be able to exert more influence in shaping the perceptions of the researcher, in this way turning the tables somewhat. In their study investigating employers’ hiring decisions, Pager and Quillian (2005) warned about this phenomenon, describing it as “social desirability bias”. Under this scenario, employers will give politically correct answers, realizing those are more socially accepted, without this necessarily translating into changed hiring practices in the firm.

This effectively challenges social scientists to develop innovative methods to bridge the chasm between attitudes as measured through surveys, or in this case interviews, and practices or behaviour on the ground. To address this social desirability bias, Pager and Quillian supplemented interviews they conducted with employers in the US about their recruitment practices of black ex-offenders for entry-level posts with an analysis of their actual hiring practices. Using an experimental audit methodology, Pager and Quillian found that even though in explicitly expressed attitudes, employers did not admit to discrimination, in practice when equally qualified candidates applied, blacks and or ex-offenders were in fact half to one third as likely to be called back. In view of the discrepancy between attitudes and behaviour in their research, Pager and Quillian emphasized the importance of vetting survey results and employer self-reports about attitudes with actual behaviour on the ground, particularly when it came to hiring, as the former alone proved an insufficient and misleading proxy for behaviour in their research.

To address social desirability bias, this study also sought to interview graduates employed in these companies, in order to gain a different perspective on recruitment experiences and graduate skill utilization in the workplace. Though interviewing graduates may not have completely offset social desirability bias, it did provide an alternative perspective on graduate employment trajectories not from that of the employers. It also enhanced the construct validity of the case studies, by way of providing multiple sources of information.

2. In addition to different research relationships, interviews with senior managers are also distinct in that the time allotted for these interviews is often restricted. Due to time constraints, the literature recommends semi-structured and full structured interviews as opposed to unstructured interviews. The literature also recommends that the interview protocol be shared in advance, and that the researcher gathers information about each organization prior to the interview. "Courtesy, friendliness and professional demeanour" are emphasized upon interviewers when working with elites, as is confidentiality (Odendhal and Shaw, 2008).

In view of the above, and in order to optimize on the time available for the interview, this study relied on the semi-structured interview format. Background research about the company/bank was conducted in advance of the interview. An information sheet was also shared in advance with participants (see annex 2). This information sheet outlined the background and aims of the study.

3. The suitability of informed consent, imperative in other fields, may also be not as necessary in the case of interviewing elites. According to the ESRC Framework for Research Ethics (2010), "in elite interviews it is often argued that formal written consent is not necessary because by consenting to see the researcher, the participant is in fact giving consent" (ESRC, 2012). The ESRC, however, stipulates that an initial letter be sent to all participants, introducing the name and status of the researcher leading the study, and including a brief rationale of the research project and the participant's role in

it. The letter should elaborate on how research findings will be disseminated and confirm confidentiality of all data provided. In line with ESRC recommendations, these steps were followed exactly in contacting respondents, and a letter was sent out outlining the rationale for the project, providing the identity of the researcher and supervisors and ensuring anonymity and confidentiality. An information sheet was also annexed to the letter, detailing information requested from participants and reasons they were chosen to participate in this project.

Ethical considerations

This research adhered to the ethical principles outlined in the ESRC Framework for Research Ethics (2010). To this end, research participants were informed about the objectives, methods and possible uses of this research in an official letter declaring affiliation to the university and clearly situating this research in the context of a doctoral thesis project. The letter confirmed strict confidentiality, protecting the anonymity of research participants and their respective organizations. Formally accepting to be interviewed confirmed participants' voluntary consent to take part in the research project.

To ensure transparency and full disclosure of research aims, participants were given comprehensive information about the research project in order to ensure that participants' choice to take part in the research was based on informed voluntary participation. As explained in more detail above, the invitation letter and information sheet sent to all participants provided

sufficient information about the research, delineating the rights and responsibilities of each party. In giving consent, participants were ensured that they reserved the right to withdraw consent or not answer particular questions.

Following ESRC guidelines, the research did not entail more than minimal risk, as it did not engage with potentially vulnerable groups. The research similarly did not address sensitive topics. For example, since the savings banks and trade unions in Spain were implicated in some corruption cases, this study focused on commercial banks instead. The most relevant type of risk for research participants associated with this study was a “risk to their position within occupational settings”. To obviate this risk, research participants were fully informed of the purposes of the study, both prior to the interview through formal communication and during the interview itself. To protect privacy the study refrained from explicitly mentioning specific individuals or organizations.⁶⁵ As per BERA ethical guidelines (2012), the possible effects of the findings on the interests or reputation of the financial or retail sector as a whole were also considered. The latter, however, was deemed a minimal risk, as the study did not make any value judgments on the performance of banks or retail companies.

⁶⁵ At this stage of the research, the names of individuals and organizations have not yet been anonymized.

Chapter 4 | Fields of study and graduate labour market outcomes

Introduction

Since the turn of the century alone, the share of tertiary education graduates⁶⁶ in the Spanish working-age population⁶⁷ has increased from 22% in 2000 to approximately 33% in 2012. The share of university graduates increased over the same period from 15.4% to over 23% (Table 4.1).⁶⁸ Despite this rapid increase of graduates in the labour market, a relatively large proportion of Spanish tertiary graduates did not participate in the labour market at all in 2012. The proportion of young university graduates (20-34) who were neither in employment nor in education or training (NEET),⁶⁹ in fact, almost doubled between 2006 and 2012, exceeding 15% in 2012.⁷⁰

⁶⁶ The International Standard Classification of Occupations (ISCED-97) classifies ISCED 5A, 5B and 6 as tertiary education. All references in this chapter to ISCED levels refer to ISCED-97, which is the ISCED version that was used in the EU LFS until 2013. The latest version is ISCED 2011.

⁶⁷ Includes all those between the ages of 25 and 64.

⁶⁸ Even though Spain has a relatively high share of tertiary graduates, almost equal to that of the OECD average (33%) in 2012, Spain's working-age population is much more polarized in its skills supply. Spain's share of the working-age population (25-64 year-old) with below an upper secondary degree (approximately 45 %) as highest educational level attained was in fact double that of the average of the OECD average (24%) in 2012. Conversely, its share of the working-age population with upper secondary degrees (around 22%) was exactly half that of the OECD (44%) (LFS 2012, OECD, 2014). This low share of upper secondary graduates leaves only 55% of the working age population with upper secondary or tertiary education, compared to an OECD average of 77% (OECD, 2014).

⁶⁹ The share of graduates NEET was calculated from the EU LFS and it is the share of graduates who are not only unemployed, but unemployed and also not in formal education or training. The variable is a combination of three EU LFS variables, the first related to work status (*ilostat*), the second to education status (*eductat*) and the third to training (*couratt*). If an individual reports being unemployed, and not having been a student or apprentice nor having attended any non-formal training in the last four weeks prior to be interviewed for the survey, they are considered NEET. The NEET rate is then this share over the total share of individuals in that age group.

⁷⁰ Among youth as a group, around 25% of those between the ages of 20 and 34 were NEET, indicating a significantly higher NEET rate among non-graduates.

Table 4.1 Percentage share of tertiary graduates in the working-age population (25-64) in Spain

Tertiary share	2000	2006	2012
ISCED 5B ⁷¹	6.6	8.9	9.8
ISCED 5A	15.1	20.3	22.4
ISCED 6	0.3	0.7	0.7
Total Tertiary	22.0	29.9	32.9

Source: Spanish LFS, own calculation based on ISCED-97 classification

In addition to a large proportion of graduates NEET, one in two Spaniards who emigrated from Spain between 2008-2011 was a tertiary-education graduate.⁷² This proportion, though shared by other Southern Mediterranean countries including Greece and Italy, effectively constitutes almost double that of other European countries outside the EU-15⁷³ (Boll et al., 2014). According to the Spanish Statistical Office nearly eight percent of university graduates of the 2009-2010 academic year worked abroad in 2014, the largest number of them in terms of fields of study from engineering and architecture (INE, 2015).

Of those graduates who remained in Spain, nearly one in every four tertiary graduates was still unemployed or inactive in 2012 (Table 4.2), up from 16.9% pre-crisis in 2006. The unemployment rate, in fact, more than

⁷¹ In line with ISCED definitions, university graduates are those who completed ISCED 5A or 6 programmes, with ISCED 6 denoting doctoral studies, and ISCED 5 A including bachelor's and master's qualifications. ISCED 5B are vocational tertiary graduates.

⁷² Over half (around 55%) of Spanish-born Spaniards, who emigrated in 2012, were tertiary-education graduates. The majority of those went to Europe. Approximately 29% were between 16-29 years, and another 61% were between 30-44 years.

⁷³ This statistic quoted from Boll et al. (2014) specifically refers to the eight new member states (NMS-8) that joined the EU in 2004. These include Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovak Republic and Slovenia. These countries in contrast had almost half their emigrants (49%) be medium-skilled workers, whereas high-skilled workers only constituted 28% of the total emigration of their nationals during the same time period.

doubled between 2006 and 2012 among tertiary graduates, whereas the inactivity rate actually decreased. Of those who were employed, one in three tertiary graduates, and one in five university graduates worked in a medium or low-skilled occupation.⁷⁴ Furthermore, approximately 17% of tertiary graduates, and just over 10% of university graduates were “visibly” underemployed,⁷⁵ i.e. involuntarily working fewer hours than “normal duration”,⁷⁶ even though they were available and seeking more work.⁷⁷

Table 4.2 ILO status by educational group⁷⁸ for the working-age population (25-64)

(ISCED-97)	2006				2012			
	Employed	Unemployed	Inactive	Total	Emp	Unemp	Inactive	Total
Below upper sec	59.2	5.8	35.0	100.0	49.0	22.4	28.7	100.0
Upper sec	75.5	5.8	18.7	100.0	64.9	18.6	16.5	100.0
Tertiary	83.1	5.0	11.9	100.0	76.8	12.4	10.8	100.0
Total	69.8	5.5	24.7	100.0	61.7	18.3	20.1	100.0

Source: LFS 2012, own calculation

Labour market outcomes varied not only among individuals of different levels of educational attainment but also between tertiary graduates depending on institutional type, educational track and field of study. In terms of fields of study (Table 4.3), for example, university graduates of agriculture and veterinary studies, health and welfare, as well as services had the

⁷⁴ ISCO major groups 4-9

⁷⁵ Underemployment is used in the literature to denote both “visible underemployment,” which refers to involuntarily working less than one would have liked, and “invisible” underemployment”. The latter is associated with skill underutilisation or more broadly any job that is “inadequate in relation to specific norms, or alternative employment, account being taken of... occupational skill (training and work experience)” (ILO 1992, 121).

⁷⁶ Relative to hours normally worked in this economic activity, or hours prescribed in legislation or collective bargaining agreements.

⁷⁷ Following ILO definitions (ILO, 1990).

⁷⁸ Less than upper secondary education includes ISCED levels 01, 2, and 3C short. Upper secondary and post-secondary education includes ISCED levels 3 and 4. Tertiary non-university and university include ISCED levels 5A, 5B and 6.

highest employment rates. Conversely, university graduates in humanities, languages and arts (HLA), engineering, manufacturing and construction (EMC) as well as social science, business and law (SBL) experienced the highest unemployment rates in 2012. In addition to field of study, a survey conducted by the Spanish National Statistical Office showed that graduate labour market outcomes also varied by university type, with private university graduates experiencing higher rates of employment and lower rates of unemployment in 2014.⁷⁹ Therefore, even among themselves, university graduates were not a homogenous group, entering the labour market with degrees of varying duration and selectivity, in different fields of study, and with different labour market prospects.⁸⁰

Whereas research on education and skill mismatch has been predominantly concerned with the economic value of surplus years of schooling, there is a growing interest in the literature in the influence of fields of study on the probability of graduate labour market mismatch. Research in the field has expanded from investigating mismatch in terms of highest level of education acquired to increasingly distinguishing even among graduates

⁷⁹ Almost 82% of private university graduates of the year 2009/2010 were employed in 2014 compared to 75% among public university graduates. Similarly, only 13.1% of this cohort was unemployed in 2014 in comparison to 20.2% among public university graduates (INE, 2015).

⁸⁰ Since the university system in Spain is relatively less stratified⁸⁰ relative to other European countries, employers increasingly distinguish graduates based on fields of study, rendering the focus of this paper all the more pertinent (Ortiz and Kucel, 2008). None of the Spanish universities featured in the top 100 universities in the Time Higher Education World University & Reputation Rankings 2016. Nine universities featured in the top 500 universities globally. These are (1) Autònoma Barcelona (2) UPF, (3) Barcelona, (4) Autònoma Madrid, (5) Navarra, (6) Complutense, (7) Polytechnic of Catalonia, (8) Rovira i Virgili, (9) Valencia.

with the same educational attainment levels by institutional type, quality of educational provision and field of study.

Table 4.3 Educational track and ILO status by field of study and academic track (percentage)

2012	Education track		Employed		Unemployed		Inactive	
	5A & 6	5B	5A & 6	5B	5A & 6	5B	5A & 6	5B
ISCED								
Teacher training & education science (Education)	15.8	2.9	74.9	61.6	10.1	24.4	15.1	14.0
Humanities, languages & arts (HLA)	10.9	2.9	70.3	67.6	13.9	20.4	15.8	12.0
Social sciences, business & law (SBL)	32.1	31.0	76.1	68.6	12.5	17.3	11.5	14.2
Life science, physical science, mathematics & statistics, computer science & computer use (Sciences)	10.3	9.1	77.8	72.6	11.8	18.3	10.4	9.2
Engineering, manufacturing & construction (EMC)	10.0	36.1	72.9	76.6	13.9	13.3	13.2	10.1
Agriculture and veterinary	2.5	1.8	83.6	65.0	11.9	22.2	4.5	12.8
Health and welfare	14.9	8.2	82.1	65.2	7.3	19.4	10.7	15.4
Services	3.4	7.9	78.7	63.0	11.7	20.8	9.6	16.2
Total	100.0	100.0	76.2	70.7	11.6	16.8	12.2	12.5

Source: Own calculation, LFS 2012

A clear link has been established in the literature between highest level of education attained and field of study with graduate labour market outcomes. The Programme for the International Assessment of Adult Competencies (PIAAC), for example, showed that field of study mismatch across participating OECD countries was highest among science, mathematics and computing graduates (about two thirds), humanities, languages and arts as well as agriculture and veterinary graduates (over 70%). In the latter fields, the majority of graduates were overqualified. It is unclear, however, whether graduates in these fields were mismatched due to

the lack of transferability of their skills to a wider range of occupations, or due to insufficient labour market demand for their skills. In contrast, only a minority of graduates from health and welfare (less than 30%), and social science, business and law (less than 25%) were mismatched by field of study.

The Survey of Adult Skills (PIAAC) also showed that the wage penalty (25%) was much larger for graduates who were mismatched in terms of field of study and who were also occupying an occupation that did not require their qualifications compared to graduates who were field mismatched but not overqualified (wage penalty of 3%). An estimated 50% of Spanish graduates who were field mismatched also experienced education and/or skill mismatch. In Spain, in fact, field mismatch was significantly associated with lower levels of job satisfaction. However, after controlling for overqualification, this effect disappeared suggesting that dissatisfaction was mainly due to vertical mismatch (OECD, 2016).

In line with a growing literature (Green and McIntosh, 2007; Dolton and Vignoles, 2008; Ortiz and Kucel, 2008) that introduces fields of study into the analysis of labour market mismatch, this chapter explores how academic majors impact the probability of employment and occupational drifting down among tertiary graduates in Spain. This chapter is outlined as follows. The first section provides an overview of the data used to analyse graduate labour market outcomes and the determinants of graduate employment and labour market mismatch. The second section explains the Spanish context, presenting educational choices and graduate labour market outcomes, with

focus on educational track and field of study. The third section provides a description of the logistic models used to analyse the determinants of graduate employment and occupational drifting down. The driving question is what role do fields of study play in the probability of graduates securing employment and accessing high-skilled jobs, and what other factors influence graduate labour market outcomes?

In this way, this study provides an original analysis of the determinants of graduate labour market outcomes in Spain. Even though analysis of the determinants of graduate labour market mismatch is not original, its focus on the role of fields of study and educational track is, nonetheless, a new, and only recently growing strand in the literature on overeducation. Furthermore in this emerging sub-field, this is the first study on determinants that uses ODD as the main indicator for overqualification in Spain.

Section I: Data and variables

This analysis uses the Spanish Labour Force Survey (LFS) for the years 2006 and 2012. The Spanish LFS is a large-scale nationally representative survey. It employs personal interviews as the primary⁸¹ method to collect quarterly and yearly cross-sectional labour market information from persons 15 years and over. The LFS includes socio-demographic variables, and information on level and field of education, labour market status, occupation, and industry. The LFS not only surveys those who are in

⁸¹ First interview is always done face-to-face, with subsequent interviews by phone.

employment, but all members of sampled households,⁸² thereby providing a rich source of socio-demographic and socioeconomic information, covering a large sample.

The Spanish LFS uses a two-stage stratified sampling process. The census section or geographic area is the primary sampling unit, and the dwelling or private household is the secondary sampling unit. All persons within private households⁸³ covered are included in the sample. Participation in the Spanish LFS is compulsory, with the response rate reaching 80% in 2006⁸⁴ (Gagliardi, Verma & Ciampalini, 2009). The Spanish national statistical institute takes the lead in selecting the sample, finalising the questionnaire, and administering household interviews. The results are then analysed and disseminated by Eurostat (Eurostat, 2015). This facilitates comparability of data due to the usage of the same definitions and classifications across EU countries, the harmonisation of the EU list of questions with national questionnaires, and Eurostat leading the analysis of the results.

⁸² Includes students, pensioners, housekeepers etc.

⁸³ Excluding those living in collective households (e.g. conscripts).

⁸⁴ The analysis was carried out with the assumption that all missing data is missing at random.

Section II: Graduate labour market outcomes and the Spanish context

Tertiary fields of study differ in their entry requirements, occupational focus and linkages with the labour market (Table 4.4). Consequently, graduate labour market outcomes also differ in turn by field of study and educational track.

The majority of Spanish university graduates (ISCED 5A and 6) in the working-age population have a degree in social sciences, business and law (about one third), STEM subjects (22.8%) or health and welfare (14 % see Table 4.5). Looking more closely at gender differences in the selection of fields of study, women generally express a greater interest in SBL, followed by teacher training and education science, health and welfare, and HLA, as illustrated in their completion rates. Men, on the other hand, exhibit a stronger preference for STEM subjects, as indicated by their higher participation rates in these fields of study at the university level, with more men graduating in STEM subjects (over 35%) than in social sciences, business and law (just over 32%).

Table 4.4 Description of fields of study and associated majors

Broad field of study	Associated majors/areas of study	Description and some examples
Humanities, languages and arts	Arts	Fine arts, handicrafts, music, audio-visual and media, performing arts
	Humanities	History, philosophy, and theology
	Languages	Literature and linguistics
Social science, business and law	Social and behavioural science	Economics, political science, psychology and sociology
	Journalism and information	Journalism, library and information archiving
	Business and administration	Accounting, finance, marketing, management, wholesale and retail trade
	Law	
Sciences	Life science	Biology
	Physical science	Chemistry and physics
	Mathematics and statistics	
	Computer	
Engineering, manufacturing and construction	Engineering	Including all types of engineering, architecture, and manufacturing
	Manufacturing and processing	
	Architecture and building	
Agriculture	Agriculture, forestry and fishery	
	Veterinary	
Teacher training & education science	Teaching training	Teacher training with subject focus or without, pre-school teaching
	Education science	
Health and welfare	Health	Medicine, nursing, therapy and pharmacy
	Welfare	Care including child care and care of the elderly
Services	Personal security	Domestic help, hair and beauty, hotel, sports and travel
	Security services	Military and defence as well as protection services
	Transport	

Source: Own elaboration based on UNESCO 2014

Some degrees are in relatively greater supply in the labour market, such as SBL among university graduates, and engineering, manufacturing and construction and SBL among vocational tertiary graduates. Some fields of study are also more clearly linked to professions than others. In some professions, a degree in the specific subject area is not only a requirement for entry, but also a stipulation to practice. Examples include teaching training, medicine, nursing, engineering, architecture and law (Ortiz and Kucel, 2008).

It is, therefore, not merely the type of degree, but also the field of study that is the focus of that degree, in conjunction with labour market demand, that is likely to influence graduate labour market outcomes in the workplace, and the probability of education and skill mismatch.

Table 4.5 Distribution of university graduates by gender across fields of study

Field of study	Men	Women	Total
General programmes	11.8	29.9	41.6
	0.1%	0.2%	0.2%
Education ⁸⁵	840.0	2,655.4	3,495.4
	7.4%	18.7%	13.7%
Humanities, languages and arts (HLA)	1,094.6	1,925.3	3,019.9
	9.7%	13.6%	11.8%
Social sciences, business and law (SBL)	3,647.9	4,607.4	8,255.3
	32.2%	32.5%	32.4%
Sciences ⁸⁶	1,740.3	1,233.4	2,973.7
	15.4%	8.7%	11.7%
Engineering, manufacturing and construction (EMC)	2,283.3	544.8	2,828.1
	20.2%	3.8%	11.1%
Agriculture and veterinary	316.5	205.6	522.1
	2.8%	1.5%	2.1%
Health and welfare	1,000.8	2,533.7	3,534.4
	8.8%	17.9%	13.9%
Services	388.7	441.7	830.4
	3.4%	3.1%	3.2%
Total	11,323.9	14,177.1	25,501.0
	100.0%	100.0%	100.0%

Source: LFS 2006, 2012 (pooled⁸⁷ data), own calculation

⁸⁵ Short for teacher training and educational science

⁸⁶ Sciences in this chapter is short for life science, physical science, mathematics & statistics, computer science & computer use.

⁸⁷ Since data is collected using the same methods in 2006 and 2012, the data has been pooled to increase estimation power.

Graduate labour market outcomes and labour market mismatch

In terms of graduate labour market outcomes, prior to the 2008-9 financial crisis, university graduates in engineering, manufacturing and construction (EMC); health and welfare; and teacher training and educational science (education) had the lowest proportion of graduate unemployment. Conversely, other fields of study including the humanities, languages and arts (HLA), life science, physical science, mathematics & statistics, computer science & computer use (the sciences) and SBL had the highest share of unemployed graduates (see Table 4.9).

Table 4.6 Graduate (ISCED 5a and 6) labour market outcomes by fields of study (percentage)

	2006			2012		
	Employed	Unemployed	Inactive	Employed	Unemployed	Inactive ⁸⁸
General programmes	93.4	1.3	5.3	79.9	3.3	16.9
Education	80.1	4.4	15.6	74.9	10.1	15.1
HLA	77.2	6.8	16.0	70.3	13.9	15.8
SBL	81.9	5.7	12.5	76.0	12.5	11.4
Sciences	79.9	6.3	13.8	77.8	11.8	10.4
EMC	84.6	4.0	11.5	72.9	13.9	13.2
Agriculture and veterinary	84.3	5.0	10.7	83.6	11.9	4.5
Health and welfare	84.8	4.3	10.9	82.1	7.3	10.7
Services	81.2	4.6	14.2	78.7	11.7	9.6
Total	81.5	5.3	13.2	76.2	11.6	12.2

Source: LFS, own calculation

The proportion of university graduates who were unemployed more than doubled post-crisis, with graduates from HLA and EMC most impacted

⁸⁸ Using ILO definitions, individuals who are inactive are outside the active labour force, that is to say they are not in employment nor are they seeking employment to be classified as unemployed.

by the crisis.⁸⁹ With the exception of EMC, occupationally focused fields of study including health and education exhibited the lowest shares of graduate unemployed in 2012. In contrast to occupationally focused degrees, other fields of study including the humanities, languages and arts and SBL had considerably higher proportions of their graduates unemployed, independent of the business cycle. The biggest percentage increase in the share of the unemployed post-crisis was among graduates of EMC,⁹⁰ HLA,⁹¹ agriculture and SBL respectively.

These labour market outcomes, however, cannot be understood without a sectoral perspective shedding light on changes in the size and labour market demand in each sector. Even though such an analysis is outside the scope of this chapter, this chapter does provide some insight on sectoral trends of relevance in understanding graduate labour market outcomes. It is particularly important to note, for example, that the significant increase in the share of the unemployed among graduates of engineering, manufacturing and construction post-crisis reflects the specificities of the Spanish economy in the aftermath of the financial crisis. The crisis effectively heralded the collapse of the “bricks and mortar” economic model, with the construction, manufacturing and real estate sectors recording the highest number of job losses. Whereas the construction sector alone constituted approximately 13% of total employment in 2006, its share was cut in half to

⁸⁹ Youth between the ages of 20 and 34.

⁹⁰ From an unemployment share of 3.7% in 2006 to 20.5% in 2012.

⁹¹ From an unemployment share of 10.3% in 2006 to 24.4% in 2012.

just over 6% of total employment in 2012. The estimated 1.6 million jobs lost⁹² in the construction sector in the aftermath of the financial crisis explains the sharp increase in unemployment among EMC graduates illustrated in Table 4.6. Together the construction, manufacturing and the real estate sectors constituted just over 38% of total employment in 2006, this share decreasing to just below 25% of total employment in 2012.

In terms of conditions of work, approximately one in five university graduates who were employed in 2012 were not employed on a permanent contract (see Table 4.7). One in every ten university graduates was underemployed in 2012, underemployment defined as involuntarily working less hours than desired, with the highest rate of underemployment among education and teacher training graduates. Over 43% of university graduates were employed in large firms (see Table 4.6), including over half of science, computer science, technology, engineering and mathematics (STEM) graduates⁹³ as well as health and welfare graduates in 2012. Less than a third of university graduates had supervisory functions. Graduates of teacher training and education science, humanities, languages and arts and health and welfare reported the largest incidence of underemployment among university graduates.

⁹² <https://research.stlouisfed.org/dashboard/770>

Table 4.7 Percentage share of university graduates by field of study

Field of study	Permanent		Underemployed		Supervisory role		Large firm (>50)	
	2006	2012	2006	22012	2006	2012	2006	2012
Teacher training & education science (Education)	73.9	76.6	8.9	13.4	17.6	12.6	27.4	27.7
Humanities, languages & arts (HLA)	72.0	78.6	8.4	12.2	22.3	22.6	38.6	42.1
Social sciences, business & law (SBL)	75.7	82.7	6.8	10.5	37.7	37.1	36.9	39.3
Life science, physical science, mathematics & statistics, computer science & computer use (Sciences)	72.8	80.9	7.0	6.7	32.9	34.2	54.4	53.6
Engineering, manufacturing & construction (EMC)	76.8	78.5	5.1	9.7	53.7	43.4	46.9	51.3
Agriculture and veterinary	62.8	76.2	9.4	10.4	47.2	43.6	35.6	43.8
Health and welfare	70.0	73.7	6.8	10.9	22.5	22.8	48.6	54.1
Services	65.8	79.5	8.2	8.3	31.7	34.8	32.9	41.6
Total	73.4	79.1	7.2	10.5	31.7	30.1	40.3	43.5

Source: LFS, own calculation

Trends in graduate overqualification

Table 4.8 illustrates trends in graduate (ISCED 5A and 6) overqualification in Spain using four different measures of mismatch used in the literature. The over-all prevalence of overqualification in 2012 ranged between 19% and 38% depending on the measure used. Even though the discrepancy in the prevalence of overqualification across the different measures (mean, mode and 80th percentile) did not vary significantly between male and female university graduates, the discrepancy was significantly larger using the ODD measure. Subsequently, whereas approximately one in every four female university graduates was employed in a medium or low-skilled job in 2012, less than one in five male graduates was similarly mismatched. Despite their relatively similar education attainment levels, a larger share of women tertiary graduates than male graduates was placed in

medium and low skill occupations, suggesting other factors at play beside education. These factors include inter alia family responsibilities such as childbearing and childcare, and potentially labour market discrimination as well.

Table 4.8 Proportion of graduates (ISCED 5a and 6) who are overqualified using all 4 measures

	2006				2012			
	Total	Male	Female	Youth ⁹⁴	Total	Male	Female	Youth
Overedmean	39.6	39.5	39.7	45.6	32.9	32.2	33.6	33.8
Overedmd	30.0	31.7	28.4	33.0	29.3	29.6	29.1	29.7
ODD	22.0	19.7	24.1	27.4	22.8	18.9	26.0	26.0
Overed80 ⁹⁵	34.4	33.2	35.5	33.4	35.8	34.3	36.9	38.4

Source: LFS, own calculation

In looking more closely at the occupational distribution of university graduates within medium and low-skilled jobs, the majority was engaged in clerical support work and sales. Those in clerical support work served as client information workers, or general and keyboard clerks. The largest share of those in service and sales, on the other hand, were working as shop and sales persons. Similarly among women, almost half women university graduates working in non-graduate jobs were employed as client information clerks, general and keyboard clerks and numerical clerks. Another 12.5% were employed as shop salespersons. The distribution of young graduates across medium and low-skilled jobs followed the same distributional pattern as other graduates.

Table 4.9 suggests that there was less prevalence of overeducation

⁹⁴ Youth between the ages of 25 and 34.

⁹⁵ Those with an educational level above the 80th percentile are classified as overeducated.

using the mode or 80th percentile measure among the younger cohort (25-39) relative to the older age group (40-64). This, in fact, illustrates one of the main weaknesses of statistical measures that exclusively rely on the education of those occupying the job. In this case, because with the expansion in higher education more graduates entered these occupations, this in turn increased the mean or the 80th percentile. As a result, less graduates among the younger cohort were considered overeducated, with a university degree increasingly becoming more common in these occupations.

Table 4.9 Share of university graduates who were mismatched by ISCO major group in 2012

Percentage	Overeducation (mode)		ODD		Overed80	
	Youth (25-39)	Older cohort (40-64)	Youth (25-39)	Older cohort (40-64)	Youth (25-39)	Older cohort (40-64)
ISCO major group						
Managers	19.2	25.9	0.0	0.0	4.9	6.6
Professionals	2.0	3.9	0.0	0.0	1.6	3.7
Technicians & associate professionals	42.7	39.1	0.0	0.0	7.3	8.7
Clerical support workers	75.1	81.6	100.0	100.0	7.1	12.1
Service & sales workers	95.7	97.5	100.0	100.0	95.7	97.5
Skilled agricultural, forestry & fish	100.0	100.0	100.0	100.0	100.0	100.0
Craft & related trades workers	100.0	100.0	100.0	100.0	100.0	100.0
Plant & machine operators	100.0	100.0	100.0	100.0	100.0	100.0
Elementary occupations	100.0	100.0	100.0	100.0	100.0	100.0
Total	31.0	27.9	26.0	20.0	15.5	15.8

Source: LFS 2012, own calculation

In looking at the proportion of university graduates who were mismatched by field of study, health and welfare graduates had the lowest proportion of university graduates who occupationally drifted down, followed by the sciences and engineering groups, both considered STEM subjects (see Table 4.10). One explanation for this phenomenon may be that fields of

study with clearer occupational focus, like health and welfare, provide students with occupation-specific skills, and are thereby expected to lead to better matches than less occupation-specific fields of study. STEM fields, on the other hand, generally tend to be more selective in their admission process, and so employers may perceive them as indicative of better ability (Reimer, Noelke & Kucel, 2008; Assirelli, 2015).

Table 4.10 Proportion of university graduates (25-64) who are mismatched by field of study (percentages) using different measures

Field of study (ISCED 5a, 6)	Overeducated (mode)	Occupationally drifted down	Overeducated (above 80 th percentile)
Teacher training & educational science	24.7	21.1	33.8
Humanities, languages & arts	30.7	24.6	38.9
Social sciences, business & law	34.5	29.4	32.9
Life & physical science, mathematics & computer use	27.8	14.7	32.2
Engineering, manufacturing & construction	27.4	15.2	32.7
Agriculture & veterinary	34.2	20.4	31.7
Health & welfare	17.2	9.4	25.0
Service	49.1	38.0	37.5
Total	29.1	21.6	32.7

Source: LFS pooled data (2012, 2006), own calculation

Furthermore, certain fields of study, like teacher training and health and welfare are linked to specific professions, which themselves are more regulated than others, stipulating that only those with the appropriate educational credentials are able to practice. This has been referred to in the literature as an example where educational credentials are used as instruments for “social closure” (Tholen, 2016; Assirelli, 2015; Barone and Ortiz, 2011; Ortiz and Kucel, 2008). This clear linkage with the labour market, however, could also be a double-edged sword, since it is also graduates from

fields with a very specific occupational focus, who will be at a greater risk of ODD due to the narrow focus of their studies. This in turn may place them at a comparative disadvantage in the labour queue once all vacancies for which they are qualified are filled (Reimer et al., 2008). This may help explain why even though both teacher training and health and welfare are occupation specific, many more education graduates are occupationally drifted down than are health and welfare graduates.

Section III: Effects of fields of study and educational track on graduate labour market outcomes

The literature (Capsada-Munsech, 2015; Barone and Ortiz, 2011; Reimer, Noelke and Kucel, 2008; Green and McIntosh, 2007) suggests heterogeneity in graduate labour market outcomes, with graduates from relatively less occupation-specific fields more likely to experience overqualification, than graduates from STEM subjects, and occupation-specific subjects such as health and education. Among Canadian graduates with a bachelor's degree, Frenette (2004) found graduates of education, engineering, computer science, law and medicine to be among the least likely to experience overqualification.⁹⁶ In the UK, Dolton and Vignoles (2000) also found graduates of engineering, technical and science degrees to be least likely to experience overqualification.

⁹⁶ Overqualification is defined as having more education than is required to be hired on the job. It was obtained through a subjective indirect self-report, where participants were asked about the minimal educational entry requirements to be hired on their job. This was then compared to their highest level of educational attainment.

Drawing on the literature, the starting point for this analysis is that educational track and fields of study impact the odds of employment and graduate education and skill mismatch, with graduates from STEM subjects and more occupationally-specific fields of study less likely to be placed in medium and low-skilled occupations (H1). For the purposes of this study, STEM subjects include life and physical sciences, mathematics and statistics, computer science and computer use (the sciences), and engineering, manufacturing and construction (EMC). STEM subjects are predicted to have better labour outcomes than other subjects because they are linked to high tech jobs that may have preference for the technical skills of STEM graduates over the artistic and creative skills of non-STEM majors.

Occupation-specific fields of study like teacher training and educational science, health and welfare, and services, are also expected to have better labour market outcomes because they prepare their graduates for specific careers in the labour market. Majors such as medicine, nursing and pharmacy in health and welfare, for example, are described as occupation specific, because they train their graduates to become doctors, nurses and pharmacists, all of which are professions that require the skills acquired through higher education before graduates are able to practice. In contrast, less occupation-specific fields of study including the humanities, languages and arts, and the social sciences are not as clearly linked to careers in the labour market as their more occupationally-specific counterparts.

Model

This analysis relied on the annual LFS sample,⁹⁷ which is a representative sub-sample covering the entire year and working age population. The analysis was confined to only those with information about their educational level and occupational classification (25-64), currently in employment (excluding members of the armed forces).

In the first stage, a logit model (M1) was used to estimate the determinants of graduate employment. The dependent variable took the value of 1 if a tertiary graduate was employed and 0 otherwise. Explanatory variables incorporated in this model included personal characteristics (female, married, native, having one or more children under two years of age), education tracks (vocational tertiary versus academic tertiary graduate), fields of study, age and a year control (see Annex 4). Interaction effects between gender and marital status, and between academic track and field of study were also considered (see Columns 2-4). The model was run for the sample as a whole (see Column 1 and 2) and for a restricted sample of tertiary graduates (ISCED 5B, 5B and 6) between the ages of 25-39 (see Column 3) and university graduates (ISCED 5A and 6) between the ages of 25-64 respectively (see Column 4).

⁹⁷ In most EU countries the annual sample consists of either the average of four quarterly samples, or one single quarter. In some EU countries, however, including Spain, the annual sample is a sub-sample representing the whole year.

The model distinguished between two broad levels of educational attainment at the tertiary-education level, namely: (i) vocational tertiary,⁹⁸ and (ii) university tertiary education.⁹⁹ Distinguishing between academic and vocational tracks, allowed for tertiary degrees in the same field of study to hold different values in the labour market, in this way testing the hypothesis suggested in the literature that Spanish employers had a preference for university over vocational graduates, viewing university credentials as more prestigious (Ortiz and Kucel, 2008). In this case, even if tertiary vocational degrees are more occupationally specific by nature, prestige will trump skill specificity, so that employers will continue to prefer technical skills acquired through the university system due to the perception that vocational degrees are inferior in some ways.

Eight fields of study were considered in the analysis, namely (i) teacher training and education science (education); (ii) humanities, languages and arts (HLA); (iii) social sciences, business and law (SBL reference category); (iv) mathematics and statistics, computer science and computer use,¹⁰⁰ life¹⁰¹ and physical sciences (sciences);¹⁰² (v) engineering, manufacturing and construction (EMC); (vi) agriculture and veterinary; (vii) health and welfare; and (viii) services. In line with previous studies, the field “general programmes” was excluded from the analysis, due to the ambiguity

⁹⁸ ISCED-97 5b.

⁹⁹ ISCED-97 5a and 6.

¹⁰⁰ Merging three categories that were separate categories in LFS

¹⁰¹ Including biology and environmental science

¹⁰² Including chemistry, physics and earth science. Life and physical science were also separate categories in the LFS.

associated with this major (Ortiz and Kucel, 2008). Following Reimer, Noelke and Kucel (2008), the natural sciences were combined into one group. Additional robustness tests were conducted separating mathematics and statistics from computer science and computer use, or alternatively combining all STEM subjects into one category. The same models were also run including general programmes instead of excluding them. These different iterations on the same models did not challenge the key findings regarding the effects of fields of study and educational tracks in any significant way. The importance of considering the field of study of the highest level of education attained at the tertiary level was confirmed by the Programme for the International Assessment of Adult Competencies (PIAAC), which observed a clear relation between field of study and jobs, wages and skill levels (Allen et al., 2013).

Age was also controlled for. To this end, five age categories were considered (35-44, 45-54 and 55-64) with the 25-34 years-old group serving as the reference category (see Columns 1,2 and 4). The yearly weighting factor of the sample for household characteristics for each person composing the sub-sample was used for all descriptive statistics to ensure a representative sample. To account for intraclass correlation, which refers to the average correlation of individuals within the same household, this study

used survey commands in Stata, with households clearly designated as the primary sampling unit.¹⁰³

Once the determinants of graduate employment were identified, a second logit model (M2) was run to estimate the determinants of graduate occupational drifting down. In the first variation of this model, the dependent variable took the value of 1 if a tertiary graduate was placed in a medium or low skill job, and 0 otherwise, with the definition of high-skilled jobs including managerial, professional and associate professional occupations. In the second variation of this model (M3), the definition of a high-skilled job was restricted to managerial and professional occupations, excluding associate professional posts (ISCO major group 3), also considered high-skilled in M2.

Labour market theories differ in their conceptualization of the determinants of overqualification in the labour market, with different labour market theories weighing personal and occupational characteristics differently. In line with the literature (Green and McIntosh, 2007; Sutherland, 2012), this analysis explored the influence of personal characteristics and occupational characteristics on graduate mismatch (for a full list of variables and variable definitions, see annex 4). Personal characteristics in M2 and M3 included age, sex, an interaction between sex and marital status, marital status, the presence of a child or more under two-years of age, and nationality. Occupational characteristics included tenure and tenure squared.

¹⁰³ Information on geographic area, which is the primary PSU is not provided in the Spanish LFS and so could not be specified, with households indicated as the secondary sampling unit.

Tenure was derived by subtracting the survey reference year from the year in which an individual started working on the current job. Tenure squared was also included in the model to allow for non-linear relations between tenure and occupational drifting down, with the idea that skills acquisition is higher in early career and decreases over time (Allen et al., 2013).

In addition to personal and occupational characteristics, educational choices were also controlled for in line with Model 1 both in terms of educational track (vocational versus university tertiary education) and field of study. To this end, education track and the same eight broad fields of study used in Model 1 were controlled for in Models 2 and 3. Since the data includes two years, 2006 and 2012, year dummies were also included in Models 2 and 3.

The proposed cut-off between graduate and non-graduate occupations made in the two ODD measures described follows the ILO's classification of occupations into three major groups, high, medium and low skill, each with an associated education level. According to this "normative measure" proposed by the ILO, only managerial, professional and associate managerial positions are associated with tertiary education levels. ISCO-08 medium-skilled occupations (Major Groups 4-8), on the other hand, are associated with upper and lower secondary education, whereas low-skilled occupations (major group 9) are associated with primary education only (ILO, 2014).

This distinction between occupation groups has also been made in the literature. Chevalier (2003), for example, defined graduate jobs to include

managerial and professional occupations, in addition to computer analysts from associate professional occupations. Green and Henseke (2016), using their graduate skill requirement (GSR) index that assessed education and skill requirement of occupations based on subjective self-reports,¹⁰⁴ also classified managerial, technical and associate professional occupations as graduate. Ortiz (2007) and Tarvid (2012) similarly used ODD, as it has been defined in this study as an indicator for overeducation, though admittedly a restrictive one. Elias and Purcell (2013) classified the majority of unit groups of SOC(HE) of 2010 in the first three ISCO major groups as graduate, the latter defined as occupations that required expertise acquired at the undergraduate level, orchestration or communication skills.¹⁰⁵ To this end, only two occupations¹⁰⁶ outside of the first three ISCO major groups were classified as graduate jobs.

Sociologists concerned with the social class returns of education have

¹⁰⁴ To construct their GSR index, Green and Henseke looked at computer usage and the nature of job tasks including designation of literacy tasks at the graduate level, as well as communications, supervisory, self-planning and specialist knowledge. They also considered the variety of job tasks and level of repetitiveness involved, as well as the training undertaken in preparation for the current job. They used the Standard Classification of Occupations (SOC) to identify the “neighborhood of jobs” that involved similar education and skill requirements.

¹⁰⁵ Elias and Purcell (2004) identified four types of graduate jobs, which they described as traditional, modern, new and niche graduate occupations. Traditional graduate jobs were those that graduates had historically occupied, such as doctors, solicitors, and scientists. Under the new classification (2013), these were the occupations that required a high level of expertise. “Modern graduate occupations,” were those occupations that graduates increasingly entered with the expansion in higher education, that under the new classification required primarily expertise, but also for some jobs communication skills. “New graduate jobs,” were the jobs in which graduates have recently become the majority, that under the new classification required expertise or communication skills. “Niche graduate jobs” on the other hand are “pocket” groups of occupations that require degrees or provide room for graduate-level skills among generally non-graduate broad group of occupations. Almost 45% of niche graduate jobs were re-classified as non-graduate under the new classification.

¹⁰⁶ These are national government administrative occupations (4112) and local government administrative occupations (4113), both classified as requiring an orchestrator role.

also distinguished between occupational groups in this way. Bukodi and Goldthorpe (2011), for example, described the “professional and managerial salariat” as a specific social class that can be distinguished by the “social class returns” or privilege it bestows relative to other occupational groups. This occupational privilege entails not just higher income, but also income security, generally higher economic activity rates and career prospects that promise better graduate skill utilization. It is precisely for those reasons that holders of professional and managerial occupations have also been described as the “generally advantaged... salariat” (Bukodi and Goldthorpe, 2011). To this end, it is no coincidence that all jobs described as “elite jobs¹⁰⁷... [or] contemporary gateways to the... economic elite” also all fall under this category of occupations (Rivera, 2015).

This study employed ODD as the dependent instead of other statistical methods using the mean or mode ODD, as using ODD obviates the need to transform educational attainment levels to years of schooling. In this way, the education variable is no longer assumed to be a “continuous variable” with all years of schooling being equal (Berg, 2003, p. 26). This in turn shifts the emphasis instead to credentials attained. Similar to other statistical measures, however, ODD fails to address any potential heterogeneity within the same occupation or job, when variations “within occupational groups have been found to be as great as variations among these groups” (Berg, 2003, p. 41). It subsequently may oversimplify the hierarchy between occupational groups,

¹⁰⁷ In Rivera’s analysis, elite jobs were restricted to positions in top American investment banks, management consulting firms and law firms.

assuming that all managerial, professional and associate professional jobs are higher skilled and consequently utilise graduate skills more than medium and low skill occupations. Even though this is a strong assumption, this analysis argues that, in the absence of subjective-information on education required to get the job and skills required to do the job, and any empirical evidence in the literature suggesting that the academic university track is indeed the most efficient pathway into these medium and low-skilled occupations in Spain, ODD is still a relatively better indicator than the share of graduates per occupational group.

Study limitations

In running these models, the scope of this analysis has also been limited by data availability. The data for instance do not allow us to differentiate between bachelors and masters students (all grouped under ISCED 5A) or between social sciences graduates, on the one hand, and business and law majors on the other.¹⁰⁸ Ideally, law, business and the social sciences would not have been aggregated into one group, since law is occupation specific. However, since the data do not allow for further disaggregation of this sub-category, this group as a whole is not considered occupation specific.

With regard to education required for the job, the data also does not provide any information containing subjective self-reports of education

¹⁰⁸ LFS 2016 has separated Social Sciences, Journalism and Information from Business, Administration and Law, applied from 2016 onward.

required to obtain the job, nor does it include any questions on skills required to do the job. Since subjective self-reports on overeducation and overskilling are not available in the datasets used, ODD is considered a proxy for educational and skill mismatch, with the premise that without evidence of job upgrading, medium and low-skilled occupations as defined, do not fully utilise graduate skills.

Another key limitation in studying the effects of educational track and field of study on graduate labour market mismatch is the lack of data on unobservable characteristics, such as ability, type of university attended, quality of education, ambition and motivation, all not available from the LFS, that may be driving both employment prospects and the risk of ODD. Consequently, the literature (Green and McIntosh, 2007; Dolton & Vignoles, 2000) has pointed to the influence of “heterogeneous ability” and institution type on overqualification, particularly in the aftermath of HE massification, emphasizing the potential bias in results in the case of their omission. To address this bias, some studies resorted to including controls for ability such as mathematical scores (Murnane, Willett and Levy, 1995), whereas other studies used instrumental variables (Belingieri and Zierahn, 2014). The literature suggests that proxies for ability such as basic cognitive mathematical skills or high school grades, significantly and negatively affect self-selection into fields of study,¹⁰⁹ the risk of overqualification (Belingieri and Zierahn, 2014) and wages (Murnane, Willett and Levy, 1995). Without these

¹⁰⁹ In Belingieri and Zierahn (2014) students with higher grades tended to opt for STEM fields of study when choosing a major.

controls, results may be positively biased due to self-selection into educational tracks and fields of study, potentially overestimating the effects of field of study on the risk of mismatch.

Due to difficulties in establishing valid instruments and due to the lack of proxies for ability in the LFS, this study was not able to control for ability, leading to results that may be positively biased. To address this problem of unobservables, and considering the limitation in the data itself, this study also investigated the determinants of employment or entry into the labour market, before investigating determinants of labour market mismatch.

Results

Table 1 presents the results of a logit model (Model 1) evaluating the influence of personal, educational and occupational characteristics on the probability of graduate employment. Column 1 shows results for the full model for the working-age population between the ages of 25-64. Column 2 shows results of the same model but introducing some interaction effects between gender and marital status, and between academic track and field of study. Column 3 also shows the same model with interactions, but for a restricted sample of tertiary graduates (ISCED 5B, 5B and 6) between the ages of 25-39. This is the cohort that entered the labour market beginning in the early 1990s just as HE was starting to expand in Spain. Column 4 shows results for university graduates (ISCED 5A and 6) alone, excluding vocational tertiary graduates, between the ages of 25-64.

Table 2 presents the results of a second logit model where the dependent variable is a dichotomous variable that takes the value of 1 if a tertiary graduate is mismatched or placed in a medium or low-skilled job, and zero otherwise. Column 1 shows results for the full model, which includes in addition to personal, and occupational characteristics, educational track¹¹⁰ and field of study. Column 2 shows the results of the same model, but introducing an interaction term between education track and field of study and between female and married. Column 3 includes the same interactions but restricting the sample to tertiary graduates between the ages of 25-39.¹¹¹ Column 4 shows results of the full model with interactions, but restricted to university graduates in the working-age population (WAP) 25 years of age and above.

Table 3 presents the results of the same logit model as Table 2, but where the dependent variable is restricted to managerial and professional occupations. All other ISCO major groups, including technical and associate professional occupations, are not considered high-skilled in this model.

For the working-age population, the results show that being a female graduate significantly decreases the likelihood of being employed (Table 1).¹¹² The basic version of the model without any interactions (Column 1

¹¹⁰ Tertiary vocational ISCED 5b versus tertiary academic ISCED 5a and 6.

¹¹¹ This is the generation that started entering the labour market in the early to mid 1990s, a period characterized by rapid HE expansion.

¹¹² There is divergence in the literature regarding the influence of gender (Groot, 1996) on the probability of overqualification, in large part because overqualification continues to be a fuzzy word that is defined differently by different authors, and also due to varying country contexts covering different time periods. Groot (1996), for instance, using a multinomial logit model found a positive association in the UK in 1991 between being male and the probability of

Table 1) also seems to suggest that being married is positively associated with securing employment, yet upon further analysis including an interaction effect between female and married (Column 2), it becomes apparent that the penalty of being married is restricted to women. This may be due to household and family responsibilities, including child rearing, which the model shows is negatively associated with the likelihood of employment (Table 1). Confirming this hypothesis, for men (Column 2 Table 1), being married is associated with an increase in the likelihood of employment.

Table 1: Logistic coefficients estimating determinants of tertiary graduate employment, odds ratios¹¹³

	M1 Column 1	M1 including interactions Column 2	Youth 25-39 Column 3	University graduates Column 4
Female	0.563 ^{***} (-13.50)	0.925 (-1.36) _{***}	0.886 (-1.84) _{***}	0.619 ^{***} (-9.52) _{***}
Married	1.243 ^{***} (5.10)	2.205 ^{***} (12.79) _{***}	2.577 ^{***} (7.64) _{***}	1.274 ^{***} (4.45)
Female x Married		0.386 ^{***} (-12.56) _{***}	0.337 ^{***} (-8.10) _{***}	
Native	2.059 ^{***} (11.10)	2.088 ^{***} (11.24)	1.798 ^{***} (6.37)	2.190 ^{***} (10.04)
One or more children under 2	1.017 (0.26)	1.009 (0.15)	0.861 (-1.88) _{***}	1.029 (0.34) _{***}
Year 2012	0.660 ^{***} (-10.73)	0.662 ^{***} (-10.60)	0.541 ^{***} (-11.55)	0.670 ^{***} (-8.28)
Vocational graduate	0.665 ^{***} (-9.75)	0.715 ^{***} (-5.10)	0.987 (-0.14)	1 (.)

overeducation. Groot defined overeducation as having more years of schooling than that required for the job, the latter derived from the average years of schooling per occupational group. Using the definition of overqualification as Groot, in Spain, with the same independent variables as in Column 1 shows that female graduates are less likely to be overqualified (logit table not shown).

¹¹³ Odds ratios (OR) are compared to 1 rather than zero for positive/negative effects. An OR equal to one indicates that the odds of success are equal to the odds of failure. An OR below 1 suggests a negative association whereas an OR greater than 1 shows a positive association i.e. higher odds of the occurrence of an outcome (in this case employment) given the independent variable in question.

Education	1.057 (0.88) ^{**}	1.126 (1.72)	1.222 (1.87) ^{**}	1.051 (0.72) ^{**}
HLA	0.835 ^{**} (-2.63)	0.838 (-2.35)	0.756 ^{**} (-2.76)	0.815 ^{**} (-2.68)
Sciences	0.957 (-0.64)	0.978 (-0.27)	0.863 (-1.35)	0.986 (-0.17)
EMC	1.042 (0.71)	0.901 (-1.28)	1.006 (0.06)	0.953 (-0.59)
Agriculture & Veterinary	1.108 (0.80)	1.235 (1.44) ^{***}	0.983 (-0.10)	1.309 (1.81) ^{***}
Health & Welfare	1.578 ^{***} (6.62)	1.882 ^{***} (7.38)	1.847 ^{***} (5.13) ^{**}	1.793 ^{***} (6.78)
Services	1.014 (0.16)	1.077 (0.61)	1.550 ^{**} (2.70)	1.101 (0.79)
Vocational x Education		0.705 (-1.75)	0.631 (-1.67)	
Vocational x HLA		1.112 (0.54)	1.085 (0.31)	
Vocational x Sciences		0.979 (-0.15)	0.862 (-0.81)	
Vocational x EMC		1.170 (1.41)	1.016 (0.10)	
Vocational x Agriculture & Veterinary		0.591 (-1.86)	0.445 [*] (-1.97)	
Vocational x Health & Welfare		0.528 ^{***} (-4.45)	0.427 ^{***} (-4.50)	
Vocational x Services		0.858 (-0.85) ^{***}	0.615 (-2.10)	
Age 35-44	1.422 ^{***} (6.96)	1.402 ^{**} (6.71)		1.698 ^{***} (8.19)
Age 45-54	1.456 ^{***} (6.47)	1.380 ^{***} (5.54)		1.789 ^{***} (7.88)
Age 55-64	0.373 ^{***} (-15.80)	0.325 ^{***} (-17.67)		0.447 ^{***} (-10.73)
Age 30-34			1.816 ^{***} (9.36)	
Age 35-39			2.036 ^{***} (9.88)	
N	40,028	40,028	18,923	24,762

Exponentiated coefficients; *t* statistics in parentheses

Source: EU Labour Force Survey for Spain

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2 shows that once in the labour force, women are also more likely to be found in medium and low-skilled occupations. This may be due to a number of factors. In households where men are the primary breadwinners, women's career choices may be constrained in terms of location. Women may also accept jobs for which they are overskilled, prioritizing childcare

responsibilities over career prospects. The gender penalty in terms of graduate labour market outcomes may alternatively be due to potential labour market discrimination, where Spanish women in fact face greater hurdles in accessing high-skilled jobs, a phenomenon referred to in the literature as the “glass ceiling effect” (Eurofound, 2015). Trends in the gender wage gap¹¹⁴ in Spain, in fact, confirm increased gender pay discrimination in the aftermath of the financial crisis, with the wage gap increasing from 16% in 2008 to 18% in 2012. This increase reversed a trend toward a reduction in the gender wage gap, which had reached 22% in 2002, thus culminating in an even wider gender gap by 2012 (Eurofound, 2015).

Having one or more children below two years does not significantly impact the likelihood of employment (Table 1). Once employed, however, having one or more children under two is statistically significant (Table 2), and positively associated with a good match, defined in this model as a tertiary graduate occupying a high-skilled job. One explanation may be self-selection into employment, where families with young children are more likely to have one parent out of the workforce, and it makes sense that the parent who stays is the one with the high-skilled job. After the child is two, when maternity or paternity leave ends and children move to childcare, both parents are more likely to be in employment, although one might accept a less demanding job in order to juggle childcare and employment more easily. This explanation is

¹¹⁴ In an effort to address this wage gap, Spanish Organic Law 3/2007 called on all large firms with more than 250 employees to devise their own equality plans to ensure equal pay for “work of equal value” (ILO, 1951).

in line with the literature (Green & McIntosh, 2007; Sutherland, 2012), which suggests that the presence of a child may constrain parents' mobility, therefore limiting their flexibility to seek occupations at their skill level.¹¹⁵

Being a Spanish native both significantly increases the likelihood of a tertiary graduate being employed, and significantly protects against the likelihood of mismatch relative to non-Spanish graduate residents employed in Spain. Spanish natives, in fact, are more than twice as likely to be employed as non-natives (columns 1 and 2 Table 1). This may be due to a number of factors, including labour market discrimination or more serious obstacles that impede the integration of migrants, such as the equivalence of degrees obtained abroad or language barriers (Leuven & Oosterbeek, 2011). The average marginal effect shows that being a native graduate relative to a non-native graduate decreases the probability of occupational drifting down by over 19% among the WAP over 25 and by 22% among young entrants ages 25-39 (Column 3).

In looking at the determinants of employment in Spain using PIAAC data, Hernández and Serrano (2013) found that being female did not significantly impact the probability of being employed. Being a non-native, on the other hand, significantly reduced the probability of employment, confirming the trend in Model 1. With reference to youth between the ages of 16-24, their results also showed that all other age group categories were significantly

¹¹⁵ Due to different model specifications and varying country contexts, direct comparison of resulting estimates with other studies is difficult to establish. This study, however, has compared to findings from similar studies, specifying where applicable varying definitions of the dependent variable for overqualification.

more likely to be employed, as reflected in Model 1 with the exception of the pre-retirement cohort.

Table 2: Logistic coefficients estimating the determinants of ODD, odds ratios

	M2	M2 including interactions	Youth 25-39	University graduates
	Column 1	Column 2	Column 3	Column 4
Female	1.370 ^{***} (7.03)	1.417 ^{***} (5.44)	1.388 ^{***} (4.31)	1.260 ^{***} (3.05)
Married	0.869 ^{**} (-2.87)	0.874 [*] (-2.02)	1.005 (0.05)	0.746 ^{**} (-3.24)
Female x Married		0.988 (-0.16)	0.920 (-0.80)	1.166 (1.53)
Native	0.315 ^{***} (-14.29)	0.312 ^{***} (-14.28)	0.294 ^{***} (-10.92)	0.294 ^{***} (-13.91)
Child under two	0.836 ^{**} (-2.65)	0.837 ^{**} (-2.61)	0.806 ^{**} (-2.71)	0.861 (-1.67)
Tenure	0.957 ^{***} (-6.13)	0.954 ^{***} (-6.50)	0.923 ^{***} (-4.42)	0.940 ^{***} (-6.47)
Tenure squared	1.001 (2.35)	1.001 (2.46)	1.004 (3.19)	1.001 (2.63)
Year 2012	1.191 ^{***} (4.24)	1.197 ^{***} (4.34)	1.160 ^{**} (2.63)	1 (.)
Education	0.689 ^{***} (-5.13)	0.693 ^{***} (-4.98)	0.570 ^{***} (-5.28)	0.708 ^{***} (-4.60)
HLA	0.685 ^{***} (-4.71)	0.718 ^{***} (-3.96)	0.749 (-2.52)	0.713 ^{***} (-3.96)
Sciences	0.377 ^{***} (-12.05)	0.407 ^{***} (-9.40)	0.404 ^{***} (-7.28)	0.398 ^{***} (-9.55)
EMC	0.832 ^{**} (-3.15)	0.449 ^{***} (-8.33)	0.385 ^{***} (-7.64)	0.435 ^{***} (-8.55)
Agriculture & Veterinary	0.806 (-1.71)	0.654 ^{**} (-2.81)	0.630 (-2.21)	0.649 (-2.84)
Health & Welfare	0.295 ^{***} (-15.70)	0.239 ^{***} (-13.79)	0.237 ^{***} (-9.93)	0.240 ^{***} (-13.62)
Services	1.456 ^{***} (3.44)	1.364 [*] (2.31)	1.177 (0.99)	1.354 (2.23)
Vocational tertiary	8.412 ^{***} (46.45)	6.407 ^{***} (26.43)	6.060 ^{***} (19.14)	
Vocational x Education		0.474 ^{**} (-3.09)	0.511 (-2.20)	
Vocational x HLA		0.520 ^{**} (-3.19)	0.341 ^{***} (-4.09)	
Vocational x Sciences		0.877 (-0.86)	0.769 (-1.38)	
Vocational x EMC		3.028 ^{***} (9.08)	2.919 ^{***} (6.54)	
Vocational x Agriculture & Veterinary		2.274 [*] (2.43)	1.944 (1.51)	
Vocational x Health & Welfare		1.910 ^{***} (3.94)	1.757 [*] (2.54)	

Vocational x Services		1.260 (1.03)	1.347 (1.06)	
Age 35-44	1.050 (0.86)	1.038 (0.67)		1.056 (0.75)
Age 45-54	0.987 (-0.18)	0.976 (-0.34)		1.015 (0.16)
Age 55-64	0.847 (-1.58)	0.844 (-1.57)		0.915 (-0.60)
Age 30-34			0.878 (-1.83)	
Age 35-39			0.869 (-1.70)	
N	28,229	28,229	13,644	20,042

Exponentiated coefficients; *t* statistics in parentheses
Source: EU Labour Force Survey for Spain
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Even among themselves, the results in Model 1 show that graduates of different educational tracks and fields of study have different employment outcomes. Among university graduates (Column 2 Table 1), graduates from health and welfare, for example, seem to have significantly better employment prospects than SBL graduates, whereas graduates from HLA fare significantly worse and are less likely to be in employment than SBL graduates. In fact, university graduates from health and welfare have more than two times the odds of employment as humanities graduates.

Not all health and welfare tertiary graduates, however, share the same employment prospects. Whereas university graduates from health and welfare have the best employment prospects relative to SBL, their vocational tertiary counterparts in the same field do not fare as well. In fact, vocational graduates from health and welfare are significantly less likely to be employed relative to SBL vocational graduates.

The model further shows that vocational graduates as a whole, not just those from health welfare, are significantly less likely to be employed compared to university graduates (Columns 1 and 2 Table 1). Even though the model does not indicate better employment prospects for vocational tertiary graduates, among young tertiary graduates between the ages of 25-39, the penalty of being a vocational graduate is no longer statistically significant (Column 3 Table 1). This suggests a possible improvement in linkages between the vocational training system in Spain and labour market demand over time. Alternatively, it may reflect improvement in employer readiness to employ vocational tertiary graduates, indicating a decrease in the stigma associated with the vocational tertiary track. Once in the labour market, however, vocational training graduates are at least six times (Column 2 and 3 Table 2) as prone to be placed in a medium or low-skilled occupation than university graduates.

Model 2 shows that fields of study significantly influence the likelihood of being found in a medium or low skill job, even after controlling for personal, and occupational characteristics. With reference to SBL graduates, university graduates from all other fields of study, with the exception of services, are at a significantly lower risk of mismatch. These results, suggesting a higher risk of mismatch among SBL graduates, are consistent with Green and McIntosh's (2007) findings¹¹⁶ observing the same trend in the UK for business

¹¹⁶ Green and McIntosh defined overqualification as having more education than was "required for the job," using the indirect self-report. Being a university graduates in services in this study was not associated with a higher likelihood of overqualification.

and management graduates, and Ortiz and Kucel's results¹¹⁷ (2008) for Spain and Germany. In the latter study, in addition to services, university graduates in the humanities, languages and arts were also reported to be at higher risk of overqualification, relative to SBL university graduates in both countries. Chevalier (2003) also found that humanities, languages, biology and agriculture graduates were at greater risk of being overeducated than economics graduates.

Including for the same field of study, Model 2 shows that tertiary graduates from different educational tracks also face different risks of mismatch (Column 2 Table 2). Whereas among university graduates all fields of study except services are more likely to be matched in a high-skilled job than SBL graduates, among vocational tertiary graduates, only education and HLA graduates are significantly less likely to be found in medium and low-skilled jobs compared to SBL tertiary graduates. Furthermore, whereas university tertiary graduates from EMC, agriculture and veterinary, and health and welfare, are significantly less likely to be mismatched relative to SBL university graduates, vocational tertiary graduates in the same fields are significantly more likely to be found in medium and low-skilled occupations relative to their SBL vocational counterparts. This confirms the "lower status" associated with certain vocational fields of study, whose counterparts with a university degree in the same field of study are sought after and considered "highly prestigious" by employers (Ortiz and Kucel, 2008). This may be due to

¹¹⁷ Ortiz and Kucel defined overqualification as having an education level above that of the 70th percentile per occupational group. Their analysis also employs LFS 2003-2005 data.

employers' perception of the university path as more difficult than the vocational path, thereby endowing its successful graduates with characteristics vocational graduates may not have such as resilience and grit.

The year control suggests that compared to 2006, tertiary graduates face a lower probability of employment (Table 1), and greater likelihood of mismatch in 2012 (Table 2) subsequent to the financial crisis. This is confirmed by graduate employment trends, where only 74.5% of tertiary graduates were employed in 2012, in comparison to 81.1% in 2006, indicating a significant increase in graduate unemployment and inactivity rates. The prevalence of ODD¹¹⁸ among tertiary university graduates, on the other hand, continued to hover around 22% in 2006 and 2012, showing only a slight increase by 0.08% in 2012. The greater risk of occupational drifting down among graduates in 2012 suggests a reduction in labour market demand for high skills, which may also be linked to sectoral effects, which are outside the scope of this paper.

Tenure or years of experience with the same employer is statistically significant and associated with an increase in the likelihood of a tertiary graduate being matched in a high-skilled job. This effect, however, is not necessarily causal as it may well be because graduates are well matched they stay longer with the same employer.

Even though information on other occupational characteristics and sectors of employment is available, this analysis does not run the same

¹¹⁸ The variable in the descriptive statistics for ODD is OFD.

model incorporating these variables for two main reasons. The first is the endogenous nature of these variables in any analysis of occupational drifting down. The second rationale for not incorporating sectors of employment is that, in fact, it is changes in these sectors over time that is relevant to this analysis, even more so than the specification of the sector per se (Ortiz and Kucel, 2008).

The same model is also run but with the definition of high-skilled jobs restricted to professional and managerial occupations, thus further restricting the dependent variable (Table 3). The results are consistent for educational track and fields of study. The model shows that vocational training graduates are more than two times as likely not to be found in managerial and professional occupations than university graduates (Column 2 Table 3). The model also shows that university graduates of all fields of study have a lower probability of being found in a medium and low skill job relative to social science graduates, with the exception of graduates in services. Being female is also no longer statistically significant in this model, suggesting that for managerial and professional posts specifically, women are not at a significant disadvantage, as indeed confirmed by their majority numbers in professional posts. All other personal and occupational characteristics generally tend in the same direction as summarized for Model 2.

Table 3 Logistic coefficients estimating the determinants of ODDR, odds ratios

	M2 Column 1	M2 including interactions Column 2	Youth 25-39 Column 3	University graduates Column 4
Female	1.208*** (4.40)	1.056 (0.87)	1.008 (0.10)	1.034 (0.50)***
Married	0.875** (-2.76)	0.753*** (-4.24)	0.786 (-2.37)	0.770 (-3.59)
Female x Married		1.314*** (3.45)***	1.404 (3.01)***	1.311 (3.18)***
Native	0.425*** (-10.33)	0.416 (-10.49)	0.388 (-7.81)	0.414 (-10.36)
Child under two	0.898 (-1.66)	0.901 (-1.58)	0.891 (-1.39)	0.873 (-1.87)
Tenure	0.937*** (-8.83)	0.935*** (-9.05)	0.904 (-5.02)	0.928 (-9.14)
Tenure squared	1.001*** (5.58)	1.001*** (5.61)	1.005*** (3.79)	1.001*** (5.22)
Year 2012	0.942 (-1.48)	0.944 (-1.40)	0.859** (-2.59)	1 (.)
Education	0.495*** (-10.55)	0.522*** (-10.02)	0.418*** (-9.16)	0.525*** (-9.88)
HLA	0.637*** (-6.23)	0.644*** (-6.00)	0.625*** (-4.53)	0.642*** (-6.00)
Sciences	0.502*** (-9.37)	0.519*** (-8.93)	0.536*** (-6.35)	0.515*** (-8.98)
EMC	0.525*** (-9.73)	0.403*** (-11.37)	0.328*** (-10.46)	0.395*** (-11.55)
Agriculture & Veterinary	0.667*** (-3.56)	0.601*** (-4.00)	0.507*** (-4.00)	0.593*** (-4.11)
Health & welfare	0.270 (-18.00)	0.228*** (-17.48)	0.227 (-12.14)	0.229 (-17.29)
Services	1.487*** (3.13)	1.858*** (4.90)	1.548 (2.53)	1.864*** (4.90)
Vocational tertiary	21.62*** (44.92)	15.50*** (26.74)	15.27*** (18.54)	
Vocational x Education		0.193*** (-6.65)	0.198*** (-5.11)	
Vocational x HLA		0.588 (-1.95)	0.381 (-2.76)	
Vocational x Sciences		0.817	0.838	
Vocational x EMC		(-0.92) 2.752***	(-0.69) 3.711	
Vocational x Agriculture & vet		(6.81) 8.051***	(5.67) 1	
Vocational x Health & welfare		(4.21)	(.)	
Vocational x Services		5.159*** (5.56)***	3.733*** (3.47)	
		0.306*** (-4.22)	0.338** (-2.90)	
Age 35-44	0.972 (-0.51)	0.970 (-0.54)		1.024 (0.39)
Age 45-54	0.864 (-2.02)	0.867 (-1.95)		0.965 (-0.44)

Age 55-64	0.611 ^{***} (-4.65)	0.621 ^{***} (-4.32)		0.741 [*] (-2.56)
Age 30-34			0.888 (-1.61)	
Age 35-39			0.832 [†] (-2.11)	
<i>N</i>	28,229	28,229	13,588	20,042

Exponentiated coefficients; *t* statistics in parentheses

Source: EU Labour Force Survey for Spain

[†] $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

When looking at age cohorts, Model 1 shows that all age groups are significantly more likely to be in employment relative to youth between the ages of 25-34, with the exception of the pre-retirement cohort (age 55-64). Model 3 also shows that youth between the ages of 25-34 are more likely to be found in medium and low-skilled jobs than are tertiary graduates above the age of 35, though the results are only significant for the cohorts 45-54 and 55-64 (Column 1 Table 3). From the scope of this analysis alone, it cannot be determined whether youth face a greater risk of mismatch because of less experience in the labour market despite their higher academic credentials on average, or because of structural impediments delaying their entry including insufficient labour market demand for high skills. If the correct interpretation is the latter, this suggests a structural mismatch in Spain, where labour market supply of high skills has systematically outpaced labour market demand, particularly for cohorts that have entered the labour market after the expansion of HE in the 1990s.¹¹⁹

¹¹⁹ This age group entered the labour market in the 1990s. A 35 year old in 2012 would've been born around 1977 and entered the labour market in 1999-2000, if we assume they'd done so at the age of 21. A 44 year old in 2012, by the same calculations, would've entered the labour market in 1989-1990.

Introducing an interaction term between year and cohort (2012 x youth 25-39), confirms that tertiary graduates as a group, and university graduates (excluding ISCED 5B) between the ages of 25-39 are significantly less likely to be placed in a managerial or professional occupation in 2006 than their pre-expansion counterparts (ages 40-64) *ceteris paribus* (Column 2 and 4 Table 5). The fact that it is the older generation who are significantly more likely to be found in a managerial or professional job, suggests that the same degree no longer provides young graduates the same assurance of a high-skilled job as it did one generation before. This significant cohort effect, challenges the suggestion that overeducation “may be part of the adjustment process of young workers to the labour market” (Groot, 1996), and rather suggests it is a symptom of HE massification in countries where the employment structure is such that the queue for managerial and professional jobs exceeds their availability. Where graduate supply outpaced demand, HE massification has instead led to the “increasing substitution of graduates for non-graduates” (Mason, 2002), in this way increasing the prevalence of graduate mismatch in turn (Groot, 1996).

Table 4: Logistic coefficients estimating the determinants of employment, OR

Employment	M1 with interactions Column 1	University grads Column 2
Female	0.905 (-1.77) ^{***}	0.659 ^{***} (-8.53) ^{***}
Married	2.003 ^{***} (11.56) ^{***}	1.315 ^{***} (5.41)
Female x Married	0.461 ^{***} (-10.40) ^{***}	
Native	1.949 ^{***} (10.18)	2.018 ^{***} (9.18)
Child under 2	1.099 (1.48)	1.178 [*] (1.99)
Education	0.977 (-0.35) ₂	0.926 (-1.13) ₂
HLA	0.813 ^{**} (-2.85)	0.798 ^{**} (-3.07)
Sciences	0.945 (-0.68) ₂	0.953 (-0.58)
EMC	0.838 (-2.14) ₂	0.885 (-1.49)
Agriculture & Veterinary	1.256 (1.62) ^{***}	1.314 (1.93) ^{***}
Health & Welfare	1.663 ^{***} (5.98)	1.605 ^{***} (5.49)
Services	1.019 (0.15) ^{***}	1.039 (0.30)
Vocational	0.720 ^{***} (-5.07)	
Voc x Education	0.827 (-0.95)	
Voc x HLA	1.153 (0.74)	
Voc x Sciences	1.053 (0.36)	
Voc x EMC	1.234 (1.88)	
Voc x Agriculture & Veterinary	0.629 (-1.65) ^{***}	
Voc x Health & Welfare	0.596 ^{***} (-3.65)	
Voc x Services	0.876 (-0.71) ^{***}	
2012	0.812 ^{***} (-3.77) ^{***}	0.803 ^{**} (-3.21)
Youth 25-39	1.474 ^{***} (6.44) ^{***}	1.196 [*] (2.41) ^{**}
2012 x Youth 25-39	0.726 ^{***} (-4.25)	0.751 ^{**} (-3.06)
N	40,028	24,762

Exponentiated coefficients; *t* statistics in parentheses

Source: EU Labour Force Survey for Spain

^{*} *p* < 0.05, ^{**} *p* < 0.01, ^{***} *p* < 0.001

The results also refute the possibility that graduate skill mismatch may be a consequence of the financial crisis in Spain. Instead the model suggests that even though all age groups were significantly more at risk of not being placed in employment subsequent to the crisis than they were in 2006 (Table 4), once in employment, the probability that youth would be placed in managerial or professional posts (Column 2 Table 5) actually increased in 2012 with reference to 2006. Therefore the crisis negatively impacted graduate employment prospects in 2012, but if employed, graduates were significantly more likely to be placed in managerial and professional posts than they were in 2006.

Logit Table 5: Logistic coefficients estimating the determinants of ODD, OR

	ODD Column 1	ODDR Column 2	ODD University graduates Column 3	ODDR University graduates Column 4
Female	1.414 ^{***} (5.41)	1.053 (0.83)	1.257 [*] (3.02)	1.031 (0.47)
Married	0.870 [*] (-2.14)	0.747 ^{***} (-4.41)	0.748 [*] (-3.26)	0.775 ^{***} (-3.52)
Female x Married	0.994 (-0.08)	1.327 ^{**} (3.58)	1.172 (1.59)	1.319 (3.26)
Native	0.312 ^{***} (-14.25)	0.419 (-10.42)	0.293 ^{***} (-13.93)	0.412 ^{***} (-10.40)
Child under 2	0.851 [*] (-2.33)	0.907 (-1.47)	0.873 (-1.50)	0.874 (-1.85)
Tenure	0.957 ^{***} (-6.33)	0.941 ^{***} (-8.54)	0.943 ^{***} (-6.43)	0.935 ^{***} (-8.62)
Tenure squared	1.000 (1.77)	1.001 ^{***} (4.37)	1.001 (2.35)	1.001 ^{***} (4.27)
Education	0.690 ^{***} (-5.02)	0.521 ^{***} (-10.05)	0.706 ^{***} (-4.61)	0.525 ^{***} (-9.87)
HLA	0.716 ^{***} (-3.99)	0.641 ^{***} (-6.06)	0.713 ^{***} (-3.96)	0.641 ^{***} (-6.01)
Sciences	0.407 ^{***} (-9.41)	0.519 ^{***} (-8.93)	0.398 ^{***} (-9.55)	0.515 ^{***} (-8.99)
EMC	0.448 ^{***} (-8.37)	0.401 ^{***} (-11.46)	0.434 ^{***} (-8.57)	0.393 ^{***} (-11.60)

Agriculture & Veterinary	0.652**	0.600***	0.649**	0.594***
	(-2.83)	(-3.99)	(-2.86)	(-4.07)
Health & Welfare	0.238***	0.228***	0.239***	0.228***
	(-13.87)	(-17.60)	(-13.69)	(-17.44)
Services	1.363	1.855	1.353	1.861
	(2.32)	(4.92)	(2.23)	(4.92)
Vocational	6.415***	15.56***		
	(26.47)	(26.78)		
Voc x Education	0.480	0.195		
	(-3.05)	(-6.59)		
Voc x HLA	0.520*	0.591		
	(-3.19)	(-1.94)		
Voc x Sciences	0.880	0.821		
	(-0.84)	(-0.90)		
Voc x EMC	3.039***	2.759***		
	(9.11)	(6.83)		
Voc x Agriculture & Vet	2.294	8.173***		
	(2.44)	(4.23)		
Voc x Health & Welfare	1.909***	5.153***		
	(3.95)	(5.54)		
Voc x Services	1.261	0.305***		
	(1.03)	(-4.24)		
Year 2012	1.295***	1.083	1.228**	1.005
	(4.40)	(1.37)	(2.64)	(0.08)
Youth 25-39	1.073	1.287***	1.049	1.214**
	(1.02)	(3.62)	(0.53)	(2.60)
2012 x Youth 25-39	0.872	0.775*	0.892	0.797*
	(-1.71)	(-3.15)	(-1.10)	(-2.58)
N	28229	28229	20042	20042

Exponentiated coefficients; *t* statistics in parentheses

Source:

EU Labour Force Survey for Spain

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Conclusion

Using the European Labour Force Survey for Spain for the years 2006 and 2012, this study has examined the effects of educational track and field of study among tertiary graduates on occupational drifting down. An analysis distinguishing between education track and fields of study in analysing mismatch begins to break the trend in much of the overeducation literature that graduates can be studied as a homogeneous group (Sutherland, 2012).

This chapter has focused on the determinants of graduate labour market mismatch, with the underlying assumption that individuals pursue tertiary education with the aspiration to first be employed and second land a high-skilled job requiring their university credentials and skills (Wolbers, de Graaf & Ultee, 2001). Professional, managerial, and more recently associate professional occupations are occupations that are increasingly associated with tertiary degrees.¹²⁰ They are also occupations that the models discussed in this paper have shown to be associated with a number of job characteristics that are also frequently cited in the literature as indicators of the quality of employment or “decent work” (Burchell et al., 2014). These include work autonomy, employment security¹²¹ and freedom from visible underemployment. Other benefits outside the scope of this analysis associated with professional and managerial occupations include income, prestige, and career progression, precisely for which reason these very occupations have also been used as an indicator to measure the “social class returns” to education (Bukodi et al., 2011).

With respect to educational track, this study has shown that vocational tertiary graduates are at a significant disadvantage compared to university graduates both in terms of the probability of securing employment and being matched in a high-skilled job. In terms of employment, this is somewhat surprising given that vocational degrees are designed with the intention of promoting the employability of their students and graduating individuals with

¹²⁰ Associate professional posts are associated with ISCED 5b not ISCED 5a and 6.

¹²¹ Both in terms of full-time employment and tenure.

skills to meet sectoral shortages. With respect to field of study, this analysis has shown that only health and welfare university graduates are significantly more likely to be in employment than SBL graduates, and only HLA graduates are significantly less likely to be placed in employment than their SBL counterparts. Once employed, however, university graduates, from all fields of study, with the exception of services face a lower risk of being found in a medium or low-skilled job relative to SBL graduates.

One of the main assumptions implicit in public policy discourse with respect to higher education is that “if society provides opportunities for education, then...the burden falls upon the individual to achieve the education necessary for employment” (Berg, 2003, p. 10). With nearly one in four Spanish tertiary graduates in Spain unemployed or inactive in 2012, this chapter has shown that graduate labour market capabilities can, in fact, be drawn to a halt in the absence of sufficient labour demand, as amply illustrated in the case of Spain. This confirms the underlying assumptions made in assignment theory, as well as job competition theory that individual characteristics do not alone determine the match, for productivity is not “fully embodied” (Groot, 1996), but instead contingent upon labour market demand.

Chapter 5 | Retail banking: A case study

Titulitis¹²² and the “opportunity trap” in Spain

Introduction

The share of tertiary¹²³ graduates in the working-age population in Spain exceeded 32% in 2012, a level comparable to the OECD average and “Scandinavian” rates of educational attainment” (Barone and Ortiz, 2011). The Spanish employment structure, however, had not changed to resemble that of its Scandinavian counterpart, leading to a relatively higher prevalence of “surplus” graduates placed in medium and low-skilled occupations,¹²⁴ a situation defined in this thesis as “occupational drifting down” (Berg, 2003). The percentage share of graduates in these traditionally non-graduate jobs hovered around 22%¹²⁵ even before the onset of the financial crisis in 2008 and remained at this level in 2012 (LFS, 2012).

Spain is estimated to have lost between 3.3 million and 3.5 million jobs (FT, 2017) during the recession between 2008 and 2012. Of those jobs, 1.4 million were in the construction sector, one of the biggest employers before the crisis. The unemployment rate in Spain soared to 25% by the end of 2012 reaching 20% in 2016, with over half of the unemployed being in long-term unemployment (OECD, 2016). By 2017, Spain is estimated to have recovered

¹²² The term *titulitis* was coined in Spain precisely to describe this increasing phenomenon where graduates preemptively accumulate academic titles in hope of gaining a comparative advantage and achieving better labour market outcomes.

¹²³ ISCED 5A, 5B and 6.

¹²⁴ Defined in this study as ISCO Major Groups 4, 5, 6, 7, 8 and 9 .

¹²⁵ Using the Labour Force Survey, ODD among university graduates in the working-age population was just over 22% in 2006 and around 22.8% in 2012.

1.7 million of the 3.5 million jobs lost, with the Spanish economy growing by 3.2% in 2016 (FT, 2017).

The labour market reforms of 1984 heralded the segmentation of the Spanish labour market, with the percentage share of temporary workers increasing from 15% preceding the reform to over 35% one decade later. The relatively large percentage share of Spanish workers on temporary contracts pre-crisis in turn facilitated their subsequent layoff in the aftermath of the crisis. As a result, approximately one fourth of total employment in Spain was still in temporary employment in 2015 (OECD, 2016), a figure almost double that of the EU average and far higher than Spain's own pre-crisis share of approximately 32%.

Men and youth (16-29) of both sexes were the demographic groups that were most impacted by the crisis. The unemployment rate among young people aged 16-24 more than doubled between 2008 and 2012, increasing from 21.3% in 2008 to 52% in 2012. Among young people aged 16-29, unemployment rates increased from 15.6% to 39.6% over the same time period. A large percentage of youth held temporary contracts before the crisis, with over half of 16-24 year-old workers holding such a contract in 2008 in comparison to just over 41% among those between 25 and 29. In addition to being in temporary employment, many of these youth were also employed in some of the sectors that were most hit by the crisis including construction, retail sales and accommodation (Rocha, 2012). This culminated in a situation

wherein they were “the last person hired [and] the first to be laid off” (Ibid, 2012).

In addition to the large number of layoffs, approximately 13.5% of young people (15-29) were low-skilled youth who were neither in employment nor in education or training (NEET) in 2015. This share of Spanish youth NEET was both higher than the OECD average and Spain’s own pre-crisis levels (OECD, 2016).

On their part, Spanish youth have responded to these grim labour market prospects by increasing their investments in further university education. This has led to the phenomenon of “titulitis”, a term coined in Spain to express the trend among youth toward the accumulation of academic titles, in an attempt to distinguish themselves in the competition for jobs.

Against this backdrop of higher education massification, a university degree became a requirement for all positions in Spanish retail banks over the past decade, reflecting similar graduatisation trends reported by Mason (1996) for the financial sector in the UK. Whereas in the past Spanish university graduates competed with non-university graduates, today only university graduates were considered qualified for entry-level posts in Spanish retail banks. Illustrating this trend, the percentage share of graduates employed in financial and insurance activities among new entrants to the labour market was over 27 percentage points higher than the percentage share of older adults employed in the sector in 2012 (see Table 5.1).

Table 5.1 Percentage share of graduates employed in financial and insurance activities

Financial and insurance activities	Non-graduate	University graduate	Total
Total (working-age population)	39.2	60.8	100.0
Youth (20-34)	32.7	67.3	100.0
Older adults (45-64)	59.8	40.2	100.0

Source: LFS 2006 & 2012 (pooled), own calculation

As a result of this graduatisation process, university graduates seemed to have increasingly pushed vocational tertiary graduates out of “the queue” for jobs in the finance industry, as illustrated in Table 5.2. Whereas among the older cohort (45-64), 18.6% of tertiary graduates employed in the financial and insurance services industry were vocational tertiary graduates, only just over 13% of youth tertiary graduates employed in the sector were vocational graduates.

Table 5.2 Percentage shares of upper secondary, post-secondary non-tertiary and tertiary graduates

Financial and insurance activ	University tertiary	Vocational tertiary	Total
Total (working-age population)	86.6	13.4	100.0
Youth (20-34)	86.8	13.2	100.0
Older adults (45-64)	81.4	18.6	100.0

Source: LFS 2006 and 2012 (pooled), own elaboration

The purpose of this case study is to provide a more in-depth understanding of the drivers of this evident graduatisation of the retail-banking sector in Spain. Semi-structured interviews with senior and human resource (HR) managers, branch managers and other graduate employees of retail banks were conducted in order to gain a better understanding of educational and skill upgrading in traditionally non-graduate jobs.

The primary research question for this chapter is: What are the drivers behind the “increasing substitution of graduates for non-graduates” (Mason, 2002) in retail banks in Spain? Other studies (Alba-Ramirez, 1993; Dolado et al. 2002; Alba-Ramirez & Blásquez, 2003; Malo et al., 2004) have looked at overqualification in the labour market in Spain as a whole, but none inform us about sector specificities. They also do not tell us whether job content has been upgraded in these occupations that have been graduated. Economists have traditionally focused on the effects of overqualification on wages, predominantly relying on secondary quantitative data sources alone. Quantitative analysis alone, however, is not sufficiently informative as to whether in assuming traditionally non-graduate jobs; graduate skills are in fact underutilised in the workplace (Mason, 1996). This study joins a group of only a few other sectoral studies (Elias and Purcell, 2004; Mason, 2002; Green and McIntosh, 2002; Knights and McCabe, 1998; Mason, 1996), all UK-based, adopting the case study sectoral approach, in the belief that such an analysis allows for the investigation of the changing skill content of specific jobs over time, as well as the evolution in educational requirements to get the job, and skill requirements to do the job. In this way, this study advances scholarship on graduate skills utilization and hiring trends at the sectoral level at a time when sectoral country-specific case studies are sparse in the literature, particularly for Spain.

This study conducted semi-structured interviews with graduates in order to capture first-person accounts of educational and skill mismatch, the

motivation behind graduate educational choices as well as their labour market expectations and aspirations. In this way, this study also sought to capture graduates' own perceptions of what they have been able to "do and be" in the labour market since graduating (Sen, 1993).

Whereas in the past, graduates and non-graduates alike spent some years performing cashier or administrative roles in Spanish retail banks before assuming the tasks of commercial manager (*gestor comercial*), today the post of commercial manager has been closed to non-graduates, including tertiary vocational graduates. Since the post of commercial manager is the entry-level post to a career in retail banks, being a pre-requisite to all subsequent positions in a retail branch, the graduatisation of this post has effectively barred non-university graduates, including vocational tertiary graduates, from pursuing a career in retail banking. In banks that have further introduced a graduate-only policy, a university degree has also become a requirement to assume clerical and cashier roles, both classified as medium-skilled occupations under ISCO, and associated with a non-tertiary degree. Drawing on interviews with employers and graduates employed in Spanish retail banks,¹²⁶ this chapter argues that the tipping-point that led to this decisive increase of educational requirements necessary to get a job in retail banking came less in response to job upgrading than to HE massification, which rendered the hiring and training of non-graduates unnecessary, including most recently tertiary vocational graduates. This chapter further

¹²⁶ Based on semi-structured interviews with graduates on the post.

argues that in assuming these medium-skilled occupations, graduate skills are underutilised in retail branches, before they are able to assume the role of commercial manager, itself arguably an associate professional position for which tertiary vocational graduates would have been well matched in terms of skills required to carry out the tasks of the job. Consequently, it is only when graduates are promoted after at least one or two years working as commercial managers (without a portfolio of clients) to premier relationships managers (*gestor de banca premier*),¹²⁷ attending to more affluent clients, or small businesses managers (*gestor de negocios*), attending to micro and small enterprises (SMEs), that they become well-matched in professional high-skilled professional job associated with their academic qualifications. This chapter argues that it is only in the latter occupations that university graduates skills are utilised, and university graduates are no longer overskilled for the post, with overskilling defined in this thesis as having more skills than that necessary to carry out the tasks required on the job.

¹²⁷ In some banks, commercial managers cater to clients whose net worth is up to €100,000 whereas affluent banking managers attend to clients whose net worth is between €100,000-500,000. Private banking specialists attend to clients whose net worth exceeds €500,000.

Table 5.3 Key Retail banking positions, ISCO classification and associated academic qualifications

Position	ISCO Major Group	ISCO Sub-Major Groups	Academic qualifications defined in ISCO
Branch manager	Professional (ISCO Major Group 2) classified as high skill	134 Professional services managers 1346 Financial and insurance managers	Skill level 4 requiring ISCED 5 A and 6 (university degree)
Account manager specialised in premier banking or small and medium enterprises	Professional (ISCO Major Group 2) classified as high skill	241 Financial professionals 2412 Financial and investment advisor	Skill level 4 requiring ISCED 5 A and 6 (university degree)
Commercial manager/Employee without a title ¹²⁸	Technical occupations (ISCO Major Group 3) classified as high skill	331 Financial and mathematical associate professionals	Skill level 3 requiring ISCED 5 B
Cashiers and ticket clerks (ISCO 523)	Services and sales workers (ISCO Major Group 5) classified as medium-skilled	523 Cashiers and ticket clerks	Non-tertiary ISCED 2, 3 or 4

Source: Own elaboration, based on ILO ISCO-08

This chapter is structured as follows. The first section describes the methodology used for data collection and analysis. The second section discusses the graduatisation of occupations in the retail banks sampled. Employers interviewed for this study articulated four main drivers for the graduatisation of entry-level posts, each of which is described and critically analysed in turn. The third section examines graduate trajectories within retail banks, and whether the latter have diverged from the typical career trajectories of non-graduates who had occupied these posts just one generation before. The last section explores employers' human resource policies and views on education and skills mismatch.

¹²⁸ Employee without a title is the title given to individuals who are recruited for the post of commercial manager, before they are able to specialise in premier banking, wealthy clients or SMEs.

Section I: Methodology

The study is based on 33 semi-structured interviews with 9 members of senior management, 5 managers and deputy managers of branches and 19 young graduate employees working in five retail banks¹²⁹ in Spain. These banks included three of the largest employers in this sector, with over 25,000 - 30,000 employees each, in addition to one intermediate and one small bank. Interviews were carried out between January 2015 and March 2016. In choosing the sample, this thesis targeted the largest retail banks in Spain.¹³⁰ In selecting the latter, multiple-case sampling was used, which involves strategically and intentionally, rather than randomly, deciding which organizations to interview (Miles et al., 2013). Accordingly, retail banks in Spain were invited to participate to the exclusion of *cajas*, or the saving banks, due to the politicization of the latter, and the closure of many saving banks subsequent to the consolidation of the retail banking sector in the aftermath of the financial crisis.

This study has selected the in-depth interview, supplemented with additional banking documentary materials, as the main method of inquiry, in

¹²⁹ One of the graduates interviewed in this study was employed in a bank, in which she chose to participate on an individual basis. Another senior manager who worked in one of Spain's top three banks also chose to be interviewed in an individual capacity. The participation of the remaining four retail banks was not merely at the individual level but with decision of participation coming from Human Resources, who took the lead in selecting participants and organizing the meeting schedule.

¹³⁰ A formal letter was sent out outlining the rationale for the project, providing the identity of the researcher and supervisors and ensuring anonymity and confidentiality. An information sheet was also annexed to the letter, explaining exactly the information required from participants and the reasons they were chosen to participate in this project.

an effort to gain insight and deeper understanding of graduate skill utilization in graduatised occupations, and to learn about employers' recruitment trends within their real-life context in the workplace. Several banks were chosen, instead of just one, in order to test the hypothesis that was generated from the first round of interviews with the first retail bank, which strongly suggested qualification inflation. The purpose of subsequent interviews with other banks was to test for the prevalence of qualification inflation, which occurs when firms respond to an increase in the average education of labour market entrants by increasing their own average education hiring requirements.

Participant senior managers in this research project were selected because of the position they held within their respective organizations. The assumption was that by virtue of their seniority and title as senior executives and human resources directors/senior officers, they were also key players in setting human resource strategies and recruitment practices in their respective banks. At least two senior managers were interviewed in each bank to cross check information within the same organization on recruitment policies and strategies. Interviews with employers were structured into different segments covering evolution in recruitment practices and job functions, employers' perceptions of higher education expansion and the quality of graduates, and policies addressing educational and skill mismatch.

Table 5.4 List of employers and directors sampled

	Name	Position	Gender	Bank no.	Bank size	City
1	Francisco	Assistant Director General and Director of People and Knowledge Management	Male	4	Small	Madrid
2	Jacobo	Deputy Managing Director, Head of Innovation, Products and Services, and Quality Management	Male	4	Small	Madrid
3	Luis	Corporate Director Talent Management	Male	2	Large	Madrid
4	Manuel	Human Resources	Male	2	Large	Madrid
5	José	Director of HR and Compensation	Male	2	Large	Madrid
6	Berta	Management and Compensation, HR	Female	1	Large	Barcelona
7	Miguel	Talent Management	Male	5	Intermediate	Barcelona
8	Emili	Director Employer Branding, HR	Male	5	Intermediate	Barcelona
9	Agustin	Executive Manager	Male	3	Large	Madrid
10	Lluís	Branch Manager	Male	1	Large	Barcelona
11	Gemma	Deputy Director	Female	1	Large	Barcelona
12	Josep	Branch Manager	Male	1	Large	Barcelona
13	Eduard	Deputy Director	Male	1	Large	Barcelona
14	Rafael	Branch Manager	Male	1	Large	Barcelona

Source: Own elaboration

In addition to interviews with employers, semi-structured interviews with branch managers and deputy managers (see Table 4), as well as young graduate bankers (under the age of 35) in headquarters and in the branches (see Annex 5) were also carried out. Interviews with graduates focused on job functions, graduate skill utilization in the workplace and direct self-reporting of overeducation and overskilling. Devising two separate semi-structured questionnaires, one for graduates and another for employers, enhanced the reliability of the study, since each group was questioned about what they could speak to most knowledgeably. Managers and assistant managers of

branches were asked questions from both questionnaires, since the interest was both in their roles as “employer” and their experience as employees.

Semi-structured interviews were chosen instead of structured interviews or survey questionnaires in order to allow respondents a certain degree of flexibility. The questions were standardized to a certain extent in order to ensure that all central themes were covered and there was commonality across interviews. At the same time, the semi-structured format left room for follow-up and further exploration of certain answers. This allowed for a change in the sequencing of questions, as well as variations on the same questions in order to ensure fluidity in the interview process.

The questions were first drafted in English then translated to Spanish. They were formulated to ensure that the method of inquiry did not “lead” participants’ answers (Gubrium and Holstein, 2008). Only follow-up questions differed from one interview to another. Interview questions largely steered away from technical jargon, avoiding usage of terms like “overeducation”, “overskilling”, “job upgrading”, and “skills mismatch”, or any direct reference to the theories being tested, such as “human capital” or “job competition theory”. Instead each of these terms was unpacked and reformulated in simpler language. Wengraf (2001) described this as dropping the “theory-questions” that directly made use of theoretical terms and academic jargon, and reformulating interview questions to make them more in line with the informant’s language.

The interviews themselves were conducted predominantly in English, and in a few cases in Spanish. Oftentimes, the two languages were mixed during the interview to ease fluency and ensure that nothing was lost in translation. That said, all correspondence up to that point was bilingual and interviewees were explicitly informed interviews could be held in English or in Spanish, in order to avoid respondents dropping out due to discomfort with being interviewed in English. Interviews were audio recorded with the consent of interviewees, and subsequently translated into English as necessary.¹³¹

Section II: Retail banking: Drivers for graduatisation

The three biggest banks dominating the retail-banking sector in Spain today¹³² are CaixaBank, Santander and BBVA, the last two with significant international presence as well (see Annex 6). The retail-banking sector as a whole underwent massive restructuring in the aftermath of the financial crisis. José, a top recruiter at one of Spain's largest banks, described the impact of the financial crisis on the banking sector as follows:

Jose [Bank 1]: In Spain, we were around 45 banks, now we are around 10 banks. This means, that in our case, we have made in the last five years, around eight to nine acquisitions, mergers...[By the end of the consolidation process], we will have six banks or even less, this will happen for sure.

¹³¹ The coding for interviews was done on the English transcription of interviews using HyperResearch.

¹³² As of July 2015. <http://uk.reuters.com/article/uk-spain-banks-m-a-idUKKCN0PT04C20150719>

Spain had 55 banks in 2008.¹³³ Only 14 retail banks survived¹³⁴ the last wave of mergers and acquisitions, with the number of banks projected to drop to below 10,¹³⁵ as a result of the continuing drive toward consolidation in the aftermath of the financial crisis (Reuters, 2015). The trend of domestic consolidation and massive restructuring was not unique to Spain. The banking sector in the Eurozone was estimated to have cut over 7% of its total workforce in 2008-2014, according to the European Central Bank, closing down over 4,500 retail branches in 2013 alone. This increased the average number of clients per branch from 4,250 in 2008 to 5,000 clients per branch, on average, across the Eurozone (A.T. Kearney, 2014).

Despite this restructuring, and largely as a result of savings banks competing with commercial banks, Spain continued to be the country with the highest concentration of branches per citizen in Europe. As of 2012, there were 43,000 branches across Spain, culminating in an average of one branch per 1,000 customers by some estimates (Rosenthal, 2012). This effectively translated to about 96 branches per 100,000 inhabitants, compared to only 49 in Germany. This has led to the financial sector in Spain being described as “over-banked, and as a result highly-competitive” (Parada et al., 2009). This pattern continued subsequent to the 2008 financial crisis, with Spain

¹³³ The Spanish banking industry was historically very fragmented with many very small banks, including many local and regional industrial, retail commercial, state-owned and savings banks (Bankinter Annual Report, 2014).

¹³⁴ As of July 2015.

¹³⁵ Banco Popular, and the savings banks namely Liberbank, and unlisted BMN and Ibercaja are identified to be the most under threat if further consolidation is to take place.

remaining the country with the densest network of retail branches per capita in Europe in 2013, according to the Bank of Spain (Reuters, 2015).

Today the majority of Spanish retail banks require a university degree for an entry-level job, both at the branch level and in headquarters (HQ). This shift in preferences toward hiring university graduates began as recently as the 1990s. However subsequent to the financial crisis, non-graduates, including tertiary vocational graduates, were no longer eligible to apply to the majority of positions in the retail banking sector. The only positions that remained open to non-graduates were cashier and other administrative positions where they still did exist in banks that had not yet introduced a university graduates only policy. In this way, millennials or Generation Y (1980-1995) became the first generation in which non-university graduates were not permitted entry into the retail-banking sector.¹³⁶ Because this upgrade in academic entry requirements was fairly recent, several more senior positions in retail branches today, including that of sub-director, and director of branch, were populated by Generation X (1965-1979) graduates who worked alongside an older non-graduate generation, known as the baby boomer generation (1945-1964). The latter were able to climb the career ladder, acquiring the skills necessary to carry out the tasks of the job through work experience and on-the-job training, with the majority of them not holding any university qualifications.

¹³⁶ Explicitly requiring a university degree for entry-level posts in retail banks began to be implemented fully starting in 2000.

In contrast, today the major banks all reported that at least half of their employees had a university degree, with all new entrants required to have university qualifications. In La Caixa, for example, over 93% of employees were university graduates according to the bank's 2014 Annual Report, whereas the share of university graduates among employees exceeded 55% in Santander. In Bankinter, the share of university graduates was even higher at around 78%. Even though there was unanimous agreement among employers and graduates that a university degree had become a prerequisite for millennials to obtain an entry-level job at the bank, particularly in the aftermath of the financial crisis, viewpoints did not similarly converge as to whether university graduate skills were also required to perform the tasks of the job.

Education required to do the job?

Retail bank branches provide advisory support and services to individual clients and small businesses. The financial products they sell include current accounts, savings accounts, credit cards, mortgages and loans. Retail banks also sell insurance, including specialised life insurance, pensions and general insurance products. In addition to financial products and insurance, Spanish retail banks are increasingly also selling non-financial products, including mobile phones and home appliances on credit at zero interest rates.

The main retail banking positions at the branch level include cashier(s), commercial manager(s) attending to individual clients, premier relationships managers (*gestor de banca premier*)¹³⁷ attending to more affluent clients, small businesses managers (*gestor de negocios*) attending to micro and small enterprises (SMEs), deputy branch manager and branch manager (see Table 2).¹³⁸ In some leaner branches, commercial managers also take up cashier functions, whereas in some larger branches these remain separate posts. The division of work between the key account managers is based on the nature of the client, with commercial managers¹³⁹ attending to individual clients, premier relationships managers to more affluent ones, and small businesses managers to SMEs. In banks that have introduced a policy requiring a university degree for all positions in the branches, graduates commence their retail banking careers as cashiers or directly as commercial managers. In other banks that have not introduced such a policy, graduates begin their professional careers in the branches as commercial managers, after which they become account managers able to specialise in small businesses or affluent clients. As part of their job description as commercial managers, and depending on the size of the branch, they are sometimes also designated cashier functions as part of this job. In this way, graduates build the required work experience to then become eligible to apply to become

¹³⁷ In some banks, commercial managers cater to clients whose net worth is up to €100,000 whereas affluent banking managers attend to clients whose net worth is between €100,000-500,000. Private banking specialists attend to clients whose net worth exceeds €500,000.

¹³⁸ Cajero, gestor comercial, asesor, subdirector y director

¹³⁹ Newly recruited graduates in one of Spain's top banks who perform this function are referred to as employees without a title.

premium relationship manager or SME manager, and eventually deputy branch manager or branch manager. Alternate trajectories available to graduates include transitioning from commercial managers of premier banking into the private banking route, or from SMEs to the business centers. Once a branch manager, a graduate has the option of shifting between branches to manage bigger teams, or taking responsibility for a number of branches by district or zone. The position of zone manager is the highest position in retail banking outside of HQ.

The only possible entry points for university graduates into retail bank branches are at the level of bank teller/cashier or commercial manager, which are in many banks interviewed, the only entry-level positions that are open to external recruitment. In some leaner branches, commercial managers also take up teller functions. Where the teller post is maintained, even this clerical job has been graduatized in a growing trend that has been documented in the literature for the UK as well (Mason, 1996). For all subsequent positions in the career ladder, internal labour markets are used. Reflecting changing hiring trends in the financial services industry as a whole, graduates under the age of 45 already formed the majority of employees in all managerial, professional, associate professional and clerical posts in 2012 (see Table 5.5).

Table 5.5 Share of graduates (ISCED 5a and 6) in ISCO major groups (1-4) in the financial sector

ISCO major groups	All graduates (15-64)	Graduates (15-44)
Managers	82.6	91.9
Professionals	98.2	98.9
Technicians and associate professionals	47.6	56.5
Clerical support work	51.8	67.8

Source: Own calculation, 2012

Employers and graduates mentioned several drivers for the graduatisation of the retail-banking sector, rendering a university degree a requirement to get any job within a retail branch. Table 6 lists these major drivers, elaborated in more detail in subsequent sections. In surveying all four drivers, this study will argue that it is, in fact, the fourth driver, namely HE massification, that has precipitated the graduatisation of positions at such a rapid pace that it has become practically impossible for a non-graduate to obtain an entry-level job in a retail branch today. That is not to deny that technological changes, more stringent regulatory requirements, and more sophisticated clients had all contributed to changing the nature of jobs in the branches, as well as diversifying the scope of products and services offered. Rather, it is to argue that the tipping-point that led to the conclusive upgrading of educational requirements in retail banking came less in response to skill upgrading than to HE massification, which rendered the hiring of non-graduates, including tertiary vocational graduates, unnecessary.

Table 5.6 Drivers of change leading to the graduatisation of the retail-banking sector

Drivers of change	Rationale
The job has been upskilled and is now more complex	Increased complexity due to heavier regulatory requirements
	Increased complexity due to technological change
	Increased complexity due to more sophisticated clients
	Increased complexity due to the shift from sales to the provision of financial advisory support
Internal labour markets	Banks are hiring their future managers
Graduates learn faster and have other graduate characteristics employers value	Graduates are better able to do the job than non- graduates in less time
	Other graduate characteristics
There is an oversupply of graduates in the labour market queuing for these entry-level jobs	Why hire non-graduates when university graduates are readily available to take up entry-level posts?

Source: Own elaboration, based on 33 semi-structured interviews in the retail-banking sector

1. The job has been upskilled and is now more complex

Commercial managers are frontline employees who attend to individuals (net worth less than €100,000), providing them with financial advisory services and support. Recent graduates take up the post with virtually no work experience. They occupy the post for at least one to three years, until they gain sufficient work experience allowing them to take up more specialised portfolios.¹⁴⁰ Even though historically a university degree was not required to do this job, all banks sampled expressed strong preference for university graduates, with a degree being the minimum

¹⁴⁰ Premier banking (Banca premier) and SMEs (*Negocios*)

academic credential for a millennial to be considered for the post today. Employers argued that the job itself had evolved and become more complex over time. They listed four main factors accounting for this increased complexity, including (i) heavier regulatory requirements, (ii) technological change, (iii) more sophisticated clients, and (iv) a shift from sales to the provision of financial advisory services, each of which will be explored in turn.

a. Increased complexity due to heavier regulatory requirements

The financial crisis and European integration forced banks to change the way they did business across Europe. Greater regulatory compliance became a banking imperative, as banks struggled to grow their customer base and win back customer trust. All the while, banks were forced “to do ‘more with less’, given the continued cost pressure facing the industry” (PwC, 2015).

Miguel Angel, the Director of Talent at one of Spain’s intermediate banks [Bank 5], cited the Markets in Financial Instruments Directives (MiFID) I and II that the European Union introduced in 2007 and 2014 respectively as examples of new regulatory requirements with which banks were increasingly required to comply. MiFID II required that the bank’s financial advisors be certified as European Financial Advisors (EFA) and European Financial Planners (EFP), as appropriate, before attending to clients. In Miguel Angel’s opinion, requiring that their financial advisors be graduates made it easier for the bank to comply with MIFID regulations. Emili, the Director of Employer

Branding at the same bank as Miguel Angel, similarly argued that providing financial advice to individuals following MiFID regulations had become more “sophisticated” over time, thus necessitating university credentials. Indeed MiFID II legislation regulated investment advice stipulating that financial advisors not only continued to conduct suitability assessments in the sale of financial products, but also catered their financial advice and products to the personal profile of the client, with a clear vision for how the latter effectively met specific personal client needs. That said MiFID II regulations applied to investment advisors, a title that arguably did not correspond to the job description of commercial managers, whose authorized limits suggested an associate professional status rather than a financial advisory role, as elaborated in greater detail in subsequent sections.

CaixaBank’s Annual Report (2014) confirmed the increasing emphasis on financial advisory certification in retail banks. To this end, CaixaBank trained 4,737 branch managers (81% of total branch managers) and 594 affluent banking managers (40% of total affluent banking managers) for a post-graduate degree in financial advising from the IDEC-Pompeu Fabra University and for international certification from the Chartered Institute for Securities and Investment (CISI). In this way, Caixabank became the first Spanish bank to obtain the AENOR¹⁴¹ personal banking advisory certification in 2013 and 2014.

¹⁴¹ The Spanish Association for Standardisation and Certification

Defining who played a “financial advisory” role in a retail bank was key to gauging whether, indeed, graduates were needed across the board for all positions in a branch. As was clear from CaixaBank’s selection, it was branch managers and affluent banking managers alone who were selected for its post-graduate degree in financial advising. Entry-level commercial managers in charge of sales and general clients, on the other hand, were excluded from the training, suggesting that the latter still did not take the lead on financial advisory support offered by the branches.

In addition to more regulatory requirements at the European Union level, some of the employers sampled argued that the need for regulation also became all the more necessary at the Spanish level following the crisis. According to José, the financial crisis meant no room for error for banks, particularly when attending to local clients:

José [Bank 1]: These small banks cheated the customers. In Spain we [the financial sector/banks] have a very bad reputation... The customers put all the banks in the same bucket... These guys that we have in the branches, need to deal with very angry customers, so they need to be very, very sure what they are advising... they need to be very precise, they need to be aware of the tax regulation, they don't have a margin for mistakes.

This impact of the financial crisis on customer trust in banks was echoed in the Annual Report of CaixaBank, which also spoke of the deteriorating reputation of the sector as a whole. The bank thus focused its efforts on improving customer service and increasing customer satisfaction in

an effort to “recover trust” (2014, p. 43).¹⁴² Recruiting university graduates facilitated the process of improving customer service, as elaborated in more detail in subsequent sections.

b. Increased complexity due to technological change

Whereas banks in the past had a lot more paper transactions and routine administrative functions, today many of these transactions have been automated and become self-service. Technology spearheaded “the multi-channel transformation” of retail banking, which had in turn impacted the customer-bank relationship. Customers were now able to carry out their banking services on-line, using telephone banking, automated teller machines (ATMs), e-banking platforms or the social media without necessarily having to physically visit their branch (Santander Annual Report, 2014, p. 161). For the bank, these same platforms created alternative sales channels, through which banking professionals were able to approach customers with the latest commercial products and services tailored to their specific profiles. From the bank’s perspective, digitalization also allowed them to standardize their platforms and banking procedures, not only across branches but

¹⁴² The banking sector was indeed heavily implicated in the financial crisis in Spain. Banks financed the housing bubble, which burst in 2008 amidst a climate described as “*el capitalismo castizo*,” or crony capitalism. *El capitalismo castizo* is a term coined by Cesar Molinas to denote a state where business and politics are strongly intertwined, to the extent that many of the most significant enterprises in Spain, including inter alia BBVA and Banco Santander, are enterprises that have managed by themselves to “capture” their respective financial regulatory authorities through political influence amidst the rampant politicization of regulatory bodies. As a result, many former politicians, temporarily or indefinitely retired from politics, occupy senior positions on the boards of many of these enterprises, in this way allowing them to continue to exert their political influence, albeit indirectly (Molinas, 2013).

internationally; in this way “allowing for economies of scale and economies of skill”. This in turn facilitated expansion with Santander, the Spanish bank with the strongest international presence, depicted as a “trailblazer” in this regard (Rosenthal, 2012).

With this provision of standardized platforms and multi-channel customer services, employers interviewed for this study argued that the role and job descriptions within a branch had also evolved. Before automation, a bank teller or clerk carried out cash transactions and other administrative functions. This was the typical entry-level hire in the bank, and it did not require a tertiary qualification or previous work experience. Automation, however, allowed for a much more efficient processing of transactions and phasing out of these lower-skilled administrative jobs.

Lluís [Bank 1], the Director of a branch employing 11 employees, including five specialised commercial managers, three bank employees without a formal title, one front-office staff, a deputy manager and himself, explained that the functions performed within a branch had radically transformed since the 1990s. At the entry level in the branches, graduates apply for the position of *gestor comercial*. Once they were recruited on this post, graduates started out as *empleado sin título* (employee without a title), without *gestor comercial* being written on their business card. After at least a year on this post, graduates were then able to apply to the position of *gestor de empresas* (businesses), *gestor de premier* (premier banking) or *gestor de particulares* (wealthy individuals). Lluís explained that, “today the *gestor*

[commercial manager] only dedicates 10% of his or her time on non-commercial tasks. During the 1990s, it was the opposite. The client would come in and you would spend most of the time doing administrative tasks”. To this end, today the bulk of the work in retail branches was focused on customer advisory services, commercial lending, and the sale of an increasingly wider selection of financial and non-financial products and services.

In this way, automation effectively enabled leaner structures at the branch level. This, in turn, changed the occupational structure in retail banks, with a decline in the share of clerical and administrative positions and an increase in the share of commercial managers. As many of the traditional banking operations were automated, the main function of the branch also shifted from processing operations to the selling of an increasingly wider range of financial products and services.

Today’s commercial managers had at their disposal unprecedented customer knowledge. Whereas in the past knowledge about a client¹⁴³ was in the hands of the local branch, the introduction of Customer Relationship Management (CRM) systems and tools eliminated these paper records, allowing for central data processing instead. This, in turn, enabled the centralization of client data from the various remote channels, allowing banks to become more informed about their clients than they ever were before. In this way, CRM systems facilitated targeted marketing, allowing banking

¹⁴³ Including previous investments, loan history, other sources of funding etc.

professionals to predict customer needs and preferences and tailor personalised financial products and services. With CRM systems providing a “360 vision of their [customers’] performance and relationship with the Bank”, commercial managers were able to better target their “cross selling¹⁴⁴” efforts, in an effort to make customers more loyal (Santander Annual Report, 2014, p. 34). In this way, having client information at hand through the CRM program when commercial managers first met customers allowed the former to seize and optimize upon these “sales opportunities”, using CRM data to customize their sales pitch and provide personalised products and services (Bankinter Annual Report 2014).

Centralised client information had also informed risk management, where banks were also using this information to calculate customer scores when considering a loan, and further provide differentiated financial products and services by customer segment (example Santander *Select* for high net worth clients and Santander *Advance* for SMEs).

In light of these changes, Francisco, the Director of HR at a medium-size bank, who had been with the bank 26 years, concluded that automation in fact made many administrative tasks redundant. In their place, it introduced more complex statistical tools. He argued that to be able to use these tools and adequately perform the statistical analysis required on the job, graduate analytical skills were needed.

Francisco [Bank 4]: With IT we don't need people just typing but people with more professional skills. This is why we changed our

¹⁴⁴ Selling new products to existing clients

recruitment policies... Now all the decisions are taken in terms of statistical performance... Before it was more a matter of smell.

Even though, automation indeed provided retail banks with much better client information, allowing for more sophisticated data analysis, this did not automatically mean that entry-level graduates using these systems were performing the analytics themselves, as several graduates on these jobs reported. This Chapter, therefore, argues that this shift from processing and administration tasks to commercial activities, with technology facilitating the customization of sales, does not indicate a shift in the job description of commercial managers so as to include the provision of financial advisory services, as per the claim of several of the employers interviewed. Instead the commercial manager post is arguably an associate professional post, which ISCO associates with ISCED 5B tertiary vocational qualifications, rather than university qualifications. The ISCO-08 description of the tasks associated with financial associate professionals, including credit and loan officers, included interviewing applicants, analysing loan applications, making recommendations and even making decisions on loan applications “within authorized limits”(ILO, 2012). According to ISCO definitions, occupations that required vocational tertiary qualifications (level 3), were also occupations that required “well-developed interpersonal communication skills”, a skillset some of the employers interviewed had disproportionately associated with university graduates.

c. Increased complexity as commercial agents have to sell more complex products and cater to more sophisticated clients

The digital revolution had also changed the client-branch relationship. Today, instead of customers going to the branch, the branch was increasingly reaching out to customers through the various remote channels and through advertising its latest products and services. Lluís, a branch director himself who had been working for Bank 1 for 35 years, explained that whereas 30 years ago proactively seeking new clients was the branch director's mandate alone, today commercial managers were equally proactive in capturing new clients. This nascent "commercial proactivity" changed the nature of the work to the point that Luis observed no semblance between the historical functions of a branch, with its emphasis on administration and operations, and its current focus on commercial activities.¹⁴⁵ Gemma, a deputy manager at a different branch of the same bank as Lluís, explained that historically "la persona del banco", or the main bank representative was the Director alone. Today, in contrast, commercial managers were leading on sales. The deputy branch manager's job was also traditionally "more administrative" and office-focused, but had now also become more commercial.

To this end, Luis, the Director of Talent Management at the same bank, reiterated that ultimately a retail bank was a sales organization, which more than ever before had to aggressively go out and find clients, rather than

¹⁴⁵ In Spanish his exact words were: "No se parecía nada lo que hacíamos de lo que hacemos."

passively wait for clients to step into the door. Discussing the new skills prioritized by the bank in light of this change, Luis said:

Luis [Bank 2]: We need people with a very, very strong competency of customer attention and delivery. With a lot of empathy, to be able to take the needs of the customer as if they were their own needs, that they like the sales world, the sales activities, that they don't worry about going to the streets to visit small businesses to offer products.

In line with this expansion in commercial activities, banks were opening in different locations including shopping malls and other retail outlets and for longer hours in order to compete with non-financial organizations¹⁴⁶ that were offering financial services and products in similar locations. These included the provision of financial and insurance services in large multilateral retailers such as Carrefour, and the provision of automotive financing by large automobile manufacturers such as Ford Credit and Honda Financial Services. Large multinational hospitality companies such as Hilton Worldwide Holdings, Inc. were also increasingly providing financial services, as were companies like PayPal that provided alternative on-line payment systems (Guillén and Tschoegl, 2014).

In this changing environment, the interpersonal skills of branch employees became all the more important to capture new customers and to maintain and grow client relations. To this end, some employers argued that the commercial manager was, thus, at the forefront in sustaining and growing the bank's customer base, in this way "forming the bank's image in the eyes

¹⁴⁶ These include for example debit and credit cards issued by department stores and other traditionally non-financial organizations, which now provide these basic financial services and products.

of customers” (Fernández et al., 2001, p. 58). Cross selling to increasingly sophisticated clients entailed not only strong interpersonal skills in front offices, but also specialised knowledge of the financial products and services offered by the bank. In order to gain this knowledge, commercial managers received extensive on-the-job training, usually short-term in nature, on each of the bank’s financial services and products.

The Future of Jobs Report (2016), published by the World Economic Forum (WEF), which investigated the impact of recent innovations, including in the areas of artificial intelligence and robotics, on the labour market, echoed this projected growing demand for “specialised sales representatives” across industries. According to the Report, these representatives would need to aptly explain their products. They were “specialised” either because the products themselves had become more technical and/or because clients had become more knowledgeable (WEF, p. 17).

In the banking sector, employers sampled argued that both premises held true, with products becoming more technical and clients more knowledgeable. Jacobo confirmed the “specialised sales representative” hypothesis, arguing that retail banking had become more demanding, largely due to the provision of more complex financial products.

Jacobo [Bank 4]: Have the jobs changed over time? I would say yes... Of course you don't need MBAs all over the place, but you need people that have enough credibility and enough assurance to talk to a client and can provide... a good advisory service...The financial knowledge of our clients has increased drastically. The jobs have changed because the clients have changed, because some products are getting more and more complex.

In addition to products becoming more complex, employers argued that clients themselves were also more sophisticated in terms of their own financial knowledge, a claim corroborated in the literature. These “increasingly financially sophisticated customers” (Gardener et al., 1999) were better informed about different offers on the market, were able to compare offers, and could well choose the one that best suited them. They were also clients that were interested in broadening their investments beyond just opening a savings account, a claim also corroborated in the literature (Dombret et al., 2003; PwC, 2015). Banks were, therefore, challenged to cater to “increasingly educated and empowered customer[s]”, who were able through new technologies to independently research and purchase their own products, without seeking the assistance of financial advisors. This notion of the ever more sophisticated client was shared by all employers interviewed.

According to Luis:

Luis [Bank 2]: The client is demanding every time more. They are more literate and want to have a better service. Financially speaking, people have more information. Before to ask for a mortgage, you go to the bank, to the person of trust and they sell it. It was about trust. Now it's about getting the information on the web, you look for different options on the web and then you go to your bank. You need to be better educated because your client is more demanding.

Some of the employers interviewed consequently reasoned that the commercial executive must be equipped with the necessary knowledge to cater to this new client. This seemed self-evident to Agustin, a senior executive at one of Spain’s largest and most prominent banks who had been working at the bank for 20 years:

Agustin [Bank 3]: You have to understand what you're selling. You need to understand what is the market atmosphere... You need to understand the figures. You need to understand what the customer needs. You open a conversation, and you try to sell the most profitable products that you have.

This exact focus on increasing the sales volume of retail banks, however, seemed to suggest a shift toward commercial sales more strongly than it suggested any skills upgrading that may have occurred. It was precisely this shift to sales that led Baethge et al. (1999) to describe, “branch employees ... as sales staff, and branches as sales outlets” (p. 12), which would in turn refute any claims to job upgrading taking place. Knights and McCabe (1998), in looking at the financial sector in the UK, for example, reported “many of the branch bank managers found the shift towards ‘sales’ uncomfortable since it fundamentally threatened their identity as ‘professional’ bankers and their empires” (p. 176). In other words, the shift to sales was seen as degrading to British bankers who perceived themselves more as professionals.

Josep [Bank 1], the director of a branch at one of Spain’s largest banks, who had been working in the bank for 15 years, echoed this sentiment reported by branch managers in the UK. “Right now it’s in the DNA of new employees [to sell insurance as well as a number of financial and increasingly non-financial products]. But for us it was really surprising, really hard. Because you want to think of your job as old banking, and insurance seller, I don’t want to be an insurance seller... I’m a banker not an insurance seller”. That said, Josep realized that this “new banking”, which included selling

insurance in the branches, as well as a wide range of non-financial products was there to stay, insurance being the best source of profit for the bank at present.

Celia, a graduate occupying the post of commercial manager also primarily described her job as a sales job, where commercial managers essentially had to learn how to sell their five to ten financial products. Celia refuted employers' claim that the client had become increasingly more sophisticated. Instead Celia described her own experience working as a commercial manager as follows:

Celia [Bank 2]: As a general rule, a client could come and know a lot. But in general... they are not specialists. And the people who have a lot of money, have their own private bankers.

David, also a commercial manager at another of Spain's leading retail banks [Bank 1], confirmed that high net worth clients, who may indeed require more individualised financial advising, had their own more specialised managers¹⁴⁷ and were not catered to by commercial managers at entry-level posts. The latter sold standardized products and services to clients who, David acknowledged, today came better informed into a branch. That said the client still did not come into a branch knowing "what suits them". It still remained the commercial manager's job to explain the different products to them and advise them. In David's opinion, doing so did not necessarily require that the commercial manager be a university graduate. It merely made the training received on the post necessary. These included short trainings on

¹⁴⁷ Affluent clients managers (*gestor de banca premier*) and enterprise managers (*gestor de negocios/empresas*)

the macroeconomic and fiscal situation, as well as specific trainings on the bank's range of financial products and services as relevant to each employee. "This training without a university degree would be more than sufficient to do the job", said David.

d. Increased complexity due to the shift from sales to the provision of financial advisory support

Whereas in the closing decades of the 20th Century, retail banks shifted their focus from processing transactions to sales (Baethge et al., 1999), Spanish employers sampled argued that with the turn of the 21st Century this shift had gone one step further, from sales to financial advisory support. Retail banks today segmented their clients based on net worth, whereas in the past only high net worth clients¹⁴⁸ received personalised customer services from private banking specialists. Today, however, retail banks were increasingly seeking to expand this advisory service to other segments, in an effort to differentiate themselves from other providers of financial services. Spanish employers surveyed, subsequently, argued that commercial managers no longer just provided standardized products and advice, but went one extra step, advising the client on products that best suited them. The higher the client's net worth, the more personalised the advice and services provided. This trend toward personalised banking was

¹⁴⁸ High net worth clients have more than € 1 million

confirmed in Bankinter's Annual Report (2014), which explicitly stated that with increased automation of many of the bank's services, "the branch office becomes a place for giving more personalised in-depth advice, a place offering the highest level of added value" (p. 69). Caixabank's Annual Report (2014) also listed, under changing customer demands, the increasing demand for more advisory services. Santander's Annual Report (2014) seconded this trend, stating: "In the case of branches, which are the main channel for forging and maintaining long-term relations with customers, the objective is to have more modern and simpler spaces that combine the advantages of the rapid advancement of technology with the proximity and professionalism provided by the Bank's employees to customers" (Santander, 2014, p. 36). The many mergers and acquisitions that had taken place subsequent to the financial crisis had enabled banks like Santander to further segment and specialise their branches, reserving certain branches for high net worth individuals entirely staffed by private banking specialists.

In light of this shift toward the provision of financial advisory services, commercial managers did not only process transactions and sell standardized financial products, according to employers. They also advised them on financial products and services. This transition was echoed in the PwC Report projecting the state of retail banking in 2020, which argued that, "Tellers will need to evolve into financial advisors, fluent in all bank products, a massive transformation of skills" (PwC, 2015). It is this "evolution" that Spanish

employers repeatedly referred to in justifying why only graduates were now eligible for commercial manager positions today. Francisco explained:

Francisco [Bank 4]: Before you needed someone with a lot of sales skills, now it's more financial advisory services as well, which is used on the job.

This seemed to suggest the emergence of what Rosenthal (2012) described as the “Spanish [banking] model”, wherein “very small branches [harness technology] to offer sophisticated advice and customer service”. To play this new role, employers sampled argued that commercial managers now needed to come with high skills. According to José [Bank 1] retail banking was a financial advisory service that like any advisory service required the necessary technical knowledge. Manuel, likewise, compared the role of the *gestor comercial* to that of a consultant, providing a financial advisory service:

Manuel [Bank 2]: If I were a retail company, or a fashion company, definitely it would be different. But the service that the people I recruit offer requires a certain type of knowledge... In a way, he [the commercial manager] is a consultant for your client, offering him a financial service. So you need the academic training. I don't think we are recruiting people with a higher qualification than we need for the post.

This shift to the provision of financial advisory services for commercial managers in retail banking, however, ran contrary to what was reported by several commercial managers interviewed, who defined their jobs primarily as sales jobs. According to Celia:

Celia [Bank 2]: A commercial manager sells... So now I have five to ten products that I need to know and that I need to sell. There's nothing more. I don't need to know much more... In my work I don't do this [analysis and strategy]. I have to sell. Instead of selling shirts in

Zara, I sell investment funds. At the end it's the same... To know how to ... get people to trust you and once you have that, close the sale. But it's the same. It's to say that it suits you this shirt, it fits you great, you will greatly use it, and at the end you buy it. It's the same.

This suggested that the sale of standardized financial products and services did not require a high degree of technical skills, a claim corroborated in the literature (Regini, 1999). Instead, it was dependent more on the ability to sell, than on theoretical technical knowledge. According to Jordi, a commercial manager in one of the three largest Spanish retail banks:

Jordi [Bank 1]: It's like sell, sell, sell. If you've got any problem call the center here and they have more who know more than us about the products... I'm not applying anything of my degree [in economics], or almost anything...to do the very commercial tasks that we do... it's more a question of character than it is of training... Because someone with a masters from Harvard would probably not know how to sell.

Therefore, while the emphasis was on sales and the “push to sell financial products” for commercial managers, all evidence suggested that advising seemed more the prerogative of banking managers of affluent and high net worth clients, not entry-level commercial managers (CaixaBank Annual Report, 2014). In fact, several commercial managers interviewed argued that on-the job training, which graduates already received, was sufficient to be able to perform the tasks of the job of commercial manager. This was because for the selling of financial products what was required first and foremost was the talent to sell. According to David:

David [Bank 1]: It's not really relevant if you have an undergraduate degree ... nor is it really necessary for the work... What you do is sell financial products and for that it's sufficient that you know the products and that's it... Previous generations worked in this sector and did not have a degree. I could've done my job without a degree definitely.

When asked about the relevance of their education in performing their jobs, graduate responses varied. Whereas some graduates believed their university education facilitated their learning on the job, many believed training-on-the job would have been sufficient in itself. As Anna, a commercial manager who specialised in premier banking simply put it, “I don’t remember anything from what I studied, so I’m sure it hasn’t helped me”. She explained that 70% of her work was commercial revolving around the sale of financial products and services. What little analytical work the job entailed “is done for us [through automation].” Veracruz, occupying the same post as Anna at a different branch of the same bank, put the percentages at 90% commercial, 10% technical. “Before the majority [of new entrants] didn’t need a degree. It’s nothing so technical you need a degree”, she explained. Xavier, also a commercial manager at the same bank, put it at 75% commercial and 25% analytical.

Xavier explained that the bank had a “system” that was “clever enough” to direct and customize the sales of financial products and services to customers, based on their credit history and profile. Accordingly, the system itself was able to suggest to employees the financial products and services to be offered to clients, based on their profile. Another programme, TF7, guided employees on mortgage payment instalments required of clients, based on input that the employee must enter about the client’s profile. In this way, the commercial manager’s need to analyse and make these calculations manually was significantly reduced, as attested by the high percentage share

commercial managers gave to commercial vis-à-vis analytical requirements on the job. According to Jordi:

Jordi [Bank 1]: You're supposed to do that [use analytical skills on the job] but no... You don't need to have lots of skills for my job now. It's more important your character and personality than your own [analytical] skills. We should sell that or this and you don't touch why you have to sell that even.

This seems to confirm that automation, in fact, made these graduates' jobs at the entry level less, rather than more, analytical, practically conducting the analysis for them. That said, Jordi, and all others interviewed as part of this sample, confirmed that a university degree was, nonetheless, necessary to secure an interview for their post, as it had simply become a prerequisite. Despite a university qualification being a prerequisite, however "as soon as you enter, everyone is equal", said Veracruz.

During the interview process for the job, Jordi reported being asked subject-specific questions related to his area of academic specialization, namely economics. On the job however, Jordi reported he was not applying "anything... or almost anything" from his degree, including knowledge of microeconomics and accounting. Knowledge of languages, most importantly English was also a requirement to get the job, but not do the job. Jordi reported he very rarely used English, as very few clients actually were English-speakers.

The alleged shift to financial advisory services, therefore, ran contrary to several commercial managers' own self-report of what their jobs entailed. It also ran contrary to employers' own demand for, and emphasis on, strong

sales and commercial skills. The impression given by some managers that there had been a shift to the provision of financial advisory services, akin to a financial consultancy, at the commercial manager level, was therefore questionable. Commercial managers at the entry-level only sold a specific number of standardized financial services and products. Their financial advice was, therefore, sought only in terms of these specific products, rather than for financial investments more generally. Furthermore, even when selling these financial products and services, graduates did not have the autonomy to make the final decision approving a loan. Instead the director and/or deputy director of the branch made the final decision, and in the case of big loans it was the Risk Department. It follows that when university graduates are hired as commercial managers, an associate professional occupation, their skills are largely underutilised, whereas vocational tertiary graduates whose skills would have better matched the requirements of the job using the International Standard Classification of Occupations, are not eligible for consideration for this post.

2. Internal labour markets: We are hiring our future managers

Furthermore, even when some of the employers sampled conceded a university degree was not necessary for the job of commercial manager per se, they insisted that it was necessary for subsequent posts, which were primarily filled through internal recruitment. Therefore one of the primary reasons employers presented for hiring only graduates for entry-level jobs

was precisely because at the branch level, banks recruited externally only for the entry-level post of commercial manager. Though the position of *gestor comercial* was traditionally not associated with a university degree, nor was it considered a high-status job per se, it effectively presented the only gateway for tertiary graduates into more high-status jobs in retail banking.

From among university graduates, retail-banking employers generally expressed preference for graduates of economics, business administration and management and law (ISCED 5A). This preference for these fields of study stemmed from a perception, on the part of some employers, that graduates of business and economics had a demonstrated interest in banking and finance, whereas law graduates had the required analytical skills perceived to be necessary for the job. English was increasingly another requirement for entry. Other competencies employers mentioned included customer attention and delivery, commercial skills, empathy, communication skills, motivation, teamwork and interest in sales and the financial sector more generically.

Despite this increasing focus on non-cognitive interpersonal skills in new hirings, non- graduates who were in the past considered for and occupied the post of commercial manager and other subsequent posts within bank branches, today were at a significant disadvantage in an industry that heavily favoured the recruitment of university graduates. As a result, even in instances where someone with a *formación profesional* (tertiary vocational ISCED 5B) or a *bachillerato* (post-secondary non-tertiary) could potentially

have been able to perform the tasks required of a commercial manager, and did so historically, employers today did not see FP graduates as able to fully perform the tasks of the job, or take up more complex tasks in subsequent positions.

Manuel, the Director of Selection who had been on the post since 2012, explained that when his bank, one of the largest and most prominent retail banks in Spain ran a pilot recruiting FPs to entry-level posts in the branches, they found that the FP graduate could well perform the tasks of the job of commercial manager, but not subsequent posts up the hierarchy. As a result, FP graduates were promoted to the position of deputy branch manager, but not branch manager. Since the bank considered the entry-level post of commercial manager to be akin to a training period for the incumbent to then lead a branch, it subsequently introduced a policy of recruiting only university graduates, even for entry-level posts. Manuel described the recruitment process as follows:

Manuel [Bank 2]: I recruit a gestor comercial so that within three to four years he becomes branch manager... What we have is what we call in Spanish a modelo de cantera [pool of potential recruits]. So you get very young people, very young professionals and you put them in the organization and you make them grow... What we do best, is recruit juniors who have no experience at all in banks, and who have the minimum qualification, which is an undergraduate.

Employers emphasised that when graduates were considered for a post, hiring was not based on requirements of the job alone, but also on the potential for growth to take up subsequent managerial-level posts. Luis, the Corporate Director for Talent Management at the same bank as Manuel who

had occupied the post for three years, similarly described the work structure as more of a “pyramid”. The lower levels were recruited to become managers in turn. Luis explained:

Luis [Bank 2]: The lower levels feed the upper levels. The only entry point within this pyramid is as commercial agent... [for which a university degree is required]. Question do you need it [university degree] to do the job? Not really, but we are not just looking at the short-term. We are thinking about hiring the people who will be feeding the pipeline in the future... This is why we require this level of education and skills.

Requiring a university degree was, therefore, seen as a part of the talent management policy of a bank. José, the Director of Management and Compensation, part of the Human Resources Department of another of Spain’s leading banks, who had been on the post for two years, and worked at the bank for seven years before that, explained the talent management policy adopted by the bank as follows:

Jose [Bank 1]: Our talent management approach is very much based in the development of internal talent and internal people. We try to create a pool of people who will be able to become managers in the future. Because of this reason... we only hire graduates... For retail 100% is internal talent promotion. Hundred percent of the managers that we have in retail banking are from the house, [they] are not hired.

Because banks did not recruit externally for the majority of branch positions, employers argued they required flexibility and leeway in demanding more than just the immediate requirements of an entry-level post when recruiting externally. An immediate consideration to them was potential for growth within the bank. Agustin again reiterated the idea that banks recruited individuals not just to meet short-term needs:

Agustin [Bank 3]: You have to bear in mind that when this company selects people, you are not selected based on a specific role in the company ... The company tries to look for flexibility or ability to work in different environments...HR are looking for people not only as branch managers...HR is looking at the long-term, looking for someone who can do different things.

Jacobo explained that the prevalence of internal labour markets with the emphasis on the long-term perspective when recruiting was also due to the rigid and dual structure of the labour market in Spain, which heavily protected permanent workers.¹⁴⁹ This made it imperative that when banks recruited employees on permanent contracts, they also considered the medium-term career trajectories of new recruits, even for clerical posts such as that of bank teller. Jacobo explained:

Jacobo [Bank 4]: There's no culture of mobility in Spain. People get into a job and they stay there forever... I don't want people with no education in ten years' time in my bank.

Even though these were legitimate concerns, both the prevalence of internal labour markets in retail banking and the dual structure of the labour market in Spain had been constant features of both the internal dynamics of the sector and the labour market at large. Consequently, and due to their prevalence long before the educational upgrading of all entry-level posts within retail banks, they cannot be considered the real tipping point that effectively closed the door on tertiary vocational training (*FP superior*) and post-secondary non-tertiary graduates (*bachillerato*). Instead, this study

¹⁴⁹ Before the 2012 labour market reform, employers were unable to respond to falling aggregate demand by adjusting the working conditions of permanent workers, example through implementing temporary layoff or introducing changes to working hours and cuts to wages (García-Pérez and Jansen, 2015). The 2012 reforms enhanced internal labour market flexibility.

argues that the latter have been excluded from retail banking today, not because they are unable to do the job, but simply because the graduate queue for jobs became long enough to allow for their substitution.

3. Graduates learn faster and have other graduate characteristics employers value

a. Graduates are better able to do the job than non-graduates in less time

Another reason employers presented for the graduatisation of the *gestor comercial* post was, as per the job competition model, related to training costs. Thurow (1975), who first developed the job competition model, described the labour market not as “a bidding market for selling existing skills but [as] a training market where training slots must be allocated to different workers” (McGuinness, 2006, p. 391). According to this model, workers acquired the skills required to do their jobs more through on-the-job training than through formal schooling mechanisms. Based on their educational attainment levels, individuals were accordingly placed in a queue for jobs, and ranked according to their ability, proxied by their estimated relative training costs. This, in turn, determined a person’s relative position in the competitive queue for jobs, with the highest-ranking job going to the first in queue.

Some of the employers sampled believed university graduates were able to interface with clients and provide financial advisory support soon after recruitment, even before any on-the-job training. According to José:

José [Bank 1]: We hire people already able to do customer activity within a very, very short period of one month or two months or something like that, and some ones even quicker, even the third day that they are there. But they don't have any title¹⁵⁰ till three to four years, meaning they don't officially manage a portfolio till three to four years. They deal with customers but they don't have any customers associated to the employee.

This contrasted sharply with the past, when banks bore more of a responsibility to train their staff, gradually prepping them for client customer service. According to the employers interviewed, in the past, staff came in with less years of schooling and stayed more years on the job, before moving up the career ladder. The demand for higher education, however, seems to have shortened the career ladder, allowing graduates to immediately pursue more complex tasks and ascend to higher-level positions in a relatively shorter time-span. According to Manuel:

Manuel [Bank 2]: Companies [in the past] had the responsibility to teach their employees. If you talk to them, they'll tell you they start[ed] their career as bank teller. They've grown in their career from that position and even higher... People didn't have the opportunity to study. It was the responsibility of the company to make them grow.

In the past, non-graduates started in administrative positions within the branch, rotating through several administrative and clerical posts, before taking up the role of commercial manager. Today, with the restructuring and automation that has taken place over the past decade, many administrative positions are no longer required. As a result, graduates today entered the bank directly as commercial managers. This process, Manuel described as

¹⁵⁰ Referring to the *empleado sin titulo*, who performs the same functions as *gestor comercial* in José's bank. Upon recruitment, they are placed on a probationary period, during which they remain without a title.

“shorten[ing] the pyramid”. However, in banks that had stipulated a graduate degree for entry, even tellers were required to be university graduates. Therefore, for those graduates who started their banking careers as bank tellers, effectively the time it took to climb the pyramid had not really been reduced at all.

In this way, employers chose to change their hiring trends, replacing non-graduates, who would have required more training and work experience to perform the tasks of the job, with graduates who were able to take up the tasks of the job more easily. As a result, whereas just a decade ago FPs could become commercial managers in some of the biggest banks in Spain, subsequent to the financial crisis a university degree became a requirement to apply for the position. Francisco explained:

Francisco [Bank 4]: A FP (technical) graduate could do [the job]...The non-graduate supplements with experience what the graduate has acquired through education. This is why the older generation could be non-graduates but all the youth are graduates. The non-graduates have replaced this [their lack of advanced formal credentials] with experience, or with the formation that the bank has provided them with.

As a result of this shift, three out of every four employees in Francisco’s bank were university graduates, according to its 2014 Annual Report. Even though all new recruits in the banks surveyed were university graduates, there still were non-graduates working as branch managers in all of them. These were typically employees who started their careers many years ago at the bank, and were slated for retirement. According to Manuel, they were employees who came “from the old model”, people who started with the bank 40 years ago. Manuel readily admitted that non-graduates could

have been able to perform the job of branch manager today, however the trade-off would have been the time or experience it would have taken today's non-graduate to build the necessary knowledge needed to manage a branch.

According to Manuel:

Manuel [Bank 2]: Of course [someone without a university degree can do the job]. The difference is that the time that you need for that [non-graduate] guy or that girl to get that experience is not the same. It's not because of the [university] degree itself; it's because of what it implies to have a degree.

This brings to mind one of the generational fallacies that respondents faced when responding to questions about graduates and non-graduates, namely that they sometimes implicitly assumed that the non-graduates of the past were like the non-graduates of today, whereas this may not be the case. Through apprenticeships and other non-academic routes, non-graduates of the past could have been as equally skilled as the graduates of today through different learning channels (CIPD, 2015). Furthermore, it is important to note that interviews with employers did not yield any hard evidence supporting their own statements that training costs were reduced.

b. Other graduate characteristics

Even more than knowledge accrued through a university education, sampled employers valued the traits that graduates inherently must have had in order to have successfully completed their university studies. Employers expressed equal awareness of the lack of those very same traits among non-graduates. Consequently, a graduate's comparative advantage over the

tertiary non-university graduate was not merely ability and cognitive skills, but certain graduate characteristics such as ambition, tenacity and determination that had led the university graduate down the academic track. In contrast, the tertiary vocational graduate opted for what was perceived by employers as the easier FP track. The very choice of a *formación profesional* instead of a university degree was, therefore, seen as indicative of less ambition, and/or less ability, particularly that in Spain the university system is predominantly public. Manuel argued that in his view the cost of pursuing a degree was low for Spanish graduates, which left them with little excuse as to its absence:

Manuel [Bank 2]: In Spain, access to university is practically free and is very compatible with work. People who really want to have access can do it. We have a large number of universities, you don't even have to move cities. If you want a university degree, there's no reason why you shouldn't.

It was primarily the FP graduates' failure to pursue and complete university studies that some employers seemed most concerned with. José explained the specificities of Spain in this regard:

José [Bank 1]: In the academic world in Spain, it is sad to say, but the ones who go into the FP are the ones who don't have the capabilities¹⁵¹ to become a graduate.

This is echoed by the saying “*el que vale para la universidad y el que no para la FP*”, oft repeated by parents and the older generation in Spain, which means, he who can go to university should go, and he who cannot should opt for the FP instead.¹⁵² Graduates seemed well aware of this

¹⁵¹ By capability he meant not just cognitive ability

¹⁵² “Titulitis: la enfermedad del siglo XXI.” Criebo. 20 September 2014.
http://www.criebo.com/ocio_y_cultura/5256/titulitis-la-enfermedad-del-siglo-xxi

derogatory perception of the FP title. Reflecting on the distinction between a graduate degree and an FP, Rodrigo, an intern at an intermediate bank about to graduate with a triple degree from the European University of Madrid, observed:

Rodrigo [Bank 4]: Maybe... the education that you receive [through FP] is the same... but in the end what counts on your CV...is whether you have a degree or not. The FP is not a degree. It's not even half a degree. That's why personally I wouldn't pursue it.

Hence, employers seemed to perceive the mere fact of attending university and graduating with a degree as indicative of responsibility and ability to achieve. This is reflected in the literature. Berg (2003) for example, described among private sector employers in the US, this same preference for graduates due to a host of graduate characteristics not directly linked to their degree, including adaptability, self-discipline, trainability, productivity and potential for promotion (Ibid, 2003, p. 12).

Consequently, more than mere knowledge, it was graduate characteristics that were valued in the workplace and associated with university graduates. One employer compared university education and the knowledge gained there to the experience of studying abroad and returning back to one's home country. In the process one may have learned a foreign language, but it was not that foreign language the bank was now prizing, but more the exposure gained through this experience abroad and the skills acquired in the process. Manuel elaborated on these graduate characteristics as follows:

Manuel [Bank 2]: It's not because of the [university] degree itself, it's because of what it implies to have a degree...It's not because of what they know [university graduates], it's because of their skills [competencies]... Which competencies? Basically flexibility, tenacity, resilience, which is almost an evolution of tenacity, they are more sociable, and are more results-oriented, to put a goal and achieve it... During studies, they [graduates] have put into play skills that [in] a system like FP, which is a system that is more soft, they're not going to develop.

Problem solving was another characteristic, which sampled banking employers associated with a university degree. Jacobo explained:

Jaobo [Bank 4]: Graduation [a university degree] assures me a certain level of capacities, to deal with problems, to study and to learn... I would be more assured with graduates than with non-graduates. Non-graduates would not be so familiarized with figures, with spreadsheets, with statistical models, with reading in English etc.

Manuel, the top HR recruiter at one of Spain's largest banks even distinguished between graduates of long-term (*licenciado*) and short-term cycles (*diplomado*), perceiving perseverance in the long-term cycle as a sign of ambition and determination, both of which were qualities that were needed on the job. *Diplomados*, on the other hand, he argued, "seem to have less ambition". This emphasis on foreign languages and formal academic qualifications relayed by sampled employers was echoed by Branine and Avramenko (2015) in their study of graduate recruitment in four European countries including Spain. Their study confirmed that Spanish employers generally prized academic qualifications and foreign languages over other transferable skills.

4. There is an oversupply of graduates in the labour market queuing for these entry-level jobs

Even as sampled employers in Spanish retail banks were arguing that the job itself had been upgraded, and that commercial managers now served as financial advisors, they also acknowledged and repeatedly mentioned the number of university graduates queuing for their entry-level jobs. In the relatively recent past, these jobs were also open to non-graduates with a high-school degree and above. What closed the door to the latter was not a change in job content, but merely the surplus availability of graduates so that investing in training non-graduates, who now represented a less able group, became unnecessary to employers.

This study, therefore, argues that the real tipping-point for the actual graduatisation of the retail-banking sector in Spain was the surplus of graduates in the labour market queuing for these jobs. This conclusion was endorsed by several of the employers interviewed for this study. When justifying why her bank exclusively recruited graduates, Berta, for example, pointed to the ready availability of university graduates, where the number of graduates in the labour market surpassed the number of high-skilled jobs available. This surplus made recruiting a university graduate for the job the more rational decision rather than train non-graduates from scratch.

According to Berta:

Berta [Bank 1]: There are many university graduates who are graduating and we have a very high unemployment rate among university graduates and so we incorporate the best talent, and we consider it is these people who have a degree.

As a result, whereas traditionally a university education was not required to work in the branches of retail banks, today non-graduate credentials were no longer sufficient. This availability of graduates essentially made it unnecessary for employers to invest in non-graduates, since university graduates were able to fill in their place seemingly under the same work conditions and far more quickly. In other words, the massification of HE and the ready availability of graduates to take up the job of commercial manager, traditionally not a graduate job, had itself been one of the drivers of the graduation of the post. Luis explained:

Luis [Bank 2]: Former times to be working in a branch, you were not requested to be a graduate. Talking about 10-15 years [ago]. At that time you didn't need to have a[n] [under]graduate [degree], it was enough to have FP [in the branches]. There was a new wave of everybody has to go to university and have a degree, so we request it. Traditionally [in the branches] it was people with experience, and they knew how to do the job.

Jacobo also ascribed this graduation trend primarily to the specific employment structure in Spain. To this end, he said:

Jacobo [Bank 4]: The key is to understand the Spanish labour market... Now really if you want to get a job, you better get a better education. That's the reality. Because there are no jobs. We need three people. Who would you hire? The people with more education. Even if it is [for the position of] bank teller.

As a result, entry requirements for specific posts changed in as much due to demand as to supply forces. According to Agustin:

Agustin [Bank 3]: Entry requirements for this post [branch manager] have changed [over time], not only because the company demands these profiles but because there's more offer than demand.

Francisco also argued it was the surplus in labour market supply that made it possible for banks to be more selective, presenting them with “more choices”. As a result non-graduates had been pushed out of entry-level jobs in the banking sector, even though employers readily admitted a university degree was not necessary to perform many of the tasks required on an entry-level post. Luis delved straight into the polemics of it, saying:

Luis [Bank 2]: And now we can enter that conversation, is it [a university degree] needed? Not extremely needed. But as we have an over excess of graduates, how can you be different?...Most of the people attains or participates in a master, as a competitive advantage to get a job...We ask for this not as a requirement [in a job vacancy] but as a nice to have, because we are in the position to ask for it.... But honestly we don't really need it for a new entry job. Because most of the time, they [new recruits] are going to be learning while working, especially at the beginning so it's a way of shaping them to enter into the organization.

This ready availability of graduates had allowed employers by their own admission to become increasingly more selective in their recruitment processes, selecting not only graduates, but graduates from the best universities, not just with one degree but sometimes with several, in addition to a list of other human capital credentials. Graduates were well aware of supply factors influencing recruitment requirements. Celia observed:

Celia [Bank 2]: Since it [Bank 2] is a big enterprise, and it can be selective, and since in Spain, even if you're not a big enterprise, you can be selective, they opt for the [the best students from the] most renowned universities.

Section III: Delayed in transition

Some employers claimed that “the pyramid” or career trajectory of graduates had accelerated, so that commercial managers started at higher

positions and climbed through the ranks quicker. This section, however, seeks to show that, on the contrary, the graduate school-to-work transition has, in fact, been prolonged, with graduates earning higher credentials, and working several more years as interns or tellers, before they are able to secure their first jobs as commercial managers on permanent contracts.

Josep, a manager of a branch at the age of 41, reported starting his own career at the bank 15 years ago. He began as an employee without a title¹⁵³ for two years, after which he spent five years working as *gestor de empresas* (three years), followed by two years in premier banking two years. After a total of seven years of work experience, he assumed his first branch manager post. Whereas his first assignment as branch manager was in a smaller branch, at the time of interview he was leading a team of 14 on his third such assignment.

Even though Josep's career trajectory was the expected banking trajectory, what was radically different¹⁵⁴ between his career path and that of graduates' today is the length of the wait between one position and the other, the type of contracts graduates are initially offered, and the length of the queue for the entry level post of *gestor comercial*. Whereas Josep started as employee without a title, in a regular branch, at José's bank, one of Spain's largest, all new graduate recruits were requested to start off their career as commercial managers, in what the bank referred to as *oficinas punto*. The

¹⁵³ Performs the functions of commercial manager, without the title and without a portfolio of clients.

¹⁵⁴ Other than the nature of the job itself, which Josep explicitly commented on earlier on in this study.

oficinas punto were small branches, which were located in big shopping malls usually in commercial zones outside the city centre. These were leaner branches, with only core staff operating the branch, typically commercial managers and a branch director. At minimum the *gestor comercial* stayed three to four years on this post before being eligible to apply to other vacancies within the bank.

At Francisco and Javier's bank, if a vacancy was not available for the position of commercial manager, graduates were recruited as tellers instead. Other graduates, sometimes, including with advanced degrees, were recruited as *becarios* or paid trainees/interns at the bank's main office.

Celia, was one of those graduates who used a one-year *beca* (paid internship) at the bank as a stepping-stone to obtain her current job as commercial manager in a branch. She had completed a *diplomatura*¹⁵⁵ in tourism and a *licenciatura*¹⁵⁶ in business. She graduated with high marks. Celia also completed a Master's degree in Human Resources (HR) in ESIC, one of the top business schools in Spain. In between her *diplomatura* and *licenciatura*, she signed up for the Erasmus exchange program in Manchester. In parallel, Celia also had work experience, having served as a tourist guide, and also worked in an insurance company. It eventually took Celia an undergraduate degree and two master's degrees, in addition to mastery of a foreign language, to be able to secure a paid internship in one of

¹⁵⁵ Three years short-cycle

¹⁵⁶ Five-year long-cycle undergraduate degree

Spain's largest and most prestigious banks. When asked why she had opted for a paid *beca* instead of an actual job upon graduation, Celia explained:

Celia [Bank 2]: It was the possibility to enter in the area of HR and work for [Bank 2], which is one of the biggest Banks that there is... And in [Bank 2] even if you are a becaria [graduate trainee] they pay you well...When I had started they paid 1,000 Euros.

Celia was not alone in opting to take up a *beca*, despite high qualifications. Alejandra, a graduate, who completed her *licenciatura* in Business Administration from CUNEF¹⁵⁷ was also at the time of interview a graduate intern at the HQ of one of the smaller Spanish retail banks, because “nowadays here in Spain, before you have a job, you have to have an internship in the company”. Marta, another graduate trainee at the same office, also believed the six-month *beca* had increasingly become a prerequisite for regular employment in banks. “It’s very difficult. And people have a lot, a lot, a lot of studies”, she said.

And so graduates were pursuing further studies, even after a master’s degree and some years of professional experience, just to get into an internship program like Celia, Marta and Alejandra’s. For graduates to be able to access a *beca*, they had to be enrolled in a course, either at the university level or on-line. Salaries for these programs in banks generally ranged from 500-1,000 Euros per month depending on educational attainment levels.

When Laura began as a *becaria*, also at the HQ of one of Spain’s smaller banks, she already had over three and a half years of work

¹⁵⁷ *Colegio Universitario de Estudios Financieros* or University College for Financial Studies in Madrid

experience, including at Siemens and BBVA. After a period of unemployment upon moving with her husband to a new work location, Laura accepted the role of intern, realizing there was no other way to get a job. To even be considered for an internship, Laura explained she had to be enrolled in “some course”, in which she duly enrolled. When asked about the course, Laura responded it was “like a Master’s degree in HR” on-line. She explained she hadn’t started it yet because she didn’t have time, but expected to graduate within two months.

The above pointed to the increasing importance of credentialism and the signal of a university degree, in an atmosphere described by Brown, Lauder and Ashton (2011) in the UK as one of “increasing social congestion in the competition for decent jobs” (Brown et al., 2011, p. 135). Spanish graduates seemed to also be wading their way through what the same authors referred to as “the opportunity trap”, where graduates were driven to expend yet more of their time and money “on activities that may have little intrinsic purpose in an attempt to fulfil one’s opportunities” (Brown et al., 2011, p. 12), a phenomenon Ainley described as “running up a down-escalator” (2016, p. 2). Graduates were left with few options other than to invest in yet more degrees and internships, in order to be able to access their first entry-level post on a permanent contract in a retail bank, a post that just one generation ago was accessible to non-graduates. One of the problems with this disproportionate increase in investment in human capital is that further education is no longer pursued as an end in itself, but as something to be

“purchased”. To this end, when asked what he planned to do after finishing his internship, Rodrigo, another intern¹⁵⁸ at the same bank as Laura, who was well aware of the dynamics, retorted:

Rodrigo [Bank 4]: I graduate next Tuesday then my plans are to purchase a master's degree. I was thinking of doing an MBA because it's a very general degree that can open a lot of doors in the private sector. Everything is business in the end.

Even in the case of a seeming fit between educational credentials and job requirements, graduate capabilities, defined in this study as the “freedom to achieve” labour market outcomes of value, continued to be compromised, their career aspirations delayed, until they were able to secure their first permanent contract as *gestor comercial* in a branch. Examples of delayed transitions in this case study include the recruitment of graduates, sometimes with multiple degrees and previous work experience on fixed-term training contracts. This was the case of Hanna, Jordi and Victor, all recruited on entry-level posts in one of Spain's top retail banks.¹⁵⁹ Even though all three performed the exact same functions as commercial managers on permanent contracts, they themselves were recruited on fixed-term contracts and received only 75 percent of the pay of permanent commercial managers. Only upon completing a two-year probation period, would they be considered for a permanent contract, and become eligible for full pay.

¹⁵⁸ *Becario*

¹⁵⁹ These accounts are confirmed by trends in the Spanish labour market as a whole; where one in every four Spanish workers was employed on a temporary contract in 2015. Furthermore, over 90% of all new contracts that same year were temporary contracts (Handelsblatt, 2015).

Jordi had a master's degree in economics from the University of Barcelona, two years of work experience, as well as English language skills. He explained that some of his former colleagues, also with a master's degree and languages, had resigned even before the two-year probation period was over.

Jordi [Bank 1]: They hoped that after two years they'd have an option, they'd have a position at HQ not be selling insurance. It's not a question of money but of training. These are people who are well trained and want to apply what they have studied. It's not the same managing investment funds and doing completely commercial tasks.

As per Jordi's explanation, the afore-mentioned resignations were tendered not because these graduates were receiving less pay than their counterparts, also with advanced degrees but well matched. Rather, these graduates resigned because of their inability to utilise their technical knowledge to do the job, even when placed in jobs that employers of this study had argued required university degrees.¹⁶⁰ Jordi and his colleagues had pursued advanced studies in economics, aspiring for a career in banking at HQ, only to find themselves selling financial products and services in the branches. Even though other graduates like Adrian, *Gestor de Empresas* at the same bank as Jordi's, prided themselves on their "*don de gente*" or talent with people, and were very much in their element in the branches, others like Jordi had pursued advanced degrees with different banking career trajectories in mind. To this end, Adrian pursued an undergraduate in

¹⁶⁰ Defined in this study as managerial, professional and associate professional occupations (ISCO major groups 1-3).

business and management, whereas Jordi continued with a master's degree in economics. Jordi was, therefore, overqualified, whereas Adrian was well matched, on the same job for which the bank required an undergraduate as the minimum educational requirement for entry.

This brings to mind the importance in any analysis of education and skill mismatch of emphasizing the heterogeneity of graduate qualifications and aspirations, and not treating graduates as a “homogenous population” (Barone and Ortiz, 2011). In the same vein, high-skilled occupations are not all equally high-skilled, a nuance that is difficult to tease out statistically using ISCO.

In addition to occupational aspirations, the quality of the job, both in terms of contract type, and capacity for growth will also determine whether graduates stay on the job, or resign due to frustrated expectations, as did Jordi's three colleagues. Considering the quality of the job in any assessment of job match is important because as British sociologist Duncan Gallie argued, with the expansion in higher education, work has increasingly gained prominence among graduates as an end in itself. Therefore this instrumentalist approach to work as a means to an end, namely wages, in fact decreased instead of increasing with more graduates in the labour market, illustrating “a strong link between educational level and the importance attached to the intrinsic quality of work” (Gallie, 2012, p. 331). French sociologist Georges Friedman, the founder of the sociology of work subfield, further warned that without quality jobs that carried with them the opportunity

for growth, workers risked alienation. According to Friedman, “If workers were deprived of the capacity for self-development through work they would be subject to objective alienation” (Gallie, 2012, p. 326).

José acknowledged that his bank, one of the biggest employers in the retail-banking sector in Spain, was in fact failing graduate expectations for personal growth. He readily admitted that, in cases like Jordi’s and his colleagues, these transitions from branches to HQ were, in fact, very rarely made. According to José the bank was obliged to open opportunities based on its own needs and requirements, not based on supply:

Jose [Bank 1]: The deal, or the psychological contract, that this is the entry point, if you [university graduate] do a good job, if you deliver, then you get promoted, cannot be done right away because there are no organizational needs. You cannot create from scratch a new position.

Graduates, for their part, were well aware that the duration of an entry-level post varied, depending on their own performance and available vacancies within the bank. Celia, for example, explained that her branch manager had become branch manager in only two and a half years, estimating that on average it would take a minimum of two to three years for a commercial manager to become branch manager. Celia, nonetheless, noted she did have a colleague who had been working at the bank for eight years and was still in the same entry-level post due to lack of opportunities. Promotion, in other words, was not an automatic process that naturally happened to all. Berta, from an HR perspective, explicitly confirmed Celia’s suspicion that not everybody made the transition that quickly:

Berta [Bank 1]: Since it's like a pyramid and the base is much more full, not everybody can move up the hierarchy.

Evaluating graduate labour market outcomes in terms of labour market capabilities, according to the “extent of freedom” graduates have to pursue labour market outcomes¹⁶¹ they value (Alkire, 2008, p. 28), can help to shed light on the human dimension of occupational drifting down, that is generally missing in the economics of education literature. The broader conceptualization of the relationship between education and jobs from a capabilities perspective requires that the education-job skill-job match be evaluated not merely in terms of the wage premium, but also in terms of occupational aspirations and the quality of the job, both in terms of contract type and capacity for growth. From this capabilities perspective, the resignation of Jordi's three colleagues is an example of “combined capabilities” deprivation in the labour market, where “combined capabilities” are defined as “not just abilities residing inside a person but also the freedoms or opportunities created by a combination of personal abilities and the political, social and economic environment” (Nussbaum, 2011, p. 20-21).

It is precisely this “combined capabilities” deprivation that has propelled graduates to pursue even further studies. As Marta, a graduate working in one of Spain's smaller banks put it:

Marta [Bank 4]: Nowadays, you can't just have an undergraduate...Everybody already has an undergraduate and a master, or an undergraduate and two masters... Because you will go and they [employers] will ask you and what more?

¹⁶¹ Or functionings

Laura, a commercial manager specialised in premier banking at one of Spain's leading retail banks, cynically remarked that more important than the degree itself, was the title it conferred. Celia seconded Marta and Laura, arguing that employers in Spain continued to pay disproportionate attention to formal academic credentials:

Celia [Bank 2]: In Spain, we have this very old way of thinking so if you don't go with the university title, with the paper where you say you have this title, you don't have the same opportunities...

In this way a university degree "helps a lot", effectively opening up "opportunities [for university graduates] not accessible to others", as reported by Victor, another commercial manager in one of Spain's largest banks. As a result, "there is more investment in the signal" on the part of graduates, "than there would be in a world of full information" (Spence, 2002), where employers establish their own screening mechanisms to discern a potential employee's productivity on the job. Spanish employers in the banking have increased educational requirements for entry-level jobs. On their part, graduates in turn pre-emptively accumulated academic titles in hope of gaining a comparative advantage in the labour market, leading to a phenomenon better known as "titulitis" in Spain.

After serving for one year as a paid intern, Celia obtained her first formal/permanent job at the bank, taking up the entry-level post of commercial manager, for which only a university degree was officially required. Celia was placed in an *oficina punto*, her office located in a shopping mall outside the city centre. Celia, described these offices as

“difficult locations” to work in. Work hours were long, lasting until 20:30 in the evening during weekdays and spilling over onto the weekend, with work on Saturdays as well. Because there were only three people technically operating the branch, they performed many of the same functions, eradicating some of the hierarchy prevalent in the more traditional branches, where tasks were clearly demarcated. When asked whether her current job met her occupational aspirations, Celia described her thought process as follows:

Celia [Bank 2]: My studies were brilliant because the minimum that I got was an eight [over ten] in general. This motivated me to aim high, to be able to choose. What happened later is ... labour market circumstances. Half of my friends are very well educated and they are unemployed, [they are] lawyers and engineers. So today I am a person that many people perceive as fortunate.

In this way, graduates seemed to reassess their expectations and labour market aspirations in light of their “combined capabilities”, allowing their expectations to be adjusted based on labour market realities. As a result, graduates re-evaluated their own circumstances relative to that of their peers, many of whom, like Celia’s friends, belonged to the educated unemployed. Accordingly, even though in the absolute, their current jobs were not up to par with their expectations, their relatively better situation, being in employment rather than unemployment, effectively pushed them to accept and even express satisfaction with their current terms of employment, illustrating a clear case of “adaptive preferences” (Nussbaum, 2011, p. 83).

When Marta, another graduate intern, was asked about her own expectations and satisfaction levels, like Celia, she compared herself to friends who were equally qualified but unemployed, or were in graduate

training programs where the remuneration was even lower. According to Marta:

Marta [Bank 4]: My friends, for example, work the same hours (9:00-14:00) and they earn 300-350 Euros... I've seen worse. When I say I earn 667 Euros, they tell me how great! People today, this salary for these hours, is seen as perfect. Particularly for people my age. For example the girl that you will interview afterward, she is married. And she is still here... Things that before did not happen, it was practically impossible, now you have to adjust.

Section IV: Employers' perception of overqualification and skill

mismatch

In this way, the university degree signal became a requirement to obtain an entry-level job in retail banks in Spain. It became more common to see graduates with one or two university degrees and a master's degree employed in entry-level posts. Employers, however, did not see overqualification, defined in this study as having more education than was required to get the job, as necessarily a problem. Even though employers in the retail-banking sector reported using education as a signal, making a university degree a prerequisite to be eligible for an entry-level job, they did not in fact assume that this signal would, in turn, increase individual productivity on the job. At the entry level, signalling seemed to dominate, however, as soon as graduates were recruited into the bank, education attainment levels were overlooked as the mechanics of internal labour markets kicked in based on merit-based performance. Several senior managers in fact pointedly mentioned that having more education than that required to be hired on the job, defined as overqualification in this thesis,

when not accompanied by more skills than needed to do the job, did not necessarily present a problem for them at all. Agustin emphasized that overqualification became a problem only to the overqualified person, who had chosen to invest in those signals, and not at all to the employer. According to Agustin:

Agustin [Bank 3]: Overqualification is more a problem for the [overqualified] person than a problem for the company. There are many people who think because they have a degree they have the knowledge... It's not a question of the degree, it's a question of how is he using his degree for achieving what he wants... Your perception is the more degrees I have, the easier it will be to find a job. This is... an old-fashioned way of seeing things... Companies have needs. I have to cover those needs.

When asked about their policies vis-à-vis overqualification, employers emphatically chose to speak about policies related to merit-based performance instead. Their intention was to emphasize that what mattered to them ultimately was not the broad theoretical knowledge a person had. Instead employers prioritized graduate skills on the job, as reflected through superior performance on the job often captured in performance appraisals. José explained:

José [Bank 1]: We look at performance [not education]. If somebody has a doctorate in mathematics, and he or she is not performing well [that won't take them very far], I mean we look at performance.

Overqualification, therefore, only became a concern to employers when it was accompanied by overskilling, defined in this study as having more skills than required to perform the job.

Jose [Bank 1]: This is probably the big challenge that we have in HR... Here the challenge is to keep them motivated, keep them happy with their current job, and keep them with the feeling that in the future they

will be able to get bigger responsibilities... This [having overskilled employees] is an advantage.

Manuel explained that in the case of retail banking, the university graduate ceased to be overskilled as soon as the latter was promoted from *gestor comercial* to *banca premier, negocios* or branch manager. As soon as this promotion was made, the graduate no longer had more skills than was needed to perform the job, and in fact had to acquire new skills that came from learning on the job. Manuel explained:

Manuel [Bank 2]: In Spain, we have this saying that one learns how to paint painting. This is the same; it's called learning the job... In a bank like ours it [overskilling] is not a problem because we are a meritocratic organization. Your growth depends on your results... If you have many skills and this does not translate into better results, it's very difficult that anything will happen.

José also spoke about “the talent management processes” at his bank, describing it as a mechanism to detect over performers or the overskilled, in order to ensure a better match for them. Through a policy that prioritized “promot[ing] people from the house”, the bank in this way protected its employees from prolonged overskilling, explained José.

Employers' challenge: managing graduate expectations

Employers sampled were well aware of the greater expectations that accompanied higher educational attainment levels, and what overqualification entailed. It was the latter that employers perceived to be the real challenge with overqualification. José said:

Jose [Bank 2]: This is part of the expectation management of people willing to grow very quickly especially if they come from a nice high-

level university or MBA. They expect higher salaries and a quick career. But I will be needing a level of maturity and co-responsibility, meaning yes I will hire you, I will train you, I will pay you, I will give you opportunities, but... you need to deliver.

For some employers, these higher educational credentials were a signal in fact not to recruit these employees into entry-level jobs, knowing that their aspirations exceeded what the company could offer them. Berta, for example, emphasized she would not hire an MBA graduate for an entry-level post in any of the bank's branches, because she knew "they would not want to stay for a long time in the function of *gestor comercial* because they have other types of aspirations". Their expectations in terms of remuneration and promotion would also be much higher. Consequently, the bank was simply "not able to meet their expectations [in the branches]".

A top recruiter at another of Spain's largest banks explained that these overskilled graduates were either patient, and waited until a vacancy at a higher level opened up, or they simply resigned. He estimated a turnover rate of around 15-20% at his bank:

Luis [Bank 2]: They [graduates] come in as sales people offering financial products and services to people within the shopping mall for 8-10 hours daily. They stay on this job until they resign, or until there is another opportunity within the organization... You might feel you are overqualified¹⁶² for a sales position in a shopping mall, which for that specific position, yes I can share that view.

Berta, speaking from the perspective of HR, similarly acknowledged that because of the financial crisis, employees had few alternative options. This made her bank's turnover much lower, because employees were well

¹⁶² Overskilled in this thesis

aware of the scarcity of alternatives. This low turnover, in turn, also stalled the promotion of relatively more recent recruits.

Conclusion

Employers' perceptions regarding education and skill mismatch, compounded by the grim labour market realities facing graduates, confirm Mason's conclusion that "the burden of adjustment to the increased supply of graduates falls to a greater extent on individual graduates than it does on employers" (Mason, 2002). As this chapter has shown, it is graduates who pay the price for skill mismatch at the macro level, primarily in terms of foregone graduate labour market capabilities. These are not only foregone economic capabilities, which could be partially quantified through the graduate wage premium, but also frustrated occupational aspirations, emanating directly from the graduate substitution for non-graduates in entry-level jobs that have been educationally upgraded without a parallel shift in job content. As a result Spanish university graduates aspiring for a career in retail banks have at best a minimum of one to two years of work experience in an associate professional post, where they begin their careers as commercial managers, an occupation for which they are educationally mismatched and overqualified using ISCO. At worst, university graduates will begin their career even lower in the occupational hierarchy, faced with few options but to take up a medium-skilled occupation in one of the banks that introduced a university graduates-only policy, and from which tertiary vocational graduates had also been barred. To this end, this chapter consequently argued that the length of the university graduate queue for jobs was the primary driver for this

inflation in educational requirements vis-à-vis ISCO specifications for occupations within the retail-banking sector in Spain.

Employers made a strong case for job upgrading leading educational upgrading. However, by their own admission, they also acknowledged the decision to upgrade educational requirements came primarily in response to the surplus availability of graduates in the labour market. This case study has consequently argued that it was the oversupply of graduates in the labour market relative to demand that had empowered employers to upgrade their educational requirements for entry-level jobs. Graduates, on their part, have responded by intensifying their investments in education. These inflated defensive investments in human capital in the absence of a parallel shift in labour market demand, have merely led to a longer queue of “surplus” graduates, at risk of being “occupationally drifted down”, or delayed in their transition from university to their first high-skilled job utilizing their graduate skills.

The end result has been an even wider prevalence of “titulitus” in the economy, where graduates accumulate degrees and other forms of human capital in an effort to make headway in the labour market. As a result, the transition of a young person in Spain from school to their first secure job in a retail branch has become longer and increasingly more demanding. Whereas the parents of this generation’s commercial managers were able to enter a branch with a *bachillerato* or *FP*, and build their career at the bank through work experience on the job, today these very same occupational aspirations

require different types of human capital investments. Not only are higher educational attainment levels now necessary, but languages are required as well. Internships and other work experience are also a plus, as are non-cognitive skills typically associated with graduate characteristics.

To this end, graduates have been the victims of the structure of available jobs in Spain, and employers the primary beneficiaries from educational upgrading and the substitution of graduates for non-graduates in retail banks. This has culminated in a mismatch, not only in terms of education acquired and education required to get the job, but also between skills acquired and skills required to perform the job. More importantly, it is a mismatch between graduate occupational aspirations and occupational realities, where graduates are repeatedly stalled in their transition from university studies to their first secure professional job utilising their graduate skills and firmly placing them on the career ladder.

Chapter 6 | The retail industry: A case study

The Graduate Jobs “Lottery”¹⁶³

Introduction

The majority of tertiary graduates,¹⁶⁴ and approximately one in every two Spanish university graduates employed in the wholesale and retail trade industry in 2012, were employed in medium and low-skilled occupations that one generation ago did not require a tertiary degree (see Table 6.1). The percentage of university graduates employed in medium and low-skilled occupations¹⁶⁵ particularly increased in the aftermath of the financial crisis from 40.4% in 2006 to 49.6% in 2012, with similar patterns observed in the UK¹⁶⁶ around the same time period (Brown, Cheung & Lauder, 2015).

¹⁶³ Inspired by Lester C. Thurow’s description of the matching of individuals to jobs a “lottery,” in his seminal book *Generating Inequality* (1975: 92).

¹⁶⁴ ISCED 5a, 5b and 6

¹⁶⁵ ISCO major groups 4-9

¹⁶⁶ From 40 in 2008 to 47% in the five subsequent years since in the UK

Table 6.1 Distribution of university graduates employed in wholesale and retail trade

ISCO	Graduate distribution (2012)
Managers	16.7
Professionals	18.2
Technicians and associate professionals	15.2
Clerical support workers	12.0
Service and sales workers	33.6
Skilled agricultural, forestry and fishery	0.0
Craft and related trades workers	1.2
Plant and machine operators and assemble	0.4
Elementary occupations	2.7
Total	100.0

Source: LFS, own calculation

University graduates employed in the retail industry primarily worked in clerical jobs (ISCO major group 4) or in services and sales (major group 5), both of which are ISCO major occupational groups where the share of graduates is quickly increasing (see Table 6.2). Just between 2006 and 2012, the percentage share of graduates employed as clerical support workers in retail nearly doubled from 12% to 23%.

Table 6.2 University graduate share in ISCO major groups in in wholesale and retail trade

	2006	2012
ISCO	Graduate share	Graduate share
Managers	16.9	36.2
Professionals	93.5	94.7
Technicians and associate professionals	24.0	21.6
Clerical support workers	12.0	22.9
Service and sales workers	8.9	10.6

Source: LFS, own calculation

In terms of fields of study, the majority of graduates employed in the retail industry who had occupationally drifted down were graduates of social sciences, business and law (SBL), followed by teacher training and education

science, the humanities, languages and arts. Just over half of SBL graduates were employed in medium and low-skilled occupations in 2012, in comparison to less than 22% of health and welfare graduates working in the industry (see Table 6.3).

Table 6.3 Percentage share of university graduates who had occupationally drifted down by field of study¹⁶⁷

Field of Study	2006	2012
Social sciences, business and law	39.7	50.2
Health and welfare	26.7	21.6
Total	40.4	49.6

Source: LFS, own calculation

Methodology

In light of this high prevalence of graduates placed in medium and low-skilled occupations in the retail industry, reaching nearly 50% in 2012, this analysis employs the case study approach to investigate changes in educational and skill requirements in these occupations. Seventeen in-depth semi-structured interviews were conducted with senior human resource managers and directors, as well as younger graduates representing three large retail companies in Spain. These interviews were carried out between January 2015 and March 2016. In choosing the sample, this thesis targeted the largest retail companies in Spain.¹⁶⁸ In selecting the latter, multiple-case

¹⁶⁷ Only SBL and health and welfare are reported because other fields have less than 100 graduates per field of study employed in wholesale and retail trade. In health and welfare, N=143 and in SBL, N=350.

¹⁶⁸ A formal letter was sent out outlining the rationale for the project, providing the identity of the researcher and supervisors and ensuring anonymity and confidentiality. An information sheet was also annexed to the letter, explaining exactly the information required from participants and the reasons they were chosen to participate in this project.

sampling was used, which involved strategically and intentionally, rather than randomly, deciding which organizations to interview (Miles et al., 2013). Accordingly, the eight largest retail companies in Spain were invited to participate, three of which agreed to take part in this study.

In-depth interviews took place at the offices of the three companies surveyed in Galicia and Madrid. Interviews were coordinated directly with the Human Resources Unit at each organization, which itself designated the staff to be interviewed and suggested the timing of the interviews. Two of the retailers surveyed at the time of interview were among the top 10 largest retailers in Spain.¹⁶⁹ The other was a relatively smaller multinational retailer, though still a large company employing over 1,000 employees in Spain itself, and specializing in the provision of restaurant services for travellers (see Table 6.4).

Table 6.4 Profile of the three retailers featured in this case study

Retail sector	Number of outlets in Spain (2015)	Number of employees in Spain
Food retailer	4,500+	28,000+ (46,000+ globally)
Fashion retailer	1,500+ (7,000+ globally)	50,000+ (150,000+ globally including Spain)
Food/Catering to travellers retailer	69	1000

Source: Own elaboration based on respective organizations' annual reports

This chapter argues that the surplus share of graduates queuing for retail jobs has allowed employers to divert the surplus queue to non-graduate

¹⁶⁹ <http://www.retail-index.com/Countries/ToprankingretailersinSpain.aspx>

jobs at their points of sale, using graduate performance in non-graduate jobs as a screening mechanism through which the best were then deemed eligible to apply to graduate jobs in head office. In this way, employers in the retail industry introduced what Mason (1995) referred to in his case study of the financial sector as “different layers of graduate recruitment”. This entrenched segmentation in graduate career trajectories, establishing a clear divide between graduates recruited into the central offices of retail firms with clear career trajectories, and those diverted to the points of sale. In this way the costs of this “positional” competition for graduate jobs were primarily borne by graduates themselves whose career aspirations were frustrated, as they continued to stand in queue for graduate jobs, whilst firms maintained “internal labour markets with limited ports of entry” in their central offices (Thurow, 1975, p. 86).

Table 6.5 Drivers of change leading to the graduatisation of the retail sector

Drivers of change	Rationale
Changing recruitment strategies: in the past positions in the points of sale were not open to external recruitment	<p>In the points of sale employers traditionally prized tenure on the job over university credentials such that positions were not open to external recruitment. Today, some of these positions are now publicly advertised with university credentials able to substitute tenure on the job.</p> <p>Recruiting graduates into non-graduate jobs also serves as a screening mechanism through which the best graduates are then recruited to head office.</p>
Technological advances	Automation and change in technology used in warehouses requires high skills to operate this technology.
The graduate queue for jobs and the latter's readiness to take up non-graduate jobs	The oversupply of graduates makes their recruitment at the points of sale more common.
Less readiness on the part of employers to provide general training	Graduates require less general training.

Source: Own elaboration, based on 17 semi-structured interviews in the retail sector

Parallel career trajectories: HQ versus points of sale

Work realities varied significantly between headquarters and the outlets or points of sale amongst the retailers sampled. Each employment track had its distinct educational requirements, skills and career trajectory, elaborated upon in the next sections. The sharp delineation between headquarters and points of sale in terms of functions, expectations and career trajectories seemed to confirm Brown, Cheung and Lauder's (2015) hypothesis regarding "the (re)stratification of knowledge work" in the three retailers surveyed. According to this hypothesis, "those defined as 'talent'

were fast-tracked into senior management positions and given ‘permission to think’. Below them were ‘developer’ roles executing the strategies of the talented, while below them still were those that operated digitalised routines”. To this end, Brown et al. (2015) described the 21st Century as “the age of digital Taylorism”, which came to replace the “mechanical Taylorism” that characterized much of the 20th Century. In a similar vein, , some of the graduates surveyed were “fast-tracked” into analytical roles that required “vision” and “expertise”, whereas the remaining graduates who remained behind in shops, warehouses or outlets were divided between those who managed the warehouse or shop, and those who executed tasks as designated to them.

Hiring trends and graduate skill utilization

Among all three retailers interviewed, all technical posts at HQ that previously may have also been open to non-graduates today require a university degree as the minimum educational qualification for recruitment on entry-level posts. In contrast, at their points of sale, employers did not formally require university credentials, prising skills that were acquired through tenure, on-the-job training and knowledge of the organisation over skills acquired through higher education.

In one of Spain’s largest fashion retailers, over 87% of staff worked in stores, whilst the rest were distributed between headquarters, logistics and

manufacturing.¹⁷⁰ The company had over 150,000 employees spread over five continents, about a third of whom were based in Spain. Over two thirds of employees were recruited on permanent contracts, but less than half were employed full-time. When Miguel, the Director of Compensation and Benefits since 2004, first started working at the Company almost 18 years ago it covered merely six countries. Since then it has expanded to 88 countries in 2015. Today, the Company is structured around eight main brands, each of which has its own Director and functions as if it were a separate company. Miguel explained that education and skill requirements varied significantly between head office and the points of sale. For recruitment in headquarters, it was not just a university degree that was required but also previous work experience, and more specifically “expertise” or specialist knowledge, acquired through higher education and previous work experience. According to Miguel:

Miguel [Fashion retailer]: It's difficult to work in this building [HQ], because when we talk about this position, for example taxes, there are ten tax specialists [for the entire company]. If you want to work in taxes in [the Company] you need to be an expert.

Therefore a graduate degree alone was an insufficient qualification to assume a high-skilled post in HQ. Maria, also an HR Manager at the same fashion retailer as Miguel, in fact questioned the employability of fresh graduates, arguing graduates needed not just theoretical skills earned through higher education, but also skills acquired on the job before they were

¹⁷⁰ Approximately 7% were recruited in HQ, 5% in logistics and about 1% in manufacturing.

ready to assume high-skilled posts. According to Maria:

Maria [Fashion retailer]: A larger number of graduates doesn't mean a larger number of graduates with the right skillset. ... [Graduates are] simply just not being prepared for the real world. [They] have done a lot of theory but have never had a job and don't understand what working is about.

This is echoed in the literature on overeducation in Spain. Alba-Ramírez (1993), for example, argued that because young university graduates entered the labour market with only educational credentials to contribute to the job, they were only temporarily overeducated in order to accumulate on-the-job training and work experience, to then be able to access a job better suited to match their educational credentials. Accordingly, Alba-Ramírez argued that formal education alone was “not sufficient” to carry out the tasks required in high-skilled jobs, but needed to be supplemented with on-the-job training and experience to “provide overeducated workers with the qualifications that match their job market expectations based on possessed years of schooling”. In other words, skills gained through a tertiary degree alone were insufficient for graduates to assume the tasks of a high-skilled job, and needed to be complemented with work experience and on-the-job training before a graduate was ready for high-skilled employment.

The only graduate entry-level posts in headquarters that did not require previous work experience at the sampled fashion retailer were designers and buyers. Designers normally came with a design background,¹⁷¹ and buyers with a business management¹⁷² degree. Aside from designers and buyers, all

¹⁷¹ An undergraduate degree at minimum.

¹⁷² Administración y Dirección de Empresas (ADE)

other positions at HQ were recruited from the shops. Miguel explained these recruitments with the “*cantera*” or reserve team¹⁷³ concept in mind, emphasizing employee growth within the organization.

Miguel [Fashion retailer]: Imagine you are a shop assistant with ability, you become the coordinator [merchandiser] of your shop, then you become coordinator of Madrid... and maybe you are the person in charge of all Spain, and your place is here in the head office of [the Company]. It's like a pyramid.

Even though growth within the Company culminated in employment in HQ, the chain of command did not necessarily always proceed from HQ to the shops. Rather, those working in the shops still enjoyed significant discretion, explained Miguel. In fact, the innovation of his organization in his view, was precisely to “reverse... the arrow”, so that the epicentre for decision-making shifted from client and shop to designer [based in HQ], instead of designer [HQ] to shop [points of sale]. In this way shops freely chose which items to sell, based on client preference and feedback.

In one of Spain’s largest food retailers, recruitment practices also differed significantly between headquarters and the points of sale. Marina, the Director of HR since 2007, who had been working at the organization for 23 years, explained that they recruited for three profiles: offices, stores and warehouses. Over 75% of recruitments were for stores, where a medium level of education was required. In warehouses, a low level of education was required, whereas in offices, the qualification level was “medium-high”. These effectively constituted three different career tracks within the Company, each

¹⁷³ As in sports teams

with very different educational requirements. Except for managerial positions, a university degree was generally not required in warehouses or in shops.

Antonio also explained that whereas all HQ positions required university degrees, at the points of sale a university degree was not a requirement. The only point in which university degrees were specified in vacancies for positions at the points of sale was at the managerial level, where if the company resorted to an external recruitment process, it did specify university credentials. That said the company's preference was for internal recruitment, according to Antonio, even for management positions. In the rare case the company did resort to external recruitment, the university degree, though stipulated, was not a requirement carved in stone, as was the case with HQ positions. Instead work experience in the sector could compensate for the lack of university credentials.

The types of contracts offered to graduates also differed between HQ and the points of sale in the retail companies surveyed. Whereas in HQ all recruitments were for "core" full-time jobs on permanent contracts, in the points of sale short-term contracts were also employed, particularly to hire seasonal workers to reinforce existing staff at peak seasons. Antonio explained:

Antonio [Catering retailer]: Normally the contracts that we do are permanent when the post we are covering is permanent. Here in Spain we have high seasonality. If it's a post to cover the seasonality of summer, they are short-term contracts.

Juan, a Senior Executive (Head of Digital) who had been working at the same company as Marina for over 22 years, explained:

Juan [Food retailer]: In the red de tiendas [points of sale], we have a productivity level that is very high. When there is an increase in sales, we never recruit a full-time staff [members]. We recruit part-timers. That's why there are many part-timers.

Working hours also differed between the central offices and the points of sale. Whereas in the central offices graduates were recruited to work full-time, there was more flexibility in the points of sale. According to Marina:

Marina [Food retailer]: In offices, almost 100% of employees work full-time, unless they are people who have requested to work part-time for personal reasons... In stores and warehouses, there is more diversity, depending on the necessities of the post, depending on the opening hours of the store.

In the fashion retailer surveyed in this study, part-time work was also more common in the outlets. For these opportunities, university graduates who wished to combine studies with work were ideal, explained Miguel. Maria explained that employees were initially recruited for 20 hours a week as part-time shop assistants. After a short stint as part-time shop assistants, individuals were then eligible to apply to become full-time shop assistants, if they wished.

Skills required also differed depending on whether the vacancy was for central office or the points of sale. Antonio explained that whereas in HQ the Company required graduate skills, as well as English, in the points of sale the skills required were very different. He described the competencies required at the points of sale as follows:

Antonio [Catering retailer]: We look for people with passion in their work, people who are open, people who set the pace, people who know what they need to do in each moment, be reliable, and keep it simple... It's important that the person has client skills. The smile is

very important. When we interview someone, we have to see that it's not hard for them to smile.

Therefore whereas candidates for HQ positions were normally selected through an external recruitment process, points of sale or outlet positions, on the other hand, were predominantly advertised internally precisely because a different skillset was prized in the outlets. For the latter positions, external recruitment only applied to entry-level posts, after which promotion was based on performance on the job. Antonio described the recruitment process as follows:

Antonio [Catering retailer]: Externally we only recruit people for HQ. Here we have two groups of people, those who are in HQ and those who are in la red de ventas, the sales networks, operations people. In the sales networks, normally the vacancies are covered through internal promotion, vacancies of responsibility, management and leadership, whereas in HQ, yes we resort to the external market when we have vacancies.

Rosa, who worked in the same company as Antonio, explained that whereas for HQ positions, their Company valued vision and innovation over other skills, in the outlets they prized operational, managerial and negotiation skills:

Rosa [Catering retailer]: It's a different level and different approach [for training people in the sales network], because the people in the HQ are supposed to have more vision and innovation. The sales network is more about managing your own outlet, negotiation skills in your own outlet and this kind of thing, not thinking about the company as a whole.

This discrepancy in skill requirements between headquarters and the points of sale reflects the division of labour within the retailers sampled, with the central office(s) focused on product innovation, and the points of sale

focused on sales and customer services. Illustrating this importance of the customer in the outlets, the customer was described in the 2015 Annual Report of the same fashion retailer featured in this study, as “the centre of decision-making”, with the workflow designed with the intent of “focusing on listening to the customer”. This has in turn prompted the company to “reinvent” itself “daily...thanks to a flexible business model based on innovation and teamwork” (p. 33).

In the fashion retailer sampled, employees who were recruited to work in shops were recruited based on skills that were not necessarily acquired through higher education. The visual merchandiser, in charge of the window and in-store display, for instance, Miguel described not as an employee with a specific degree, but as the “shop assistant with the most special touch... it’s difficult to train, it’s like a painter”. Merchandisers kicked off their careers as part-time shop assistants and grew from within, the same career pathway shared by deputy store managers, leading to the top position of store manager.

In warehouses outside of HQ, in contrast, the warehouse manager was required to have a university degree. Whereas in the past, this position was not a graduate position, a degree became a requirement to get the job at the turn of the century. Miguel ascribed educational upgrading to technological advances, which began in 2000. Because of the increase in the number of machines and robots used, the job had become “more sophisticated”, rendering graduate skills, normally acquired through higher education,

indispensable to assume the tasks of this post, according to Miguel. This trend was confirmed in the World Economic Forum's Future of Work Report (2016), which pointed to a shift toward more high-skilled technicians and engineers to design and manage the integration of robotics and automation in manufacturing jobs in the future.

Rosa, the Head of Human Resources in the catering retailer surveyed, also ascribed graduatisation of posts in HQ to technological advances. According to Rosa, non-graduates could perform the job one generation ago because they did it manually without using IT. The job itself was also less complex due to the smaller scale of the business then. She explained:

Rosa [Catering retailer]: Before [non-graduates did the job] manually. They didn't have so [many] complex calculations. They didn't have such complex components of the business. It was easier. The business was easier. You didn't need this kind of knowledge.

There were still posts where both non-graduates and graduates performed the same functions in the central office where Rosa worked. These non-graduates, however, were all older employees with more tenure in the company, who compensated for their lack of university studies with years of work experience on the job. Therefore according to Rosa, it was not that they were not able to adequately perform the functions of the job with time, it was just a matter of how much time it took for a graduate versus a non-graduate to adequately perform the required tasks. Rosa cited the example of the company's current Purchasing Specialist at HQ, who had been with the organization 25 years, and had learned how to do the job through work experience on the job itself.

Rosa [Catering retailer]: [She] doesn't have a university degree and she has learned how to do the job...spending 25 years in the company.

The second Purchasing Specialist, however, was a university graduate and had just started working on the same post. The difference, according to Rosa, was that it didn't take the new recruit over 20 years to learn the job on the job. The graduate was instead able to immediately assume the position.

This demand for a completely different set of skills in the outlets is because the nature of the work itself differed radically between the outlets and headquarters, according to Juan, thus necessitating these different skill requirements.

Juan [Food retailer]: The shops are productive animals. The productivity of a [Company] employee in shops is 22,000 or 25,000 Euros per month in sales and this is what we look for in the shops... In shops and logistics, this is more like the army. There is the soldier, the sergeant, the lieutenant, and the captain. It's all very hierarchical. In headquarters, there is more collaboration.

In the Company where Juan worked, the number of graduates who worked as cashiers in one of Spain's largest hypermarkets, owned by the same Company, did not constitute a "significant percentage", according to Marina. However, it was more common to have both graduates and non-graduates in managerial positions at this food retailer's points of sale.

When asked what the graduate was able to do more in points of sale positions that were previously the remit of non-graduates, Antonio explained that the graduate's comparative advantage was mostly in terms of time needed to learn the tasks of the job, which in turn made promotion easier and more likely. According to Antonio:

Antonio [Catering retailer]: If we ask for a degree, it's because we understand that a graduate has a superior learning capacity and [a] capacity to assimilate concepts. But it's not indispensable... When the recruitment is for a post that we could not cover internally and we are externally recruiting, we put the requirement of a university degree because it allows us to choose between qualified people.

Bayo-Moriones and Ortín-Ángel (2006) in their survey of Spanish manufacturing firms found that the latter particularly tended to favor internal promotion over external recruitment of blue-collar workers as supervisors and technicians when they had sufficiently invested in evaluating their employees' skills. They also showed that firms tended to opt for internal recruitment and promotion from within when they were looking for specific human capital, normally acquired through tenure with the firm. In the case of Antonio's organization, the company traditionally also favored the recruitment and promotion of internal hires, valuing knowledge acquired on the job over educational credentials. However, with the expansion in higher education and the ready availability of graduates, the company had become more open to external recruitment as well.

Mason (1995) reported that employers in the financial services industry in the UK (Mason, 1995) had also adjusted their hiring requirements in view of "the relative lack of well-qualified 18 year olds entering the labour market" compared to one generation ago and before HE massification. In the same vein, the graduate ability to learn faster reported by Antonio, may also reflect the same dwindling quality of non-university graduates as compared to one generation ago before the proliferation in HE enrolments in Spain.

If the increase in graduate employment in non-graduate jobs at the points of sale was not expected to “transform industrial organization” (quoted in Keep and Mayhew, 1996), then graduate skills will remain underutilised. With retailers adopting an economies of scale strategy, however, where they mass distribute standardised product to the widest market possible, job upgrading is unlikely to take place at the points of sale. Recruiting graduates to positions where they are unable to utilise their skills on the job will, therefore, likely put graduates at greater risk of not using their skills the future, possibly culminating in skill atrophy (Keep and Mayhew, 1996). This is particularly problematic when graduate employment in traditionally non-graduate jobs, in which graduates are both overeducated and overskilled, has been documented in the literature to be associated with lower job satisfaction (Allen and Van der Velden, 2001), creating both frustrated expectations and demotivation among graduates. Both the private and social returns to education are thereby compromised in the interest of employers.

This increasing trend of recruiting graduates for traditionally non-graduate jobs (see Table 2) led to a steady increase in the share of graduates in medium and low-skilled jobs in the retail sector in Spain, with graduates “compensating-albeit rather expensively for deficiencies” (Mason, 1995) in post-secondary non-tertiary (*bachillerato*) and tertiary professional (*formación profesional*) training. Illustrating these deficiencies, Dolado et al. (2000) drawing on European Community Household Panel data, found that the majority (75%) of tertiary educated graduates in clerical and administrative

occupations self-reported being overqualified, defined as overskilled using this thesis's own definitions, to do the job, whereas the majority of non-graduates reported being underqualified. These findings confirmed managers' perceptions that graduates were indeed more agile learners in the workplace who more seamlessly assumed medium and low-skilled occupations, which did not require their graduate skills, than did their non-graduate counterparts (Mason, 1995).

Even though some of the employers interviewed claimed it was the increased complexity of the tasks at hand that underpinned their decision to upgrade educational requirements for all HQ posts, by these employers' own admission, another key variable that culminated in the graduatisation of these posts was precisely the increase in the supply of graduates itself. At the Company where Rosa was employed, for example, only candidates with a university degree were considered for positions in HQ. As in the case of retail banking, FP graduates had been crowded out from the eligible pool of candidates by the proliferation of university graduates competing for scarce high-skilled jobs within these companies. Candidates with university degrees further competed against one another, so that the candidate with more titles or more signals often made headway in the queue for high-skilled jobs.

According to Rosa:

Rosa [Catering retailer]: FP, no it's not considered. Because we want university degrees...In HQ not only do they have a university degree, most of the people here have a master's degree also, apart from the university degree and many external courses, superior courses to improve their professional profile. A university degree is required. The other requirements are a plus.

Given the choice between an undergraduate and a post-graduate, with otherwise similar credentials, her company would also hire the post-graduate, attested Rosa. Graduates themselves were well aware of the comparative disadvantage of an FP vis-à-vis a university degree. According to Maria who occupied the post of Content Manager in the HQ of the food retailer featured:

Maria [Food retailer]: The market in Spain is very very saturated... Large companies at the national and international level look for people with university degrees for jobs... I think it's more about the image of the company. If the company has an array of people working, and they're all graduates or engineers, it gives confidence to the suppliers with whom they work, or to the clients that they attend to. It's more image than practicality.

Career trajectory

Approximately half of commercial representatives and heads of product departments in the fashion retailer sampled originally started working in the shops because “[the retailer] considers that the shop floor produces high levels of potential, talent and awareness in identifying what its customers want”, Miguel explained. It was this knowledge of the client and the company itself that his organization prioritized over academic credentials. To this end, the fashion retailer introduced two initiatives in recent years to detect and promote internal talent within the organization. As a result of one of these programmes introduced in 2011, about 16% of shop employees across the global jumped up the ranks to join product or central services teams. In Spain specifically, though, promotion was slower due to the specificities of the Spanish labour market and employment structure. Maria explained:

Maria [Fashion retailer]: Fourteen years ago, people were promoted very quickly a. because we were opening shops like mad so there was a lot of opportunities for promotion; b. we're talking about [a] very active job market ... Now the process is a lot longer because the job market, as you know, is not good and we're not opening stores in Spain like we used to.

This made promotion and transition between shop and central office difficult though not impossible. Andrea, a 23-year-old graduate in industrial design and product development engineering, started working as shop assistant in the same fashion retailer as Maria during her final year at University. After about 15 months as shop assistant, she landed her current post as Product Manager in the central office. Andrea described her recruitment process as follows:

Andrea [Fashion retailer]: When I started, immediately I had the opportunity to do interviews for different posts. The minute you get into the shop, this is your means of communications. Within two to three months of starting, they [HR] got in touch with me [to apply for different posts].

Andrea earned around 1,500 Euros per month, “because the leap from shop to HQ is big”, and so those who made the leap received lower salaries than those who came from other enterprises. In the shop in which Andrea had been previously working, described by her as a “top store” in the Northern City of San Sebastian, everyone had a university degree. Andrea recounted they were about thirty women, and all new employees were required to have a degree and speak English. Only the older shop personnel did not have a university degree. Even though on paper these new recruits were not expected to stay as shop assistants, the realities of the Spanish labour

market made promotion opportunities limited though not impossible. Andrea reported another of her colleagues from the shop in San Sebastian also transitioning to HQ. But despite this transition, Andrea, like Maria, believed the transition to store manager in Spain was much longer and not “that common”, and that to HQ rarer still. The store manager in San Sebastian, for instance, had been store manager for “a lot of years”, by Andrea’s own admission.

In case of the reverse, where a graduate was placed in a non-graduate job in the points of sale, it was usually students who worked for the company as they were pursuing university studies, and who continued with their job after graduation. Employers positively regarded university degrees, which in their opinion increased the probability of promotion to managerial positions at the operational level. Rosa explained:

Rosa [Catering retailer]: Yes [there are graduates who work in the outlets] but it’s not a requirement... Maybe 10 out of 800 are graduates... If you have a university degree it’s easier for you to be promoted within the company, because you can learn faster and you have some basic knowledge that can help you to be promoted.

The increase in the number of graduates working as shop assistants, suggests graduates were displacing non-graduate shop assistants, without their receiving a graduate wage premium by sampled graduates’ own accounts, nor there being any change in the skill content of the job to merit educational upgrading. Instead this chapter argues that employers in the retail trade sector have been recruiting their surplus queue of graduates to non-graduates jobs, and using this period as a “screening” mechanism, at a time

when HE expansion has “reduced the information conveyed by the particular credentials involved” (Hirsch, 1977, p. 44).

The surplus of graduates has enabled employers to introduce what Mason (1995) referred to as a “multi-tier recruitment strategy”, where some graduates join “mainstream” graduate jobs, whereas the surplus are recruited on “lower tier” non-graduate entry positions where a university degree is not formally required. These “lower tier” graduates commence their career in part-time positions as shop assistants or in stores, with the career prospect of becoming store manager one day. It is only those of them who demonstrate competencies on the job who are further screened, including through informal meetings with employers from HQ who visit the shops and meet with selected teams of them. As per Andrea’s testimony, it is from this selected pool that both she and her colleague were chosen. In this way employing graduates in non-graduate jobs proves an inexpensive way for employers to screen potential applicants for their graduate jobs, without having to rely on credentials alone, at a time when the educational signal has increasingly become more common.

Despite this general trend, exceptional cases, where non-graduates made the transition from points of sale to HQ, were not unheard of. Antonio explained:

Antonio [Catering retailer]: Sometimes the fact of being a graduate is not an indispensable requirement [for transition from points of sale to HQ]. If a person shows skills, good management of information, good knowledge of the company, a good attitude, they can compensate for the absence of theoretical training.

Juan also related a similar story regarding the Director of Logistic Development at the food retailer for whom he worked. She also made the transition from the retail outlet to HQ. She had started working in a shop in 1998. She was studying engineering at the time, whilst working part-time to pay for her studies. From a job in one of the shops, she had climbed the career ladder within the Company to become Director of Logistic Development. This kind of promotion by Juan's own admission, however, "rarely happens. There is much more talent in shops and warehouses, that is lost. I think there's a lot of turnover. Today with this unemployment, there is lower turnover. It's very complicated".

Generally such transitions from points of sale to HQ were one-off stories that were the exception to the rule and not part of the typical trajectory within either company sampled. Even in the literature, Alba-Ramírez's somewhat positive perception of overeducation as beneficial to youths in terms of upward career mobility, was not unanimously corroborated. Drawing on data from the Survey on Class Structure, Class Consciousness and Class Biography,¹⁷⁴ Malo and García-Serrano (2004) used a multinomial logistic model to estimate the effects of skills mismatch on the probability of being promoted. Contrary to the findings of Alba-Ramírez, Malo and García-Serrano found that overeducation was negatively related to the probability of being promoted. Conversely, their findings revealed a positive influence of undereducation on the probability of being promoted.

¹⁷⁴ *Encuesta de Estructura, Conciencia y Biografía de Clase*

Training

Given the surplus number of graduates queuing for jobs, employers clearly explained they were no longer prepared to conduct generic training as in the past. Employees were instead assumed to come into the company with a certain level of human capital, after which the company trained on specific skills required for the job but not general training. With the oversupply of graduates in the labour market, generic training was no longer deemed necessary. According to Marina:

Marina [Food retailer]: In order to work in human resources and work in recruitment, you must have studied how it's done. You can teach someone, but they will take much more time than if you recruit someone who's already been trained.

In Rosa's opinion, the background knowledge necessary to perform the tasks of the job had increased and became more complex, barring a non-graduate from adequately performing the tasks of the job without the necessary prior training:

Rosa [Catering retailer]: Now we are a big company, and we need people to know these kinds of things before starting in the company. Because we don't have too much time to train them in this kind of thing. That should be known by then, before. They have training, but now they have the training in skills not in knowledge.

This reluctance on the part of employers to train graduates "in knowledge", or generic training, in turn increasing their "potential training costs" is echoed in the literature, with a clear correlation between overqualification and on-the-job training. Using the Survey on Class Structure, Class Consciousness and Class Biography, Beneito et al. (1996) found that

being overeducated on the job in Spain, in fact, reduced the likelihood of receiving on-the-job training. Consistent with job competition theory, they explained that firms might have a preference for overeducated workers, the recruitment of the latter allowing them to effectively save on training costs. Confirming trends suggested in this case study, Dolado, Felgeuroso and Jimeno (2000) similarly found that crowding out has negatively impacted firm provision of on-the-job training for less educated employees, as firms could save on-the-job training costs through the recruitment of higher-educated workers instead.

In line with Beneito et al. (1996) and Dolado et al. (2000), Malo and García-Serrano (2004) also observed that contrary to much of the literature on career mobility, there was evidence suggesting a “sort of substitution between formal education and specific job training”. To this end, undereducated workers compensated less years of formal schooling with on-the-job training¹⁷⁵ (Malo and García-Serrano, 2004; Dolado, 2000). As graduates flocked to fill the shoes of non-graduates at the points of sale, employers became increasingly more reluctant to provide the necessary on-the-job training to bring non-graduates up to speed.

Several authors have, therefore, argued that graduate underemployment, or overeducation, has been one of the chief drivers for

¹⁷⁵ These findings are corroborated by the macro observation by Dolado et al (2013), that Spanish firms generally sponsored much less on-the-job training across age groups than in countries like the UK, Germany and the Netherlands.

high youth unemployment of the less educated in Spain (Alba-Ramirez and Blasquez, 2003; García Serrano and Malo; 1996; Dolado and al., 2000; Dolado et al., 2013). In addition to wage differentials, Dolado et al. (2000) talked about “unemployment differentials by educational levels”, with higher educated workers in fact crowding out lower educated workers. As a result, those with higher educational attainment levels were undertaking jobs previously the preserve of less-educated workers, replacing the latter in the production process (Ramirez & Blasquez, 2003; Marzo-Navarro, 2007; Budri’aa and Moro-Egidob, 2008), as suggested in this case study.

In this way, and as per the job-competition model, only individuals whose individual characteristics successfully allowed them to reach the front of the labour queue and land an entry-level post were subsequently provided a “training slot” (Thurow, 1975, p. 76). In line with these developments, at the fashion retailer featured in this study, employees learned the job on the job, beginning their career as shop assistants, and then moving through the ranks to merchandiser, or deputy manager of a store, and eventually store manager. Some graduates, like Thais, valued the opportunity of starting out as shop assistant, believing that the best managers took that route. According to Thais:

Thais [Fashion retailer]: I think I did my master’s degree in [the Company]. Because what they explained to us in university is just a small thing compared to what they teach us in [the Company]... For me the best managers are the ones who started at the beginning [as shop assistants].

Pablo, a 33-year-old law graduate who had been working at the same fashion retailer as Thais for almost ten years, also described the organization

as “a bit like a university”. He started out as an intern in HQ, rose through the ranks to become director of logistics, and was at the time of interview employed in the International Department. He described his tenure at the company as one of “continuous learning”, believing his on-the-job learning would help him advance in his career in the future, within the company or outside.

Both Pablo and Thais’s descriptions of the learning involved on their jobs confirmed the job competition prediction that “most cognitive job skills” were in fact learned, not “exogenously” in preparation for entry into the labour market, but on the job itself through formal and informal on-the-job training (Thurow, 1975, p. 76). In presenting the job-competition model, Thurow argued that the market was not a “bidding market” for selling educational credentials and other qualifications, but a “training market”, where pending one’s “relative position” in the queue for jobs and their respective availability, one was allocated a “training slot” (Ibid, p. 76). In contexts like Spain, where the availability of high skill jobs was scarce relative to the number of graduates in the labour market, the relative position of graduates in the queue for jobs was based on individual characteristics, particularly educational credentials. In line with the job-competition model, only those graduates with the highest credentials like Thais and Pablo, then advanced in the queue for jobs, and were subsequently “trained into the productivity” of the job they came to assume (Ibid, p. 77).

Educational choices and “adaptive preferences”

Fred Hirsch (1977) described education as both “a filter as well as a factory”, (p. 48) in the sense that individuals made their educational choices based on other people’s choices. Normally the individuals they based their decisions upon were the generation preceding them, holding the same careers they aspired to. According to Hirsch, the problem with this decision-making model was that it only took into account the educational decisions and labour market results of the previous generation, without accounting for the educational choices of current labour market entrants. In this way, individuals fell into the trap of making their educational choices based on the labour market outcomes of the generation preceding them, without realizing that their own outcomes would in turn also be different, precisely because everybody had pursued the same labour market strategies at the same time (Hirsch 1977, p. 39). Consequently, the net result was no improvement in anyone’s “relative position in the labour queue” at all, as all workers had invested in precisely the same “background characteristics” or educational strategies (Thurow 1975, p. 76).

In response to grim labour market realities, compounded by the financial crisis, graduates were increasingly taking up further studies in order to distinguish themselves in the “tournament” for jobs (Brown et al., 2011). This expansion in supply led to what is informally referred to as *titulitis* in Spain, a term describing the accumulation of credentials and titles by graduates in an effort to make headway in the labour market.

In interviews with graduates, geographical proximity emerged as one of the key decisive factors in their selecting a university. Laura, deputy store manager in a shop at the fashion retailer featured, and Esther, a Technical Officer at the catering retailer, both explained they had chosen the Universities of La Coruña and Malaga, respectively, because these were located in the cities in which they were born. Fathima, who also worked as a Technical Officer at the same company, similarly explained that she had completed her undergraduate degree in the Ciudad Real also due to proximity. Andrea chose to study engineering at Saint Sebastian University, because she came from there. Sandra, another Technical Officer at the catering retailer featured, likewise chose Carlos III University because it was closest to her place of residence. According to Sandra:

Sandra [Catering retailer]: [I chose Carlos III de Madrid] mainly because it's the university that's closest to my house. It is also prestigious; it's one of the best. But basically at first it was because it was out of proximity, because I am from Toledo.

These educational choices guided by resistance to geographic mobility were echoed in the workplace, where employers also listed lack of geographic mobility as one of the key hurdles to growth within the company.

As Antonio explained:

Antonio [Catering retailer]: Many times, we have very good people, but they don't have geographic mobility for personal and family reasons, they are stuck in their posts.

Some retail companies, including the fashion retailer sampled, subsequently also targeted their recruitment efforts to local universities. Pablo, who worked in the International Department of that same fashion

retailer, commented that for the Company, the two local universities in fact served like a training facility for the Company. He himself was the product of the two, having been born in La Coruña, studied at the local university, and been working since his graduation at the same company.

When asked about their choice of major, as in the retail-banking sector, graduates in retail companies mentioned better labour market outcomes associated with a degree in business administration or related fields. These findings were also corroborated in the annual report of the Universidad Complutense de Madrid (UCM), which surveyed the labour market outcomes of its graduates. According to this Report, the majority of graduates who majored in business administration, economics or law, listed better labour market outcomes and “finding a good job”, as one of the leading drivers for their selecting their fields of study (UCM, 2009).

On the job, however, Pablo did not believe his degree in law was a “decisive factor” in his recruitment. He explained that a law degree in Spain was quite common, since “Anyone can get it...There are too many people who have this degree for it to be a factor that benefits you over others”. These findings are in line with Hirsch’s depiction of education as a “positional good” whose value and signal diminishes as more people acquire it. This would, in turn, require from graduates more “individual effort and resources... to achieve the same result” or the same graduate labour market capabilities in the workplace (1977, p. 53).

When asked about the usefulness of their educational degrees for their jobs, Alejandra and Fatima, both graduates who worked in accounting and finance in the head office of the catering retailer featured, generally expressed a good fit between their educational background and work experience. They reported using the theoretical knowledge acquired through their university studies to complete the tasks required on their jobs. These findings were in line with Mason's (2002) study of graduate recruitment trends in the retailing, computer services and transport and communications industries in the UK. According to Mason, only head offices had updated job content so as to utilise graduate skills, whereas outside the head offices, jobs had not been substantively updated so as to utilise graduate skills.

Other graduates simply pointed to the necessary signal of the graduate degree in the labour market. According to Sandra, who worked in the business administration department at the same catering retailer:

Sandra [Catering retailer]: With the crisis there is, it is very hard to get a job as is. Without a university degree, it would be impossible to get a job. It's a form of distinction.

These graduate first-person accounts echoed Brown et al.'s (2011) prediction that with the massification of higher education, individuals will start making their educational choices in "the form of a defensive expenditure" (p. 12), with education becoming a "defensive necessity" (Thurow, 1975, p. 96). Fatima shared Sandra's perception that without a university degree, labour market outcomes were slim, if not impossible. Accordingly, Fatima believed

an undergraduate degree was a requirement, whereas the master's degree was the only way of distinguishing oneself in the labour market:

Fatima [Catering retailer]: Today, the undergraduate is the base... and is required for all posts. It's difficult for a post not to ask for a university education... The masters could serve you to differentiate you for posts, which ask for something more specific, more specialised.

Laura, a technical architecture graduate, started working as a shop assistant at the fashion retailer during her final year at university. She was offered the post of sub-director of the shop upon graduation, an offer Laura took with the aspiration of joining the architecture team at HQ in the future. Laura explained that whereas the majority of older shop assistants did not have a university degree, today out of 50 shop assistants occupying this post, about 25 had university credentials. A shop assistant earned around a 1,000 Euros per month, sometimes even less; whereas a sub-director of a shop earned around 1,500 Euros, she reported. Laura rationalised her career choices by saying, "I think at some point you get tired of looking for a job in your area of studies, and you decide to accept any job that would give you financial independence".

When Sara, a business graduate from ICADE with a Master's degree from ESIC, started her internship at the catering retailer featured, she already had three years of professional work experience in IT consulting. At the time of interview, Sara had just started a permanent contract with the Company, after a paid internship that lasted a year and a half. With two master's degrees, Sara was clearly overqualified for her post at the purchasing department, which required an undergraduate but not a master's degree.

When asked why she had accepted an internship after having finished a master's degree with more than three years of professional experience in IT consulting, Sara explained:

Sara [Catering retailer]: Right now I went down to go up again...It's very common right now [to recruit interns who have a master's degree] with the situation. It was not common before, it was illegal. Before the crisis you couldn't do internship if you had more than three years professional experience... [But] I saw there was no other way...

Demonstrating “adaptive preferences” where individuals adapt their preferences to the limits imposed by their own realities (Nussbaum, 2011, p. 83), Sara continued to rationalize that her situation was not unique to her, but rather happened to “many people” with master's degrees. Some were even older than she, and with more years of work experience. Some even owned their own houses and had to deal with many more expenses. In this way, Sara's case was illustrative of relative deprivation theory in reverse, where she was more satisfied with her job, and less likely to quit, precisely because others with similar educational credentials were in the same boat, or one even worse off in comparison (McKee-Ryan and Harvey, 2011).

Sara's rationale echoed Sicherman and Galor's (1990) hypothesis that graduates took up jobs for which they were overskilled, if they considered those jobs a stepping-stone to securing higher-level jobs. That same stepping-stone, Brown, Lauder and Ashton (2011) described as the “opportunity trap”, where graduates instrumentally took up activities in pursuit of their actual career goals, the primary difference between the two being that “the opportunity bargain has not extended individual freedom” (p. 12). The

reason individual freedoms, or graduate labour market capabilities, were not expanded with further education, was precisely because everyone had adopted more schooling as the primary strategy to move forward professionally. Graduate adoption of the same schooling strategies in turn merely lengthened the queue for graduate jobs. Employers responded by diverting some of this surplus queue of graduates to traditionally non-graduate jobs in warehouses, shops and stores in the three retail companies surveyed.

Sara justified her taking up this job due to her own lack of work experience in the sector and the state of the labour market in Spain. According to Sara companies were clearly taking advantage of the economic crisis, and the scarcity of high-skilled jobs available to graduates, in order to continuously raise the bar for entry-level employees. As in the retail banking sector, paid internships in the retail sector were also much more common than in the past, which in turn only served to stall the school-to-work transition process even further:

Sara [Catering retailer]: Companies are taking advantage of the economic crisis... I would do the same if I were the company. But I'm not. Companies are asking for people very well educated, very well prepared, but they ... are not really paying the education they are asking for. Since there are so many people that are not working, then people like me accept these conditions.

When asked to rate her own level of satisfaction with her salary from a range of one to six, six being fully satisfied, Sara gave it a mere two. She explained she was still receiving the salary of an intern, multiplied by three, but essentially still an intern-level salary. Sara's acceptance of a job where

she believed the wages were beneath her educational attainment levels was not unique to her. The UCM study (2009) revealed that all graduates in business administration and economics surveyed, when given the choice between unemployment and employment with salaries beneath their expectations, unanimously opted for the latter over the former as well.

Sara readily conceded that promotion possibilities within the firm were slim, and if she wanted to grow, she had to look outside the company for other opportunities. According to Sara:

Sara [Catering retailer]: Promotion is not that easy. We are only three. One of them has to leave the company or something in order to be promoted... I don't think there are many possibilities. I [therefore] see my future outside [the firm].

When asked if her employers provided any incentives to motivate and retain her on the post, Sara explained she was given the lead on a company project, a strategy that her employers utilised to incentivize staff. The project she worked on involved coordination between different departments including marketing, the department that specialised in recipes and her own department, purchasing. Sara conceded her employers did recognise and strive to utilise her skills. In her opinion, this was also because the work was overwhelming and so the tasks had to be shared.

Sonia, who worked in the same company as Sara, was both horizontally and vertically mismatched on her job, yet she found her job both challenging and satisfying. Sonia started working in the outlets of the same catering retailer, when she was still pursuing her undergraduate studies. From starting as a waitress in one of their restaurants 1996, Sonia became District

Director for Airports a decade later. At the time of interview, in addition to Airports, Sonia also managed a new restaurant that specifically catered to the employees of one of Spain's largest private telecommunications companies, with fifteen thousand customers estimated per day.

Sonia's career kicked off shortly upon graduation, when she was summoned by her former boss to work as manager of one of the restaurants owned by the catering retailer featured in this study. She had just returned from a six-month stint at the University of Michigan-Ann Arbor in the US on a soccer scholarship, where she had studied child psychology, in which she also had a master's degree. From managing this one restaurant, Sonia came to manage several more, moving from the South of Spain, to Santander in the North, Bilbao, and eventually Madrid. In this way, Sonia became specialised in setting up new restaurants.

Sonia's day-to-day involved meeting with restaurant managers where they discussed costs, employees' training and development and any impending problems the manager may be facing. Sonia was also part of the Managing Committee of the company, and reported back to the Board with respect to any pending issues. Sonia explained:

Sonia [Catering retailer]: Now I prefer this work, because this is my work. For what? Because I am important here. [The Company] gave me all the training, gave me many responsibilities, and I like it... I started here by coincidence. I was there in 1996 and now it's 2015.

Sonia's two other colleagues who were also District Directors did not have a university degree. When asked how relevant her university degree was to her job, Sonia conceded a university degree was not necessary for her

job, with experience on the job being more important in operations. Sonia did believe she had the skills to do a more demanding job, but not because of her academic qualifications but as a result of her work experience. When asked about her level of satisfaction with the salary she received, Sonia gave a 3.5 rating, compared to an over-all rating of five for the kind of work she did, and over-all satisfaction on the job.

The varying levels of satisfaction that Sonia and Sara expressed vis-à-vis their jobs suggests that the link between horizontal and vertical mismatch and underemployment is not straightforward. Underemployment seems to be a “multidimensional” process that is not limited to the education required to get the job, and skills required to do the job. Rather as McKee-Ryan and Harvey (2011) suggested, underemployment also involves a self-assessment of relative payment compared to one’s own former job or compared to others with similar skill levels. It entails freedom from underemployment, as well as congruence between field of study and field of employment. Freedom from underemployment is also contingent upon subjectively not feeling overqualified, or relatively deprived. This may help explain why even though Sonia was horizontally and vertically mismatched for her post, she still expressed satisfaction with the job, whereas Sara clearly felt underemployed.

Education and skill mismatch and frustrated expectations

Because the opportunity cost of pursuing further education in Spain was relatively lower than for young people in some other countries where the public university system was not as readily accessible, this made university

studies even more of a requirement by employers. Consequently, graduate labour market outcomes did not improve, as employers were well aware of the strategies followed by graduates, as well as the underlying rationale driving their decision-making. According to Maria:

Maria [Fashion retailer]: Basically when they [graduates] finished their university degree, they couldn't find the right job so they continued to study or went abroad or decided to do something else while they find the right job. So I don't think post-graduate education makes them overqualified.

Maria's viewpoint echoed Hirsch's prediction of a "case of everyone in the crowd standing on tiptoe and no one getting a better view" (p. 49). Initially, and before higher education expansion, graduates did "gain a better view by standing on tiptoe", and distinguishing themselves through their educational credentials. This decision on the part of graduates to pursue further studies "forced [others] to follow" suit, if they wanted to "keep their position" or continue to access graduate jobs. However, exactly in line with Hirsch's prognosis, "if all do follow," and everyone adopts the strategy of accumulating educational signals, "everyone expends more resources and ends up with the same position" (p. 49). This seemed to summarize the situation in Spain, where individuals pursued advanced graduate studies in the hopes of winning the "job tournament". However, with almost 33%¹⁷⁶ of the working-age population deciding to pursue tertiary education, without a commensurate expansion in the share of high-skilled jobs, graduates had effectively collectively contributed to making the graduate labour queue much longer.

¹⁷⁶ In 2012.

Furthermore employers had no qualms about the instrumentalist approach with which graduates were increasingly approaching higher education.

According to Rosa:

Rosa [Catering retailer]: In Spain the last three four years we were in crisis so people preferred to study than to stay at home doing nothing. So it was the time where the people started to study [for a] master's [degree] and any other kind of courses that could improve their professional profile, to get a better job, and just not to stay at home doing nothing.

This led employers sampled, in turn, to raise their own bar in terms of educational requirements. According to Juan:

Juan [Food retailer]: Today [the Company] asks for a higher level of studies than before, because everybody has studies... In Spain there's a very high level of unemployment, particularly among youth, and people are ready to work in places simply to get work experience... There is a share that is more ready to work in posts that are below their level.

Juan's observation perfectly confirmed Fred Hirsch's prediction that graduate "job expectations will ... frequently be frustrated, as the expansion in supply of qualified applicants raises the threshold of necessary credentials" (1977, p. 50).

When graduates came into a post with more skills than was needed to do the job, it also created expectations of faster progression, as was widely recognized by employers. This rendered it a challenge for companies to try to manage graduate expectations and career aspirations. According to Antonio:

Antonio [Catering retailer]: It may be a problem because it could frustrate a highly trained person if the post does not cover all their expectations. Sometimes given the saturation of the labour market, we come across super prepared people, with masters, with a training that is far superior to the actual requirements of the post so it could be a problem, yes.

Marina also associated graduate overeducation, defined as having more education that is needed to get the job, with frustration on the part of graduates. She pointed out that this frustration could backfire on the company as well. That said, Marina boasted her own company's ability to match people with jobs that required their education credentials to get the job and their graduate skills to do the job. According to Marina:

Marina [Food retailer]: We try to find the perfect fit. That the cashier is happy being a cashier. And this happens, when you select not just based on her knowledge, but also her personal profile, and the motivation she has.

If a graduate is recruited for the post of cashier, according to Marina, that graduate "is overqualified", but has decided to take up the job anyway to pay the rent. That graduate will not stay long on that post. "She [the graduate] will not stay. She will get frustrated. And you have a frustrated cashier, and this is noticeable because it will decrease profit, will treat the client worse. This we have very clear. Academic qualification is important but it's not everything", said Marina. "So you have resources that are underutilised, which frustrates the person, and so they look for a different job".

Not all employers, however, readily admitted to the prevalence of overeducation. Marina outright denied the company had a problem of overeducation, arguing instead that her company made every effort to match vacancies with the required educational attainment levels. Marina argued:

Marina [Food retailer]: We don't have this problem [overeducation], because jobs are matched with the required level of education for this job... In [the Company] we optimize very well the educational level they [employees] have and they use it in their job.

Marina explained that to ensure matching, her company only recruited individuals with no education to the position of porter. Cashiers were required to have the minimum years of obligatory schooling. At headquarters, administrative posts were occupied by FP graduates, and not by university graduates. If there were graduates on any of these posts, it was because they had decided to pursue further studies whilst working on the job. According to Marina, “We try that there is no overqualification... Because overqualification demotivates, and we have experienced that... We look for the perfect fit”.

Once graduates were recruited on the post, employers’ primary concern became job performance. Maria explained:

Maria [Fashion retailer]: Once you walk in the door, your CV sort of disappears; it’s up to what you do. If you speak to any of the managers here, nobody knows what you did at University... It’s irrelevant... We have two people doing A and one is better than the other, we don’t know if that person has more qualifications. We don’t go back and look at their CV to see where they did their master’s degree. It’s about what you do everyday.

Overskilling, or having more skills than that required to perform the tasks of the job as defined in this thesis, was in fact welcome by some employers, whereas others complained that overskilling came with the belief that the graduate knew everything. Consequently, according to Rosa, one of the most difficult competencies to find in recent graduates was humility:

Rosa [Catering retailer]: In Spanish it’s humildad, humility. Some of them [graduates] think they know everything. And sometimes this is an obstacle to learn, because you can have a higher level of knowledge from your studies, but you need to know the knowledge of the company and how every department works, also the politics within the company.

When asked whether overeducation and overskilling were positively correlated, Rosa argued that perhaps in 60-70% of the cases the overqualified person was also overskilled. Marina argued that overskilling was a problem that was well recognized within HR and was vigorously addressed so as to pre-empt frustration with it, and make sure these skills were positively harnessed and channelled to the benefit of the company.

Employers interviewed emphasized they did not attach the same importance to subjective self-reports of overskilling, as they did to actual performance on the job. It was the latter rather than subjective self-reports of overskilling that was in their view essential for an employee to be considered for promotion. Promotion, therefore, was contingent not on educational credentials, or subjective reports of overskilling but on “performance and evaluation,” according to Antonio. Juan similarly explained that any incentive provided to employees, ranging from bonuses to promotions, in fact hinged on performance on the job, rather than skills.

Juan [Food retailer]: We're more about performance than skills... There is a system of promotion, which is based on an assessment. We don't only value the performance on the job, but also factors like attitude, empathy, and teamwork.

When asked how they worked to manage the expectations of overskilled graduates, employers reported different strategies, though pay incentives were the least common. At the Catering retailer featured in this study, managers resorted to providing overskilled staff with more challenging tasks such as leading on a project, which in turn gave them more visibility, thus increasing their likelihood of promotion:

Rosa [Catering retailer]: It [overskilling] is not a problem if you can give them the opportunity to develop, to apply this knowledge. We give them this opportunity, because within our management team it's very open to give projects to new graduates, so they don't feel closed by the company.

Benefits of higher education

Even without a “good economic case for further large-scale expansion” of higher education (Keep and Mayhew, 1996), education was valued as an end in itself for the pursuit of non-economic objectives. Maria repeatedly attested to the declining occupational returns to higher education, and particularly questioned the employability of graduates with only a degree and lacking any real world work experience. Yet despite her reservations, Maria explained she would still push her children into university education, as her parents did her.

Maria [Fashion retailer]: I think university is just a very interesting experience. It opens your mind up to lots of things... It completely changes your mind-set. I would definitely encourage my children to go to Madrid, to go to a major city, and [pursue further studies]. Because it's a fantastic experience even if it doesn't get you a job.

This brings us full circle back to the three individual benefits of education outlined by Hirsch (1977), namely the graduate wage premium, work satisfaction on the job and the intrinsic value of pursuing further academic studies in and of itself. Even with increasingly more graduates diverted to non-graduate jobs, higher education may still be valued as an end in itself, as confirmed by Maria. It also becomes a necessary “defensive” investment in labour market structures such as Spain, where the graduate labour queue has surpassed the availability of high-skilled jobs, capable of

utilizing graduate skills. More than distinguishing the graduates, *titulitis* has in this way made distinct the non-graduate, whose lack of a university degree has itself become a more telling signal to employers. This has, in turn, led to the “reduced availability of well-qualified school-leavers seeking employment” (Mason, 2002), since many school-leavers opted for tertiary education instead of employment in the aftermath of HE expansion.

Conclusion

This case study suggests that the expansion of higher education and the emergence of the phenomenon of *titulitis* in the Spanish labour market allowed employers in the retail industry to upgrade their educational requirements beyond the skills needed to do the job. In this way, high-skilled entry-level jobs with a clear career ladder came to be reserved to the select few, with preference for university degrees for headquarters positions in the three retailers surveyed. Since access to these jobs was contingent on both their availability and individual characteristics, most prominently educational credentials (Thurow, 1975), and since the vacancies available were indeed few, employers were given the leverage to upgrade their entry requirements and screening mechanisms. Surplus graduates standing in the labour queue were accordingly diverted to traditionally non-graduate medium-skilled jobs, where they were further screened. Whereas a few graduates in the three retailers surveyed were then able to take up a graduate job that required both their educational credentials and skills to do the job, the rest were victim to the occupational structure and general shortage of graduate jobs relative to demand.

This has “lengthen[ed] the obstacle course” for graduates to assume graduate entry posts and get on the career ladder (Hirsch, 1977). The surplus of graduates not only prompted employers to increase their educational requirements, but also introduced external recruitment at managerial

positions in the points of sale, a practice unheard of one generation ago. Whereas in the past, employers prized experience and tenure on the job over academic credentials, non-graduate internal labour markets were for the first time open to graduates and externally advertised.

Faced with these grim labour market realities, graduates on their part, have used education as their only defence mechanism against unemployment and underemployment in a mounting “job tournament” (Brown et al., 2011). This has led to a vicious cycle where youths seek jobs, find few alternatives, and are then forced back into the academic system, in an attempt to secure a *beca* (paid internship), which is in turn used as a stepping-stone for recruitment. Therefore not surprisingly, some of the graduates surveyed in this study, like Sara, who were well into their late twenties and early thirties, still had to serve as *becarios*, even after having completed an undergraduate degree, and a master’s degree, with a few years of work experience in hand. Others of the same age group had only just started their first stint on a permanent contract, clearly suggesting a declining “skills premium” (Green, 2013) and a delayed university-to-graduate job transition process.

This has exacerbated “skills inequality” or the difference in skill levels between jobs, even among graduates in the same company depending on their job placement. Among the three retailers surveyed, graduates who were recruited to the head office had effectively joined an internal labour market that put them on a secure career trajectory. Graduates who were recruited in the points of sale, on the other hand, were at a clear disadvantage, both in

terms of type of contract and pay, as well as career path. These differences suggest sharp labour market “segmentations” even within the same company for graduates with the same educational levels (Green, 2013, p. 127).

In line with Mason’s (2002) findings for the retail sector in the UK, interviews with employers and graduates alike confirmed overskilling to be more of a problem for the carrier (the graduate) than the receiver (the firm). This case study, therefore, suggests that retailers are less agile in their ability to adapt their production processes to accommodate the availability of a more skilled workforce. Instead the characteristics of the job dominate skills utilization and remuneration, with education playing its most significant role in determining a person’s position in the queue for high-skilled jobs. Once the available vacancies have been filled, the surplus queue of graduates is diverted to non-graduate jobs. Only the most talented graduates are then able to transition from a non-graduate track back into the graduate career trajectory, pending available opportunities.

Chapter 7 | Epilogue

Introduction

Before Gary Becker (1964) introduced the concept of “human capital”, the prevailing economic discourse in industrialised countries continued to regard individual workers as a “homogenous category” (Brown et al., 2011, p. 16). This discourse remained unchanged until well into the second half of the 20th Century when human capital theorists shed light on the role of knowledge and skill, or “human capital”, in enhancing productivity. In this way, “qualitative differences in the productivity of workers” (Ibid, p. 19) were emphasized, with Peter Ducker announcing the advent of the knowledge worker. The knowledge economy thesis rests on the idea that with the proliferation of graduates in the labour market, the structure of the economy itself will change, leading to a parallel shift in demand for high skills. This expectation of the transition into a knowledge economy underpinned expansionary higher education policies in countries all over the world, Spain being no exception.

This thesis has argued that the disproportionate focus on expanding education rather than expanding jobs is because in the inequalities debate, education or deficiencies in individual human capital are easier to address and tackle than structural changes to the economy and job creation. To this end, broadening the evaluative framework from an emphasis on wage premiums to one of increased graduate capabilities in the labour market can help refocus the discussion, challenging the prevalent policy discourse in many industrialised countries that supply would create its own demand.

In Spain, where the employment structure is heavily skewed in favour of medium and low skill occupations, this thesis has shown that this discourse has primarily benefited employers at the expense of sampled university graduates whose “defensive” costs have continued to rise, whilst vocational tertiary graduates have been excluded from some of the key entry-level high-skilled jobs in the retail banking and retail industries. To this end, Chapters 5 and 6 showed that many sampled graduates’ primary recourse to improve their labour market outcomes, given the situation they found themselves in, was to further upgrade their human capital. In this way, the responsibility was left to graduates to attain increasingly higher credentials, in an effort to enhance their own employability (Brown and Hesketh, 2004). As a result, the transition of tertiary graduates from college into their first high-skilled post was prolonged, and tertiary graduate expectations frustrated, as many continued to be held in queue for high-skilled jobs.

This thesis has also shown that even between themselves, tertiary graduates experienced the labour market differently, with both fields of study and educational track significantly influencing their labour market outcomes. University graduates from occupation-specific fields of study such as health and welfare, for example, were significantly more likely to be in employment than social science, business and law graduates. University graduates from the humanities, languages and arts, on the other hand, were significantly less likely to be found in employment relative to their SBL counterparts. Furthermore, university graduates from all fields of study (excluding services)

were significantly more likely to be placed in high-skilled occupations than SBL university graduates.

The results reported in Chapter 4 also show that even among tertiary graduates of the same field of study, graduates from different academic tracks faced entirely different labour market outcomes. For example, whereas university graduates from health and welfare were significantly more likely to be in employment than SBL university graduates, their vocational counterparts in health and welfare were significantly less likely to be employed than their SBL vocational counterparts. Once employed, the odds of a vocational tertiary graduate not being placed in a high-skilled job was more than six times the odds of a university graduate. One explanation for this discrepancy between educational tracks could be due to the prestige associated with university credentials, and the stigma attached to vocational studies. This negative perception of vocational credentials was confirmed during interviews with young graduates and employers in the retail banking and retail sectors in Spain.

Interviews in the retail-banking sector with employers and graduates, in fact, pointed to the effective closure of associate professional, as well as services and sales occupations, to tertiary vocational graduates who would have had the educational requirements to have been recruited for these jobs had educational requirements not been inflated for these occupations. This closure arguably came precisely as a result of HE massification. Consequently, millennials with vocational tertiary degrees and upper

secondary qualifications (*bachillerato*) have been entirely barred from employment within a retail bank branch, including for medium-skilled occupations such as cashier, for which they also would have had the appropriate education, due to the upgrading of educational requirements to get the job. In this way tertiary vocational graduates and non-graduates have effectively been entirely displaced from the job queue for retail banking positions.

Interviews with young graduates employed in both sectors in Spain confirmed graduates were well aware of the negative perception with which employers viewed vocational credentials, and the necessity of a university degree today to secure an entry-level permanent post. It was precisely because of this negative perception of vocational credentials that many of them opted for the university path without giving the vocational track serious thought. These interviews with graduates, reported in Chapters 4 and 5, in fact, showed how university credentials, including advanced academic degrees, became a “defensive necessity” for the majority of the graduates sampled (Thurow, 1975, p. 96). This process was described by Offer (1996) as the “hedonic treadmill”, and by Ainley as “running up a down-escalator” (Ainley, 2016, p. 2), both referring to the attainment of increasingly more credentials in order to assume exactly the same job position that one generation ago did not require these credentials. The rationale is that education, in fact, is a positional good, whose economic importance in the labour market is more in relative than in absolute terms. “These [positional]

goods derive their value from scarcity, and lose it as they become more widely diffused”, Offer warned (p. 10). Richard Freeman (1996), in *The Overeducated American*, similarly stated, “Knowledge is power only if most people do not have it” (p. 197). In the same vein Fred Hirsch explained, “The value to me of my education - the satisfaction I derive from it - depends upon how much education the man ahead of me in the job line has”. To Hirsch, this was in fact “more important than the intrinsic features” of education itself.

The case studies also suggest that in the absence of high-skilled jobs to absorb the increasing supply of graduates, university credentials have lost some of their positional power in Spain. In this way, Spanish graduates became entangled in what Brown et al. (2011) described as the “opportunity trap”, one in which precisely because everyone had adopted the same strategy of pursuing more education “no one secures an advantage” (Brown et al., 2011, p. 12), resulting in “diminishing returns” to higher education (Ibid). Not only were university graduates themselves worse off, but they had made others who had not followed the same strategy also worse off, since increasingly fewer jobs remained available to the latter, at a time when university credentials “appear not as an option, but as pretty much a necessity” (Wolf, 2002, p. 244). Berg (2003) argued that this phenomenon, in turn, effectively “isolate[d]” those with lower educational credentials from the rest of society (p. 60).

Interviews with the majority of graduates employed as commercial managers in retail banks, reported in Chapter 5, suggest underutilization of

their graduate skills, a perception confirmed by some of the employers interviewed. Many of the employers interviewed readily conceded this education upgrading of the post was largely due to the ready supply of graduates than to demand alone. In banks that had introduced a university graduates-only policy, graduates could well find themselves kicking off their banking career as cashiers, before they were eligible to apply for the associate professional post of commercial manager, itself a position that the interviews conducted suggest does not fully utilise graduate skills. Other university graduates may find themselves employed for a probationary period of two years, fully carrying out the tasks of a commercial manager but not receiving full pay or being employed on a permanent contract (depending on performance) for another two years.

Chapter 6 shows how in the retail trade industry the ready supply of graduates has also encouraged employers to prolong the recruitment process in an effort to further screen candidates who had been diverted to jobs that did not require graduate skills due to the sheer surplus of graduates queuing for jobs. This has accentuated the “core-periphery” divide between headquarters and the points of sale in large Spanish retailers, rendering higher education akin to a ticket just to compete for “dwindling core employment” (Ainley, 2016, p. 34). As illustrated in this case study, only core employment provided full-time work for graduates on permanent contracts and with a clear career trajectory within organizations. Consequently, increasingly more university graduates were assuming the position of shop

assistant, a medium-skilled occupation, which underutilises graduate skills, because this was the only entry-point available to them. These graduates at the points of sale were often initially recruited on part-time contracts, and “screened” on the job, before a select few were deemed eligible to apply for core positions. In this way, university graduates’ own transitions from university to graduate employment were extended, becoming “much more prolonged, uncertain and precarious” (Ainley, 2016, p. 111).

Even though the primary task in both the retail banking and retail sector is the sale of products, the chief difference that emerged from interviews with sampled employers in both sectors was in the nature of the product(s) sold and the skills required to see the sale transaction through. Whereas in the retail industry that product was clothes or food items in the retail companies sampled, in retail banking it was financial products and services, including inter alia mortgages, insurance, car and student loans. However, with the increasing foray of Spanish retail banks into the sale of non-financial products including mobile phones and other electronic devices, alongside the increasing provision by large retailers of financial services, the distinction in the skills required to sell across both industries has become increasingly blurred.

Notwithstanding the increasing overlap between the two sectors, employers in the banking sector argued that specialist knowledge and a background in finance is necessary for commercial managers to successfully sell financial products. They ascribed this need for graduates both to the

increasing complexity of the financial products themselves, as well as to the increasing sophistication of clients' financial knowledge. Employers sampled in the retail industry, on the other hand, generally conceded that the sale of retail products, requires less specialist knowledge and more interpersonal and communication skills as the products sold were technically less complex. With the steady decline in brick-and-mortar retail shops, sales jobs in the retail industry were also projected to require more creativity in order to attract customers into these shops given the increasing popularity of online shopping and e-commerce (WEF, 2016). Employers sampled, however, readily admitted that creativity was not an exclusively graduate competency per se.

Reflecting this trend, the World Economic Forum's Future of Jobs Report (2016) pointed to a transition towards "specialized sales representatives". These representatives will be requested to explain oftentimes more complex products due to "the innovative technical nature of the products themselves" and to "new client types" (WEF, 2016, p. 16). In this way, more specialist knowledge is required of sales representatives across industries. It remains doubtful, however, whether this specialist knowledge can be met through firm-specific training alone, or whether the recruitment of graduates is necessary for the delivery of this specialist knowledge. Some graduates interviewed in the banking sector, for example, pointed out that the specific training on each financial product, which banks already offered, provided the knowledge necessary to be able to successfully introduce and sell specific financial products, even without a university degree. This

suggests that firm training on their specific products may be sufficient for the training of “specialized sales representatives”.

Expanding labour market capabilities

In light of the failed graduate “bargain”, this thesis argues that a new evaluative framework is needed, one that puts graduate outcomes at the heart of the evaluation process. In *Development as Freedom* Amartya Sen stated, “human beings are not merely means of production, but also the end of the exercise” (Sen, 1999, p. 296). Evaluating higher education expansion using the human capability approach refocuses the attention to what graduates are able to achieve with more education. This shift is important because as Jane Bryson (2013) argued, “first, we live in societies not just economies; and second, we are more than just a skill set for a workplace”.

This thesis argues that using the capability approach as the evaluative framework for HE expansion refocuses the attention on what graduates are “able to do and be” in the labour market (Sen, 1993), and whether through higher educational credentials graduates are able to expand their labour market freedoms. Using such a framework, the number of universities or the share of graduates in the labour market is no longer relevant in itself, if occupational structures and labour market rigidities fail graduates, as they have indeed failed Spanish graduates, so that in line with Freeman’s prognosis, higher education did become “a 'marginal' investment” rather than a “sure 'guarantee' to relatively high salaries and occupational standing”

(Freeman, 1976, p. 188). As a result, universities effectively lost their positionality as “gatekeepers” (Gutmann, 1999, p. 181) to coveted high-skilled occupations in Spain.

Evaluating the benefits of HE expansion

Applying the HCA to the HE expansion debate would also serve to reemphasize the value of higher education and its benefits, which are “wider than for work” at the individual level and economic growth at the macro level. Some of these benefits are even “external” to the individual (Green and Henseke, 2016).

To this end, the value of certain fields of study, including history, philosophy, theology, literature, and the liberal arts more generally, cannot be understood without broadening the research interest outside the “market model” of higher education (Faust,¹⁷⁷ 2009). At stake in the instrumental approach to higher education that rejects this continued emphasis on the broader value of higher education is the potential undermining of non-professionally focused fields of study, with ramifications not just on critical inquiry, but also on democratic citizenship, imagination and empathy (Nussbaum, 2010; Dewey, 1916). In terms of future research, it will therefore be important to compliment studies on higher education and graduate labour market outcomes, with evidence on the social and individual returns to higher

¹⁷⁷ According to Drew Gilpin Faust, the President of Harvard University, “Human beings need meaning, understanding and perspective as well as jobs. The question should not be whether we can afford to believe in such purposes in these times, but whether we can afford not to”.

education by different fields of study that are not restricted to narrow labour market considerations alone. To quote Green and Henseke (2016), it is “important not to translate concern about over-education automatically into an argument against higher education. To do so would be to neglect the wider purposes of education as a preparation for life and as a potentially lifelong process and the public good character of higher education”.

In this way, the HCA approach would allow for a wider evaluation of HE, including non-pecuniary benefits of HE not just to individuals but to society, through the social returns to education, defined as the social value¹⁷⁸ of the extra output produced net of social cost, in addition to possible externalities in the social and economic spheres. Green and Henseke (2016) argued that “both in academic scholarship and public discourse, [the overeducation debate] is too narrowly focused on the employment effects of higher education”. In a similar vein, the headline of a recent New York Times Opinion Article (16 September 2016) posed the question, “Can you have a good life if you don’t have a good job”?

This brings about the larger question as to why individuals pursue higher education, and whether higher education is in fact pursued with occupational aspirations in mind alone. According to Hirsch (1977), individuals make their educational choices placing different weights on the graduate wage premium, career aspirations and work satisfaction, on the one

¹⁷⁸ This overlooks the unrealised private returns that comprise part of the social return. The argument is that if the causal wage returns from investment were higher than the costs of expansion, some valuable investment is not taking place. In this case, the role of government is to correct whatever market failures are making this the case.

hand, and the intrinsic value of pursuing further academic studies, on the other. In this way, even without access to a high-skilled job, some graduates may have fulfilled their aspirations in pursuing higher education.

This idea challenges the policy approach that evaluates education through the prism of economic returns, regarding a university degree as a mere “commodity that (hopefully) can be exchanged for a job rather than as a liberal education that prepares students for life” (Willmott, 1995 cited in Ball 2013, p. 27). Adam Smith himself argued that the pursuit of further education even for the pin factory worker is valued, with education pursued not just for vocational ends, but simply to “rehumanise them, as a form of civilised entertainment” (Grugulis, 2007, p. 21). In others words, education has a purpose wider than its economic benefits, one that is “dedicated to enhancing the quality of life” (Brown, Lauder & Ashton, 2011, p. 155). To this end, Green (2013) also spoke of the cultural benefits of education that “might be even greater for those not in work”, as the latter may have more leisure time to do more cultural activities (p. 183). This is perhaps even more applicable to the underemployed than the unemployed, as they are more likely to have more of the economic resources to enjoy the latter. This leads Green to the conclusion that the education debate as a whole should reconsider the purposes of education, veering away from “narrowly” channelling education for employment.

Illustrating this point, higher education levels have been positively correlated with longer and healthier lives, more stable marriages and children

with better learning outcomes. In addition to non-pecuniary individual benefits, HE also has other social benefits including lower inclination to commit crime among the more educated, better environmental management, and more informed and engaged citizenry better able to engage in the democratic process, with social returns to higher education in OECD economies estimated at 18% (Green, 2013). In the workplace, HE also has “positive production externalities”, namely the influence of better-educated workers (including through their lower quitting rates, and less likelihood to shirk from job responsibilities etc.) on the behaviour of others in the same workplace (Blundell, Dearden, Meghir and Sianes, 1999).

HE expansion also has positive societal externalities in terms of more equality and a reduction in class antagonism if class differentials are “equalised” through closing the social inequality gap in higher educational outcomes (Erikson and Jonsson 1996, p. 2). A basic premise behind government investment in the provision of subsidized higher education is that a skilled labour force will create the knowledge economy that will pave the way for upward social mobility. In this way, the Government concerns itself with “levelling the playing field means”, so that “those who apply equal degrees of effort end up with equal achievement, regardless of their circumstances” (Roemer, 1998, p. 12). Consequently, looking at differentials in higher educational attainment is important from a policy perspective when studying the expansion of HE, as it is directly linked to the concept of “meritocracy” and social justice in societies. Goldthorpe (1996) stipulated

three conditions for meritocracy including making the provision of positions of power contingent on competence alone, making access to educational opportunity contingent on natural ability as opposed to “social provenance”, and last but not least considering “achievement as the basis of social inequality in industrial society” (Ibid, p. 256).

If higher education no longer leads to equal probability of accessing high-skilled jobs, then this will effectively signal “the end of education as a means of upward mobility in society as a whole”, as Freeman already predicted in 1976. This in turn confirms Wolf’s depiction of policy advocating HE expansion for economic growth as “ill-conceived as a way of helping society’s least advantaged and least successful members” (Wolf, 2002, p. 245).

These individual and social returns to higher education are important in any policy evaluation of HE expansion, knowing that if the signalling model is more faithful to reality, it may imply that the social rate of return to higher education is significantly compromised, since higher education is not changing the marginal product of the worker nor is it increasing labour productivity. Furthermore, it may very well be that it was the better able individual who made the choice to go to university, meaning that ability influenced school choices, more than school choices impacted ability. That said, even if all of the above were to be true, signalling would still allow for a more efficient allocation of workers to jobs, which may in fact impact positively on national income (Borjas, 2010, p. 268).

In addition to providing a broader evaluative framework for HE expansion than Human Capital, the Human Capability Approach like the Job Competition Model, emphasizes the demand side of the labour market. In this way, the emphasis is on “combined capabilities” (Nussbaum, 2011, p. 96), which like the job competition model, and other labour market theories that take into account the demand side in the skills debate, brings to the fore the importance of the socio-economic and political environment in allowing graduates to enter and achieve in the labour market.

Implications for future research

In short, the value-added of introducing the Human Capability Approach (HCA) to any evaluation of HE expansion and to future research in this area is to introduce the normative framework that further education is beneficial to the extent that it provides graduates with the ability to expand their capabilities and attain functionings they prioritize (Alkire, 2008). This leaves it open to graduates to orient the purposes of their educational trajectories for themselves, in line with labour market and cultural functionings they choose to pursue. Using such an evaluative framework would also leave room for the possibility that some graduates may simply want to pursue a liberal education for the sheer joy of the pursuit of knowledge as an end in itself.

In a first step in this direction, this study sought to capture education and skill mismatch, both from employers’ point of view and also as

experienced directly by graduates. In this way the case studies sought to investigate more closely not only hiring trends and skills upgrading in traditionally non-graduate jobs but also the rationale for graduates' educational decisions, their career aspirations and frustrations. Semi-structured interviews with graduates allowed not only for subjective self-reports of overeducation and overskilling, but also for the capturing of first-person graduate accounts of what they felt they have been able to "be and do" in the labour market since graduation (Sen, 1993). In this way, graduates were left the freedom to reflect upon and evaluate their own labour market outcomes and career trajectories. It was clear from these interviews with graduates that they all valued job security, a clear career trajectory, and the utilization of their graduate skills on the job. Many of them felt their skills were underutilised when they were occupying medium-skilled jobs in the retail trade and retail banking industries.

The importance of capturing graduate evaluations of their own labour market outcomes brings about the need in future research to investigate more closely "capability to achieve well-being [in the workplace]" (Green, 2006, p. 14), under the larger rubric of job quality. The question of what constitutes a graduate occupation or "graduateness" has not been sufficiently engaged with in the literature on overeducation, and has been defined differently by different authors (Walker and Zhu, 2005). Some authors have defined graduate occupations as those where the majority occupying these occupations are graduates, and others have used the mean or mode

educational level to derive education required for the job. This thesis has criticized these statistical measures based on the educational attainment levels of those doing the job, as they reflect more accurately education required to get the job than skills needed to do the job. Broad occupational classifications also do not sufficiently address job heterogeneity within occupational groups. The graduate wage premium, on the other hand, though an important indicator of job quality, is also an insufficient indicator alone of graduate skill utilization in the workplace.

Therefore, until future research begins to evaluate graduate labour market outcomes more holistically based on what graduates are “able to do and be” in the labour market, we cannot truly evaluate whether the graduate skills are underutilized on the job. In the same vein, without interviewing graduates themselves, allowing them to rank their own labour market preferences including on job quality, of which education and skill mismatch is but one dimension, we cannot evaluate whether the benefits of university education outweigh its costs for these graduates.

Policy implications

The literature on overeducation in Spain has too narrowly concerned itself with “deficiencies’ in individual human capital, namely education, rather than deficiencies in job creation” (Berg, 2003, p. 9). This has led the “surplus” graduates to “drift down” (Berg, 2003, p. 58), with higher education expansion “left to the mercy of the whims of the global auction” (Brown, Lauder and

Ashton, 2011, pp. 158-9). The purpose of higher education, however, remains not one of “education-for-growth” (Wolf 2002, p. 161). The “quest for economic growth through university expansion” (Ibid, p. 162) can only be accepted, from an economic point of view, if this university expansion, in turn, expands graduate freedoms in the labour market, including freedom from unemployment and labour market mismatch. Furthermore, universities are not subservient to the economy. Broadening the focus, so that the priority is not expanding the economy or servicing the knowledge economy but expanding individual capabilities, including graduate labour market opportunities, will protect against the further instrumentalisation of higher education, entangling graduates even further in the “opportunity trap”.

In countries like Spain, where more than one in four graduates is mismatched or unemployed, and where graduates who are employed in the services sector face prolonged transitions into their first high-skilled entry-level job, occupational drifting down does indeed warrant serious policy concern. It warrants particular policy concern when it is structural, and the demand for skills has not been increasing over time to meet the rapid increase in supply. This study has argued that it is important to study how employers and workers respond to higher education expansion, which is why this thesis encompassed 50 semi-structured in-depth interviews with employers and workers in two service industries in Spain. Though the realities expressed were individual and specific to each employer and graduate interviewed, several patterns did emerge that should be of concern to policy.

The primary policy concern is with the instrumentalisation of education by both employers and graduates alike, a sentiment consistently echoed in both industry studies presented in this thesis. The second policy concern is that of employers being the primary beneficiaries of the current expansionary HE policy in Spain, and graduates and non-graduates alike the primary victims. Both case studies suggest that the expansion of higher education has been the primary driver and the tipping point for the closure of entry-level posts to non-graduates. Graduates, for their part, have been forced to take on board human capital investments that at times are of no intrinsic value to them merely to put their foot in the door and secure an internship at a company. Once they do land a job, evidence from interviews with graduates suggest that the overqualified of them do not, in fact, earn more than their colleagues who have the minimal qualifications required, when indeed they drift down.

As this study has suggested, expanding labour market supply alone in Spain has only served to lengthen the graduate labour queue to the primary benefit of employers interviewed, culminating in frustrated graduate labour market aspirations. Working through public-private partnerships instead, governments can more actively promote collaboration for innovation in order to create demand for high skills, in the spirit of the Spanish Strategy for Science, Technology and Innovation 2012-2020 already underway.

Ultimately, and as Green soberly reminded, “not all jobs can become highly skilled and meaningful and not all people can expect to be lucky enough to gain fulfilment through work” (Green, 2013, p. 183). That said,

even if not all jobs can become high-skilled jobs, more jobs can become so in Spain, where the largest share of jobs have consistently been medium-skilled. Either way, remaining clear on graduate labour market results of different government policies, depending on whether they are only supply oriented or will combine supply and demand strategies, can help orient and clarify graduate expectations. In this way, graduates can make their educational choices more knowingly. Ultimately, until policy concern shifts from expanding higher education to expanding what graduates are able to “do and be” (Sen, 1993), more investment in education will continue to be less for graduates, and subsequently the economy.

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Annexes

Annex 1: Sample letter



Centre on Skills, Knowledge and
Organisational Performance
University of Oxford
Director: Ken Mayhew

Oxford, 26 November

2014

Dear Mr./Ms. X,

We are writing to ask X Bank to help in our research project about the expansion of higher education and labour market outcomes of recent graduates. The particular part of the research for which we are seeking your help will form part of the PhD of Ghia Osseiran, a student at the University of Oxford.

Ghia's research is concerned with Spanish graduates and their experience in the labour market. We would hope to conduct three interviews at your bank: one with another member of senior management preferably not in human resources, one with a graduate employee under the age of 35, and

one with yourself. The interviews will be conducted in English or in Spanish and will each last at most one hour. They would focus on the recruitment of recent university graduates into retail banks like yours and the role these graduates perform once recruited.

This research is jointly supervised by Professor Ken Mayhew and Dr. Craig Holmes, both economists at Oxford University. It is supported by the Oxford Department of Education and has been approved by the internal ethics committee. With your permission, interviews will be audio recorded. Only the three signatories of this letter will be able to identify your individual responses. Access to data will be limited to the three signatories of this letter and data will be stored in a secure encrypted form. All information collected during these interviews will remain confidential and neither you nor your bank will be identifiable in any published documents, including the final doctoral thesis.

If this is acceptable, Ghia plans to be in Spain between ... and ... and would be available to meet with you at a time of your convenience during this period.

Thank you for your time and look forward to hearing back from you.

Sincerely,

Ghia Osseiran

Ken Mayhew

Craig Holmes

Annex 2: Information sheet

Higher Education Expansion and Graduate Labour Market Outcomes in Spain

(ESRC Framework For Research Ethics 2010)

Information Sheet

1. Background and aims of the study

This study investigates the phenomenon of rapid higher education expansion in Spain, looking at the structural and institutional changes in higher education systems and their subsequent effects on educational and skills mismatch since the 1990s. The driving question for the research is: how has the rapid expansion of higher education in Spain changed the ways in which graduate skills are utilised in the workplace? This study employs mixed methods research, incorporating both quantitative and qualitative methods.

The research forms part of the PhD of Ghia Osseiran, a student at the University of Oxford Department of Education. This research is jointly supervised by Professor Ken Mayhew and Dr. Craig Holmes, both economists at Oxford University.

2. Why have I been invited to take part?

The financial sector in Spain, and more specifically retail banks, has been chosen as part of the case study for this research. We would hope to conduct three interviews at your bank: one with a member of senior management preferably not in human resources, one with a graduate employee under the age of 35, and one with the human resource manager/senior officer. The interviews focus on the recruitment of recent university graduates into retail banks like yours and the role these graduates perform once recruited.

You are welcome to ask any questions about the study before deciding whether to participate. Should you agree to be interviewed, you may cancel the interview at any time, or remove any data about your bank from the study, by simply advising us of your decision.

3. What will my participation entail?

Accepting to be interviewed will be considered as informed consent. The interviews will be conducted at the time of your convenience at your offices. Interviews will be conducted in Spanish or in English and will each last at most one hour.

With your permission, interviews will be audio recorded. Only the three signatories of the letter sent to you will be able to identify your individual responses. Access to data will be limited to the three signatories of this letter and data will be stored in a secure encrypted form. All information collected during these interviews will remain confidential and neither you nor your bank will be identifiable in any published documents, including the final doctoral thesis.

4. Will the research be published?

The University of Oxford is committed to the dissemination of its research for the benefit of society and the economy and, in support of this commitment, has established an online archive of research materials. This archive includes digital copies of student theses successfully submitted as part of a University of Oxford postgraduate degree programme. Holding the archive online gives easy access for researchers to the full text of freely available theses, thereby increasing the likely impact and use of that research.

If you agree to participate in this project, the research will be written up as a thesis. On successful submission of the thesis, it will be deposited both in print and online in the University archives, to facilitate its use in future

research. The thesis will be published with open access, and will be made available online.

5. Ethical considerations

This project is supported by the Oxford Department of Education and has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee.

If you have a concern about any aspect of this project, please speak to the relevant researcher:

Ghia Osseiran

E: ghia.osseiran@education.ox.ac.uk

M: +44(0)793 277 2767

& Professor Ken Mayhew

E: ken.mayhew@education.ox.ac.uk

T: +44(0)1865 611030

who will do his/her best to answer your query. We will make sure to acknowledge your concern within 10 working days and give you an indication of how we intend to deal with it.

If you remain unhappy or wish to make a formal complaint, please contact the chair of the Research Ethics Committee at the University of Oxford (using the contact details below) who will seek to resolve the matter in an expeditious manner:

Chair, Social Sciences & Humanities Inter-Divisional Research Ethics Committee; Email: ethics@socsci.ox.ac.uk; Address: Research Services, University of Oxford, Wellington Square, Oxford OX1 2JD)

Annex 3: Semi-structured questionnaire

Financial Sector in Spain: Retail Banks Semi-structured questionnaire

Name of company:
Date of interview:
Name of interviewee:
Position:
Years of Experience in the post:
Tenure in the company:
Name of city:

Company profile and background

- Does the bank have any activities other than retail banking?
- What is the total number of employees working in the bank? Of those how many are full -time? How many are part-time?
- Does the bank have other establishments/branches, nationally and internationally? Excluding your headquarters, how many establishment branches do you have here and abroad?

To HR and Senior Managers only:

Recruitment process

1. What are the different positions for which you recruit externally?
2. What level of education should applicants have minimally attained to get an interview for the job today? Is this the same level of education that is needed to also perform the job? Has this level of education historically been the requirement for this job or have entry requirements changed over time for this job? ¹⁷⁹
3. [If entry requirement have changed over time], has anything about the tasks performed or the skills required changed in these jobs to go along with higher entry requirements?

¹⁷⁹ This series of questions is then asked for each of the key retail positions within a branch.

4. Is this a job in which both graduates and non-graduates currently work?
5. Provided there is a new vacancy, would you consider recruiting both applicants with a university degree and without a degree for this job? What other factors other than educational attainment do you take into consideration in making this decision?
6. Does the bank offer training to employees on this post? Is training dependent on education levels? Do you find that applicants with higher educational levels need less training to perform their jobs than non-graduates in the same job?
7. Would a graduate from a technical school be able to perform the tasks required for this job? What is the graduate able to do more or better than the non-graduate in this job?
8. Would a non-graduate with a bachillerato (upper secondary) be able to perform the tasks required for this job? What is the graduate able to do more or better than the non-graduate in this job?
9. Are any of your employees occupying this post capable of doing a more demanding job in terms of taking up more complex tasks within the organization? Do you utilise these skills by giving them more complex tasks on the same job or is job content predetermined irrespective of who occupies the post? Are these employees who have more skill than is needed to perform the job able to move up the hierarchy within the organization quicker? Does the bank provide them with such opportunities?
10. Do many of your employees occupying this post have a higher educational level than that that is required to perform the tasks for this job? When were they recruited? Is this more common now than in the past on this job? Are graduates who have more education than is needed to perform the job able to move up the hierarchy within the organization quicker? Does the bank provide them with such opportunities?

11. Has anything about the tasks performed or the skills required changed in this job with the recruitment of more graduates? If so, who decided to make these changes?
12. What other factors do you consider in recruitment aside from educational attainment if two candidates with exactly the same education applied for a post? What is the relative importance of educational attainment vis-à-vis these other factors?
13. Are there any jobs for which you would prefer to recruit post-graduates in a recruitment process where both graduates and post-graduates apply?

To Senior and HR Managers:

Recruitment of university graduates

14. In seeking to fill vacancies, do you target specific universities, indicating only specific universities in some of your vacancy announcements? If so, which ones and why?¹⁸⁰
15. When shortlisting candidates for jobs at the bank, do you have preference for graduates of specific universities? Which universities and why?
16. When shortlisting candidates for jobs at the bank, do you also have preference for graduates from specific fields of study for this job? For example business and finance, economics, or engineering? What are graduates in these fields able to do more or better than graduates from the humanities or social sciences?
17. In shortlisting candidates, do you distinguish between the new universities that have been established since the 1990s and the older universities? Do you have a preference for one over the other?

¹⁸⁰ These questions are repeated for each of the key positions discussed.

18. In shortlisting candidates, do you distinguish between graduates of public universities versus graduates of private universities? Do you have a preference for one over the other?
19. Do you feel that with the expansion of higher education, you are able to recruit graduates with the right skillsets more easily?
20. Do you see any difference in the skills graduates are bringing into the workplace today compared to those you hired in the past?
21. Are there competencies you have a hard time finding in graduates? If so, which ones?

To Senior Managers only:

General HR policies: On-the-job training, overeducation and overskilling¹⁸¹

Overeducation

- Do you think it is a problem if some workers have more education in terms of degrees and diplomas than are the minimum requirements to get the job? Is this more common now than in the past?
- Does the firm provide incentives (financial and non-financial including through increased pay, promotion, more autonomy over work tasks, or more challenging assignments) to motivate and retain people who have more education than is needed to get the job?
- Are job tasks generally predefined or can more complex tasks be added to jobs to better utilise employees who have more education than the minimal education level required to get the job? What is your firm's HR policy with regard to this?

¹⁸¹ This terminology was just for internal use. The words overeducation/overqualification and overskilling if used with interviewees was generally always defined first to avoid confusing them with unnecessary jargon.

Overskilling

- Do you think it is a problem if some workers have more skills in terms of ability and competence to perform tasks than is needed to perform the job? Is this more common now than in the past?
- Does the firm provide incentives (financial and non-financial including through increased pay, promotion, more autonomy over work tasks, or more challenging assignments) to motivate and retain people who have more skills and are capable of performing a more demanding job than is required to perform the job?
- Are job tasks generally predefined or can more complex tasks be added to jobs to better utilise employees who have more skills and are capable of performing a more demanding job than is required to perform their current job? What is your firm's HR policy with regard to this?

Semi-structured interview with a graduate banker, 20-35 years of age

- How long have you been working in the firm?
- What is your official title?
- Could you briefly describe the main tasks you perform?

Education

- Have you had university training that has provided you with the skills necessary to complete the tasks of your current job?
- What is your academic background? What did you study and where?
- Why did you choose this specific university and area of study?
- Would you have considered pursuing a vocational degree instead of a university degree? Why or why not?
- Is your university education relevant for the job you perform? How is your education relevant for the job you perform?

- What role did your education play in your getting an interview for this job?
- Do you feel that the university you graduated from and/or your chosen field of study has facilitated landing a job for you? How so?
- What role does your education play in your performing the tasks required on your job? Do you feel that without this educational qualification, you would still have had the skills needed for this job?
- Do you find that employers in the banking sector have a preference for specific universities and specific fields of study? If so which ones?
- Does your job require that you constantly learn new things?
- Have you received on-the-job training since you joined the bank? What kind of training?

Overeducation

- Do you feel that you have more academic qualifications to get a more demanding job than the one you have now?
- If yes, what are these qualifications? Do you feel they will help you with promotion to get a higher-skill job within the Company?
- Does management recognize or reward higher levels of educational attainment (for example through increased pay, promotion, increased autonomy on the job etc.)?

Overskilling

- Do you feel that you have skills to do a more demanding job than the one you have now?
- If yes, what are these skills?
- Do you think you have them because of your natural ability, university education, on-the-job training or just more experience on the job?

- Are these skills recognized or utilised on the job? Does management allow you to take up more complex tasks than colleagues on the same job as a result?
- Does management recognize or reward these skills (example through increased pay, promotion, increased autonomy on the job etc.)?

Work satisfaction

- On a range of 1 to 6, how satisfied are you with your present job in terms of type of work?
- On a range of 1 to 6, how satisfied are you with your present job in terms of wages?
- On a range of 1 to 6, how satisfied are you with your work over-all?

Annex 4: Definition of variables

Personal characteristics

Female	Binary variable that takes the value of 1 if the respondent is female
Married	Binary variable that takes the value of 1 if the respondent is married
Native	Binary variable that takes the value of 1 if the respondent is a Spanish national
Child under two	Binary variable that takes the value of 1 if the respondent has a child under two

Age groups

Age 25-34	(reference category)
Age 35-44	
Age 45-54	
Age 55-64	

Educational fields of highest level of education attained¹⁸²

Education	Teacher training and education science
HLA	Humanities, languages and arts
SBL (reference category)	Social science, business and law
Sciences	Life and physical science, mathematics, computer & statistics
EMC	Engineering, manufacturing and construction
Agriculture and veterinary	Agriculture and veterinary
Health and welfare	Health and welfare
Services	Services

Occupational characteristics

Ten	Tenure is a continuous variable
Ten2	Tenure squared is a continuous variable, derived from tenure
Supvisory	Binary variable that takes the value of 1 if respondent self-reported supervisory duties
FT	Binary variable that takes the value of 1 if respondent is working full-time
Permanent	Binary variable that takes the value of 1 if respondent has a permanent contract
Underemployed	Binary variable that takes the value of 1 if respondent confirmed wishing to regularly work more hours than the current number of hours

¹⁸² General programmes were excluded

Yr2012	Dummy variable that takes the value of 1 indicating 2012 and 0 indicating pre-financial crisis (2006)
<i>Mismatch</i>	
ODD	Binary variable that takes the value of 1 when a graduate is in a medium (ISCO major groups 4-8 groups) or low-skilled (ISCO group 9) job
Overedmd	Binary variable that takes the value of 1 when the respondent's educational level is above the mode years of education for that occupational group at the ISCO 3-digit level
Overed80	Binary variable that takes the value of 1 when the respondent's educational level is above the 80 th percentile for that occupational group at the ISCO 3-digit level

Annex 5: List of graduates interviewed

#	Name	Highest level of education achieved	Bank	Bank no.	Position	Location
1	Celia	Master in Organizational Development, ESCI Business & Marketing School	Large	2	Commercial Manager	Valencia
2	David	Master in HR, Center of Financial Studies	Large	1	Premier Client Manager	Madrid
3	Pedro	Master in the Management of SMEs, Universat Oberta de Catalunya	Large	1	Commercial Manager	Barcelona
4	Jordi	Master in Economics, University of Barcelona	Large	1	Commercial Manager	Barcelona
5	Victor	Business Administration, University of Salamanca degree	Large	1	Commercial Manager	Barcelona
6	Hanna	Business Administration, University of Barcelona	Large	1	Commercial Manager	Barcelona
7	Marta	Psychopedagogy, University of Villanueva	Medium	4	Trainee (becario)	Madrid
8	Rodrigo	Journalism, Mass Media, and Advertising, Universidad Europea de Madrid (expected June 2015)	Medium	4	Trainee (becario)	Madrid
9	Alejandra	Business Administration, CUNEF	Medium	4	Trainee (becario)	Madrid
10	Laura	Labour Science, Complutense University	Medium	4	Trainee (becario)	Madrid
11	Esther	Master in HR, CEF and Master in Applied Statistics, UNED	Medium	4	Senior Technical Manager of People	Madrid
12	Javier	MBA, CESMA	Medium	4	Treasury Back Office Manager	Madrid

13	Anna	Master in Sales and Marketing, University of Pompeu Fabra (UPF)	Large	1	Premier Banking Manager	Barcelona
14	Xavier	Economics, UPF	Large	1	Personal Banking Manager	Barcelona
15	Laura	Business, University of Girona	Large	1	Premier Banking Manager	Barcelona
16	Adria	Economics, University of Valencia	Large	1	Small Business Banking	Barcelona
17	Veracruz	Business, UPF	Large	1	Premier Banking Manager	Barcelona
18	Oscar	Administration and Management (ADE), Universitat Rovira i Virgili	Large	1	Personal Banking Manager	Barcelona
19	Paula	Economics, University of La Coruña	Medium	6	Personal Banking Manager	Barcelona

Annex 6: Largest Spanish retail banks (excluding savings banks)

Bank	Total assets, EUR	Number of employees	Number of branches
1. Banco Santander	1.266 (€ trillion)	24,979 (Spain) 185,405 (in total)	3,511 (Spain) 12,951 (globally)
2. BBVA	651,511 (€ million)	28,416 (Spain) 108,770 (in total)	3,024 (Spain) 7,371 (globally)
3. CaixaBank	343,454 (€ million)	31,210	5,251
4. Bankia	217,456 (€ million)	14,042	1,974
5. Banco Sabadell	163,346 (€ million)	17,529	2,267
6. Banco Popular	161,456 (€ million)	13,501 (Spain) 15,321 (in total)	1,946 (Spain) 2,140 (globally)
7. Bankinter	57,333 (€ million)	4,185	360

Source: Based on banks' annual reports