

Immigrant occupational mobility: Longitudinal evidence from Spain^{*}

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Abstract

This article examines the occupational mobility of immigrants between their countries of origin and Spain on the basis of one of the few surveys available internationally with longitudinal information on immigrant employment in home and host countries. The evidence shows that the occupational status of immigrants in the Spanish labour market is, in general, substantially worse than in their countries of origin. The severe loss of occupational status experienced by immigrants is explained by the combined effect of the intense initial downgrading they experience when entering the Spanish labour market and their very slow occupational progress during their stay in Spain. These findings are more in line with the segmented assimilation theory, which suggests a limited or blocked immigrant occupational mobility, than with the assimilation theory, which predicts a U-shaped evolution in the occupational status of immigrants between their home and host countries. As a result, the Spanish case contrasts sharply with previous evidence for other advanced countries, which tends to support the assimilation perspective. Finally, the empirical evidence suggests that one of the elements impeding the occupational mobility of immigrants in Spain is the significant size of the secondary segment of the labour market, which restricts immigrants' opportunities mainly to low-status occupations.

Keywords: Immigration, occupational mobility, Spain.

JEL codes: J15, J24, J61, J62.

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1. Introduction

The economic and social integration of immigrants in the host countries has received considerable attention in the literature on international migration (Borjas 1999). This integration depends largely on their attachment to the labour market and, hence, both on their capacity to find work and on the type of occupations they obtain. For this reason, the occupational attainment of immigrants and its evolution over time has been the focus of a considerable volume of research.

A particularly interesting approach to this question is to examine the occupational mobility of immigrants between their home and host countries. Empirical studies on this issue are, however, scarce and cover only a small number of countries (Akresh 2008; Chiswick, Lee and Miller 2005; Bauer and Zimmermann 1999; Rooth and Ekberg 2006). This deficiency is very plausibly the result of the scarcity of the type of longitudinal information required for these analyses. In sharp contrast, a large number of empirical studies use an alternative approach to compare the occupational mobility of immigrants with that of native workers with similar characteristics in the host country (e.g., Green 1999 and Barrett and Duffy 2008).

The aim of this article is to examine the occupational mobility of immigrants from their countries of origin to Spain and to identify the main drivers of this process. The empirical examination is based on microdata from a survey (the *Encuesta Nacional de Inmigrantes*) that is one of the very few available statistical sources available internationally with detailed longitudinal information on the employment of immigrants in their home and host countries. This dataset has been used previously by certain studies that examine partial aspects of the pattern of occupational mobility of immigrants in Spain, as occupational mobility in the first stage of their settling into Spain (Stanek and Viera 2009) or differences in occupational mobility between primary and secondary segments of the labour market (Aysa-Lastra and Cachón 2013). A major difference between our research and these studies is the use of an international, standardised

index of occupational status (the International Socio-Economic Index). This index offers significant advantages for the examination of the occupational mobility of immigrants between countries, as it facilitates the comparison of immigrants from different countries of origin and provides an exact quantification of changes in occupational status. Hence, our analysis of the full process of occupational mobility complements previous partial evidence available for Spain, on the one hand, and facilitates the extension and enrichment of the aforementioned very limited international evidence regarding the occupational mobility of migrants between their countries of origin and destination, on the other hand.

The two main theoretical approaches to the immigrant mobility phenomenon are the assimilation model and the segmented assimilation theory. The assimilation hypothesis predicts a U-shaped pattern of occupational mobility characterised by the occupational downgrading of immigrants on arrival in the host country, given that the transferability of human capital between countries of immigrants is limited, and a significant occupational improvement as the duration of residence increases, as immigrants improve their human capital over time (Chiswick, Lee and Miller 2005 and Duleep and Regets 1999). In contrast, the segmented assimilation theory predicts the lack of occupational assimilation or convergence of immigrants over time, given that immigrants tend to be concentrated in the secondary segment of the labour market, characterized by low-paid, unstable and unskilled jobs with little room for occupational mobility to the primary segment, implying that the occupational downgrading of immigrants is not transitory but permanent (Piore 1979 and Fassman 1997). The scarce international evidence on the occupational mobility of migrants between their countries of origin and destination tends to confirm the assimilation perspective, as a U-shaped pattern of occupational mobility is generally observed for immigrants in countries such as Australia, the United States and Sweden (Chiswick, Lee and Miller 2005; Akresh 2008 and Rooth and Ekberg 2006). Yet, it must be noted that these studies have examined this issue only for immigrants in a small sample of developed countries with employment structures characterised by a high presence of highly skilled jobs. Thus, one of the main contributions of the article is to examine whether a similar pattern is also observed in

other advanced countries with other types of employment structures. In this vein, Spain is an ideal setting, as it is a developed country that has experienced immigration on a massive scale and it has a large secondary segment of the labour market, with and a high presence of temporary jobs and a higher than average percentage of low-skilled jobs (Kogan 2006).

The structure of the article is as follows. The section following this introduction contains a brief description of immigration and the Spanish labour market and a brief review of the literature on the occupational mobility of immigrants. The microdata and the variables used in the empirical analysis are described in the third section. The fourth section presents the results of the descriptive and multivariate analysis. The article ends by summarising the main conclusions.

2. Background

2.1. The Spanish labour market and immigration

Since the middle of the nineties and up to the start of the Great Recession, Spain experienced a process of sustained economic growth that occurred faster than in other Western countries. The sectors with higher employment growth were building, real estate, domestic services, hospitality and personal services. Because of the particular characteristics of these sectors and the high firing costs for permanent contracts, a substantial portion of new hires was on fixed-term contracts. Therefore, the rate of temporary employment in the Spanish labour market reached a high level, above 30% and was especially high in the building, domestic services, hospitality and personal services.

This strong employment growth concentrated in low-skill occupations attracted large immigrant inflows. Consequently, between 1996 and 2007, the foreign population in Spain increased by five million people, accounting for 13.1% of the total population at the end of the period. While most foreign residents in the mid-nineties were from North Africa and developed European countries, those who arrived thereafter came mainly from Eastern Europe and South America (although inflows from North Africa were also substantial during this period).

Immigrant entry into the labour market was very significant. As a result, in 2007, immigrants accounted for 14.3% of the labour force. Their presence was higher in labour-intensive activities with low levels of qualification, which were the sectors with higher growth during the considered period. The sectors with the greatest numbers of immigrants were construction, hotels and private households (OECD 2009). Because of their work in these sectors and their recent arrival in the Spanish labour market, the temporary employment rate was very high (45%) among immigrants (Reher et al. 2008).

Spanish economic growth was focused in low-productivity activities and, as a result, mostly created jobs in unskilled occupations. This pattern, together with the relocation of some industrial firms, led to an occupational structure clearly biased to low-skill occupations.¹ Hence, the massive inflows of immigrants coincided with the generation of employment in low-skill jobs. In addition, the transferability of foreign human capital is limited,² and some form of discrimination could also be present in hiring decisions.³ For these reasons, most immigrants found only jobs in unskilled occupations, complementing the jobs held by natives (Amuedo and De la Rica 2011). Thus, according to data from the Spanish *Labour Force Survey* previous to the Great Recession, 36% of immigrants worked in unskilled occupations, 53% were employed in semi-skilled occupations and only 11% had a job in skilled occupations.

2.2 Literature review

The main theoretical approaches to the immigrant mobility phenomenon are the assimilation model and the segmented assimilation theory (see e.g. Massey et al. 1993). The assimilation model, on the basis of the neoclassical theory of human capital and a microeconomic perspective related to the characteristics of job supply, departs from the hypothesis that the transferability of human capital of immigrants between countries is limited, given that the human capital might become devalued in the host country for reasons such as the lack of language fluency or a lower quality of education acquired in origin, and that this is the main cause of their downgrading after arrival. Over time, as immigrants tend to adapt to the requirements of the host country's labour market, the human capital that immigrants accumulate

improves their employment prospects. This phenomenon is expected to significantly influence the behaviour and occupational attainment of immigrants in the labour market. Accordingly, it is expected a U-shaped pattern of occupational mobility characterised by the occupational downgrading of immigrants on arrival in the host country and a significant occupational improvement as the duration of residence increases (Chiswick, Lee and Miller 2005 and Duleep and Regets 1999).

On the contrary, the segmented assimilation theory predicts the lack of occupational assimilation or convergence of immigrants over time. According to this theory, based on a macroeconomic perspective and the characteristics of labour demand, the labour market in advanced countries is divided, at least, into two segments with very different characteristics. Whereas the primary segment offers jobs with high wages, better working conditions and prestige and possibilities of occupational promotion, the secondary segment is characterized by low-paid, unstable and unskilled jobs with little room for occupational mobility. Immigrants would tend to be concentrated in the secondary segment of the labour market for reasons such as the reluctance of natives to fill these jobs, reducing the job search costs, the technological characteristics of the demand or the presence of discrimination in hiring based on nationality or ethnicity. The existence of structural barriers that restrict the mobility between the two segments of the labour market would hinder the promotion of immigrants into better jobs, trapping them in the secondary segment (Piore 1979 and Fassman 1997). The assumption underlying this theory is, therefore, that structural factors related to the characteristics of the labour market would originate that immigrants had limited or blocked occupational mobility, implying that the occupational downgrading of immigrants were not transitory but permanent. Some authors argue, moreover, that the slow pace of assimilation is very plausibly reinforced by certain characteristics of immigrants such as low levels of education, membership in disadvantaged and racialised minority groups or undocumented status (Bean, Leach and Lowell 2004).

The empirical examination of the occupational mobility of immigrants between their home and host countries facilitates the evaluation of immigrants' economic integration and the

assimilation hypothesis against competing theories. Nevertheless, empirical studies on this subject are rather scarce, in contrast with the large number of empirical analyses on the assimilation of immigrants that focus on comparisons with native workers in the host country in terms of occupational attainment (e.g., Green 1999) or the gap in earnings (e.g., Chiswick 1978; Borjas 1985, 1995 and Lacuesta, Izquierdo and Vegas 2009). The paucity of studies on the occupational mobility of immigrants across countries is plausibly explained by the fact that it requires longitudinal statistical information that is difficult to find in practice.

The scarce available evidence on this body of research tends to confirm the assimilation perspective, as a U-shaped pattern of occupational mobility is generally observed for immigrants in advanced countries such as Australia (Chiswick, Lee and Miller 2005), the United States (Akresh 2008) and Sweden (Rooth and Ekberg 2006). Nonetheless, the pattern of occupational mobility of immigrants could differ between countries according to international differences in factors such as the nature of immigration and pre-existing ethnic community networks, but also to their particular institutional and economic characteristics, such as immigration policies, government policy and labour market structures (Borjas 1990; Piore 1979; Portes and Rumbaut 1996). Interestingly, Reyneri and Fullin (2011) show in this sense that the role played by the nature of immigration and the characteristics of the labour demand are crucial drivers of inequalities between immigrants and natives with respect to the access to highly qualified occupations in European countries. They observe, in particular, that immigrants perform worse in Southern European countries than in old receiving European countries. In a similar vein, Kogan (2006) shows in a comparative analysis for 14 European Union economies that the extent and success of immigrant incorporation to a particular labour market, as measured by the unemployment risk relative to natives, is determined by the structure of the labour market and by its regulation. Hence, the author finds that the higher the relative size of the secondary segment of the labour market (as measured by the share of unskilled and low-skilled jobs) the lower the unemployment risk of immigrants and, also, that immigrant employment disadvantages are found to be lower in liberal welfare states marked by flexible labour markets.⁴ For this reason, it

is important to note that previous studies have examined occupational mobility only for immigrants in a small sample of developed countries with employment structures characterised by a high presence of highly skilled jobs. Consequently, it could be interesting to examine whether these known patterns of occupational mobility are reproduced in countries with different employment structures, as Spain.

Although it is partial and most of it covers only specific occupational trajectories, evidence from previous studies on the occupational mobility of immigrants in the Spanish labour market is generally compatible with the hypothesis of limited mobility. Stanek and Veira (2009) use microdata from the *Encuesta Nacional de Inmigrantes* in order to compare the first occupation attained in Spain with the last occupation held at the country of origin of immigrants who arrived to Spain in recent decades. Using logistic regression models, authors observe that the vast majority of immigrants had experienced occupational downgrading in the first stage of their settling into the Spanish labour market and that the likelihood of experiencing downward mobility varies significantly among different groups of migrants according to factors like gender, region of origin, education and branch of activity. They also find that routine workers have very little probabilities to improve their occupational position in relation to their last job at origin. On the other hand, other studies examine the evolution of the occupational distribution of immigrants exclusively during their residence in Spain based on microdata from *Labour Force Survey* and *Census of Population* (Bernardi, Garrido and Miyar 2011; Alcobendas and Rodríguez-Planas 2009; Amuedo and De la Rica 2007). Their findings show that immigrants experience significant occupational segregation from the native-born population and that this segregation tends to persist over time.⁵ Thus, although immigrants experience more occupational mobility than natives and have seen some occupational progress, assimilation is limited and there is no convergence in the occupational distributions of the two groups. Finally, Aysa-Lastra and Cachón (2013) examine patterns of occupational mobility of non-EU immigrants in Spain from the perspective of theories of labour market segmentation. Using multinomial logistic regression models and microdata from the *Encuesta Nacional de Inmigrantes*, they find a pattern of segmented

mobility, since it is much larger within primary and secondary segments of the labour market than between them. They also note that there are significant differences in some of the most important determinants of mobility in the primary and secondary segments, both in terms of downward mobility related to the transition between the last job in origin and the first job in Spain and of upward mobility related to the transition between the first job in Spain and the job at the time of the survey.

The available evidence in the previous literature also suggests that the economic integration of immigrants in the host country could differ according to several attributes. Clean-cut differences in occupational mobility have been documented for groups of immigrants with different levels of education, reasons for migration and regions of origin (Chiswick, Lee and Miller 2005; Akresh 2008). These studies show, in particular, that immigrants with higher levels of education, those migrating for non-economic reasons and those migrating from developing countries tend to experience a deeper U-shaped pattern of occupational mobility (i.e., more intense initial occupational downgrading and subsequent occupational recovery). As a consequence, patterns of occupational mobility between home and host countries are expected to differ according to personal and social attributes of immigrants.

The first particular characteristic that is expected to influence the scale of the initial occupational downgrading and the recovery of immigrants is the level of education. Although advanced education is more difficult to transfer internationally than basic education, it also allows faster subsequent recovery as a result of increased investment in human capital. Thus, because of the lower opportunity cost and the higher expected return, a higher educational level is associated with a deeper U-shaped pattern in the occupational trajectories of immigrants (Duleep and Regets 1999). Occupational status attainment and occupational mobility are also expected to differ by gender, as immigrant men and women tend to be systematically employed in different types of occupations (e.g., Bean, Leach and Lowell 2004 and Powers, Seltzer and Shi 1998). Alternatively, given that the level of transferability of human capital across countries depends on the cultural and economic distance between the country of origin and the host

country (see e.g., Hagan 2004), less developed countries of origin are associated with poorer occupational attainment. The type of migration is also relevant. Economically motivated migrants are expected to weigh their decision to migrate more carefully, and this characteristic may allow them to minimise, to some extent, the initial occupational downgrading. In contrast, family-based immigrants and political refugees might prioritise other criteria (Chiswick, Lee and Miller 2005). Otherwise, as immigrants in most cases benefit from access to personal or social networks formed by compatriots already established in the host country, their networks might well mitigate their initial occupational downgrading and yield a flatter U-shaped pattern of mobility. Nonetheless, it may also be that the social capital in the networks is restricted to a particular segment of the labour market, resulting in a significant occupational downgrading for the newcomers (Mahuteau and Junankar 2008). Knowledge of the language might also allow access to jobs that involve more complex tasks and personal interaction (Chiswick and Miller 1998); for this reason, immigrants who already know the language on arrival may experience a lower initial occupational downgrading. Finally, unauthorised immigrants are more likely to be employed in worse occupations (e.g. Kandel and Donato 2009). Thus, illegality is expected to be associated with an intense occupational downgrading. Subsequent legalisation might allow immigrants access to better jobs, yielding a pattern of occupational mobility with a deeper U-shape.

3. Data and variables

3.1. Data

The source of information used in the empirical analysis is the *Encuesta Nacional de Inmigrantes* (i.e., National Immigrants' Survey; hereafter ENI), a survey that provides a representative sample of the immigrant population in Spain. It was prepared by the Spanish National Statistics Institute (*Instituto Nacional de Estadística*) to obtain detailed information on international immigration in Spain. Data collection was conducted during the last quarter of 2006

and the first quarter of 2007, using the week prior to the interview as the reference period⁶. The survey targeted foreign-born people older than 15 and living (or having the intention to live) in Spain for more than one year. The sampling framework was the Municipal Population Register (*Padron Municipal de Habitantes*), and the survey was carried out in a representative sample of households with at least one foreign-born person older than 15. The original survey sample comprises a cross-section of approximately 15,500 individuals.⁷

The ENI defines immigrants as individuals born abroad (regardless of whether they have Spanish nationality) who, at the time of the interview, had reached at least 16 years of age and had resided in Spain for a year or longer (or, alternatively, those individuals with less than one year's residence in Spain but with the intention to remain in the country for at least a year).

The analysis focuses on immigrants with employment experience in their countries of origin who were employees or self-employed in Spain. Furthermore, the analysis is limited to immigrants who arrived in Spain after 1997. This choice was made because, although the ENI includes retrospective information on immigrants, it is composed of a single cross section. Consequently, the analysis of occupational mobility can incur a bias for three different reasons: changes in the composition or quality of immigrants arriving at different points in time (Borjas, 1985 and 1995), business-cycle effects on the results of entrants into the labour market (Aslund and Rooth 2007) and return migration (Constant and Massey, 2003 and Dustmann and Weiss 2007). We analyse only the occupational trajectories of immigrants arriving in Spain between 1997 and 2007 to reduce the effects of the three problems described. Immigrants during this period were relatively homogeneous according to their regions of origin (Reher et al. 2008) and that period was a homogeneous phase of sustained growth and strong job creation in Spain, circumstances that are expected to minimise both the business-cycle effects on the employment of immigrants and the importance of return migrations in relation to economic downturns. On the other hand, we have excluded from the original sample data on immigrants with incomplete information on the variables of interest, as well as those aged less than 16 years or above 65 at the time of the survey and those aged less than 16 years or over 55 years on arrival in Spain.

Additionally, we excluded those who possess Spanish nationality from birth and those who have completed their education in Spain. The final sample consists of 4,543 immigrants.

The ENI provides detailed information on the sociodemographic attributes of immigrants (e.g., age, gender, nationality, country of birth, marital status, schooling, legal status, knowledge of languages and year of arrival in Spain), certain characteristics related to the migratory experience (reasons for migration, previous residence in a developed country, access to support networks) and the occupation and other characteristics of their jobs at three different times: before leaving the country of origin (last job in the country of origin), just after arrival in Spain (first job in Spain) and the moment of the survey (current job in Spain).

This survey is one of the very few statistical sources available internationally that includes retrospective information on the employment trajectories of immigrants. As a consequence, it facilitates an accurate examination of occupational transitions between origin and host countries. Moreover, this survey has some distinguishing features with regard to existing surveys for other countries that permit a more comprehensive analysis of the occupational mobility of immigrants. Firstly, it covers a longer period of residence for immigrants in host countries than the three-to-four years considered in similar analyses in other countries, allowing a closer examination of the potential occupational recovery of immigrants in the destination country. Secondly, it permits a widespread analysis of the determinants of immigrants' occupational mobility, comprising all factors considered in previous international studies and others suggested by the literature (e.g., legal status or recognition of foreign education). Finally, as the ENI includes a fully representative sample of immigrants, the analysis is not limited to specific groups of immigrants defined by factors such as the type of migration (Rooth and Ekberg 2006) or their legal status in their host countries (Akresh 2008; Chiswick, Lee and Miller 2005).

3.2. Variables definition

As established in the introduction, a prominent feature of the empirical analysis is the use of an international index of occupational status, the International Socio-Economic Index (hereafter, ISEI). ISEI is a standardised measure of occupational status developed by

Gazemboon and Treiman (1996) using information from 16 countries. This index combines weighted information about educational requirements and the potential earnings of each occupation and measures continuous values between 16 and 90.⁸ Moreover, it facilitates the quantitative comparison of the occupational status of immigrants from different countries. For this reason, its use offers significant advantages for the examination of immigrants' occupational mobility between countries and for the accurate testing of competing hypotheses.⁹

Starting with the definition of some relevant explanatory variables, the origin of immigrants is characterised by country of birth, differentiating between developed and developing countries (among the latter, distinguishing additionally between Latin America, Eastern Europe and the rest of the world).¹⁰ In turn, immigrants' legal status reflects whether they have the permits to become legally contracted employees under Spanish law¹¹. Spanish proficiency is considered to apply to immigrants whose mother tongue is Spanish or, alternatively, those who state that they can speak Spanish 'well' or 'very well'. Immigrants have also been classified according to whether they claim to have migrated for economic reasons. Access to networks is considered to apply to immigrants who claim to find their first job in Spain through personal contacts or, alternatively, who declare to have contacts at arrival. Finally, four different levels of education have been employed (primary education, first and second stage of secondary education and tertiary education). It is also considered whether the educational level was recognised in Spain. On the other hand, as some explanatory variables are available only for particular stages in immigration (i.e., last job in the country of origin, first job in Spain or current job in Spain), its inclusion in the multivariate models for empirical analysis depends strictly on this fact.

Table A.1 in the Annex contains descriptive data of the sample. The characteristics of the immigrants in the survey generally fit the profile of recent immigration in Spain¹²: immigrants come mainly from developing countries (90.9%), particularly from Latin America (53.3%) and from Eastern Europe (26.7%), and are mainly men (53.4%) and middle-aged (the average age at the time of the survey is approximately 35 years, and the average age at arrival is approximately

31 years). Most immigrants have finished the second stage of secondary education (45.4%), and the percentage of university graduates is significant (20.1%), while only 5.2% hold degrees that are recognised in Spain. Most of them migrated to Spain for work (70.8%) and had contacts at arrival (82.1%), and 45.1% obtained their first job through personal contacts. The average number of years spent in Spain is 4.1, and the vast majority were in Spain legally with work permits (87.5%). Additionally, most were proficient in Spanish (81.7%).

4. Results

4.1. Descriptive evidence

Table 1 and Figure 1 contain information on the occupational status of immigrants in their countries of origin and in Spain, distinguishing in the latter case between the first job performed by the immigrant on arrival and the current work (corresponding to the timing of the ENI). It is observed that on average, immigrants experience a severe loss of occupational status when they enter the Spanish labour market: while the average occupational status in their countries of origin is 40 points in the ISEI scale, the status of the first job in Spain is only 27.8 points. During their stay in Spain there is some improvement in the occupational status (the average status for the current job is 30.8 points), the scale of which is apparently associated with the duration of the stay, given that the status shows a rising trend over the years of residence in Spain. Whereas immigrants with less than 3 years of residence in Spain have an average status of 29.9 points, those with more than 6 years of residence exhibit a status of 33.1 points. However, the improvement is in general rather limited and does not compensate for the initial loss of status. As a result, the occupational status of immigrants in Spain is typically substantially lower than in their countries of origin.

To examine the extent to which occupational downgrading on arrival and the slow subsequent occupational recovery are general phenomena, figures 2 and 3 contain the distribution of changes (as approximated by histogram graphs and density functions) in

immigrants' occupational status on arrival and during their stay in Spain. The evidence in Figure 2 confirms that the occupational downgrading associated with the entry to the Spanish labour market affects most immigrants (specifically, 65.6% of immigrants found a job in Spain with a lower occupational status than in their countries of origin, 22.3 % maintained their status and 12.1% improved it). In a similar vein, it can be observed in Figure 3 that only a minority of immigrants (29.5%) was able to improve their occupational status between the first and current job in Spain. Therefore, occupational status tends to remain unchanged for most immigrants while in Spain (58.2%), regardless of whether they change jobs (24.9%) or remain at their first job (33.3%), and a few even experience a further loss of status (12.3%).

The intense occupational degradation experienced by immigrants in Spain is consistent with their shift from occupations with higher skill requirements in their countries of origin to occupations with lower relative levels of qualification in the Spanish labour market. Table 2 shows that while the occupational distribution of immigrants in their countries of origin was characterised by a high proportion of individuals employed in skilled (25.6%) and semi-skilled occupations (59.3%), and only a relatively small proportion worked in unskilled occupations (11.1%), their current occupational distribution in Spain is characterised by a significantly lower proportion of immigrants in skilled occupations (11%) and a remarkably higher proportion in unskilled occupations (33.9%).¹³

Whereas previous results correspond to all immigrants, Table 1 and Figure 1 exhibit the occupational trajectories of immigrants broken down by those attributes that according to the theory are expected to influence occupational mobility (i.e., gender, educational level, reasons to migrate, legal status in Spain, networks, region of origin, recognition of foreign education in Spain and Spanish proficiency). Overall, this evidence confirms that although limited occupational mobility tends to be generally observed for all types of immigrants, there exist distinct patterns of mobility for specific groups. Moreover, these differences are most pronounced in the intensity of the initial occupational downgrading. In contrast, the subsequent

limited improvement tends to be, with some minor exceptions, relatively similar for all immigrants.

In general, most of the disaggregated results are in line with previous evidence from international studies on the significant differences in the patterns of occupational mobility in relation to attributes such as educational levels (it is observed, in particular, that the higher the educational level of immigrants, the deeper the U-shaped pattern of occupational mobility), gender (immigrant women experience a more intense occupational downgrading on arrival), area of origin (immigrants from developed countries have a flatter U compared with immigrants from developing countries) and existence of support networks (access to informal networks apparently leads to poorer occupational achievement). In contrast, the evidence for Spain does not seem to support previous findings for other advanced countries that economic immigrants present a differentiated pattern of occupational mobility. On the other hand, it is noteworthy that, as expected, legal status and recognition of foreign education do have a significant influence (immigrants with legal status and with recognition of education exhibit a comparatively more intense occupational recovery), and that Spanish proficiency has a beneficial effect on occupational mobility, as well.

Table 3 contains information on the size of secondary segment and on the occupational status of immigrants for Spanish regions.¹⁴ Following the analysis of Aysa-Lastra and Cachón (2013) for the Spanish economy previously referred, we have defined the primary segment as total workers (i.e. including self-employed and employees) employed in occupations 1 to 4 in occupational classification ISCO-88 and the secondary segment as those employed in occupations 5 to 9. These occupational clusters are empirically defined on the basis of the *Encuesta Nacional de Inmigrantes* according to the patterns of occupational mobility of immigrants (specifically, taking into account that occupational mobility should be much larger within primary and secondary segments of the labour market thus defined than between them). The source of information on the regional size of secondary segment is the Spanish *Labour Force Survey* and it corresponds to the time of elaboration of the *Encuesta Nacional de Inmigrantes*, 2007. Final rows in Table 3 report the

results for two clusters of regions defined according to the size of the secondary segment. As can be observed, immigrants living in regions with a size of the secondary segment above the national average experienced a more severe loss of occupational status when they entered the Spanish labour market. As a result, their occupational status in the final job in Spain is comparatively lower with respect to immigrants in regions with a size of the secondary segment below the average, despite the rather similar occupational status of both groups in their countries of origin.

To bring the Spanish case into international perspective, Table 4 contains information from a representative set of developed countries on the size of the secondary segment, the occupational distribution of immigrants and the occupational status of immigrants and the total population. This international evidence yields several interesting findings. In a general manner, the size of the secondary segment is negatively correlated across the sample of countries with the occupational status of immigrants and positively correlated with the proportion of immigrants working in the secondary segment (the coefficients of correlation are -0.606 and 0.665 and they are statistically significant at conventional levels in both cases). This finding is consistent with the facts that the size of the secondary segment in the Spanish labour market is significantly larger than in other advanced countries (59% compared to an average of 47.9%), that the occupational status of immigrants is also comparatively lower in Spain (35.2 ISEI points compared to an average of 41.6) and that the share of immigrants working in the secondary segment is comparatively higher in Spain as well (78.7% and 59.8%). This last finding is partially due to the higher presence of immigrants in unskilled occupations in Spain relative to other advanced countries (32.7% and 18%) and is consistent with the fact that, although in every developed economy the occupational status of immigrants tends to be generally lower than that of all workers (the averages for all the countries are 41.6 and 45.2 ISEI points), the difference is more marked in Spain (35.2 and 41.6).¹⁵

4.2. Multivariate analysis

In a nutshell, previous descriptive evidence shows that immigrants in Spain experience a very intense occupational downgrading between their countries of origin and the host country

and that the decrease in the occupational status is explained largely by the initial degradation that occurs when entering the Spanish labour market (as the subsequent occupational achievement is generally very limited). The rest of the section presents the results of a multivariate analysis of the determinants of the occupational mobility of immigrants. It allows to control for potential compositional effects and to further characterize the occupational mobility of immigrants by examining which are the main drivers of this phenomenon.

An initial set of econometric models (Table 5) is used to identify the main factors affecting the occupational trajectory of immigrants when their last occupation in the Spanish labour market is compared to the occupation held in their countries of origin. Table 5 contains the results of ordinary least squares estimates of models where the dependent variable is the difference in occupational status between the current job in Spain and the last job in the country of origin (Models I and II) or the occupational status achieved in the current job in Spain (Model III).

The positive and significant coefficient of the variable years of residence in Spain confirms that, as suggested by the assimilation theory, the length of the stay in the host country is positively related to higher relative occupational status. However, consistent with the hypothesis of limited occupational mobility, the magnitude of the improvement is very low (approximately 0.3 ISEI points per year). Nevertheless, it is possible that the occupational advancement associated with the length of the stay is somewhat greater in practice, as some of the variables included in Models I and II may be capturing the effect of some occupational enhancement mechanisms highlighted by the literature (i.e., recognition of foreign education, knowledge of Spanish and legal status). When the models are estimated after the removal of these regressors, the magnitude of the improvement increases (0.6 points per year of residence) but is still very limited (full results of these estimations are available from the authors on request).

The evidence also suggests that the occupational downgrading on arrival in Spain is more marked for women and for immigrants from developing countries (with estimated coefficients in both cases of several ISEI points). This last result holds for all developing regions (i.e. Latin

America, Eastern Europe and rest of developing countries), with a quantitative effect rather similar in all cases, and is consistent with previous evidence in the literature to the effect that immigrants migrating from developing countries tend to experience a more comparatively intense initial occupational downgrading. Immigrants with higher levels of education experience a greater drop in occupational status, and this effect is especially important for those with tertiary studies. Consistent with this finding, the recognition of foreign education in Spain provides access to a significantly higher occupational status (actually, this factor is one of the most important for the occupational mobility of immigrants). The coefficients of the variables measuring education change their sign when the initial occupational status in the country of origin is entered as an additional explanatory variable (Model II), suggesting that the severe downgrading suffered by immigrants with high educational levels is due to their higher occupational status in the country of origin and that after controlling for this factor a high level of education actually helps to mitigate the occupational degradation. Actually, the coefficient of the occupational status at the country of origin is negative and relatively close to unity (-0.84), and the introduction of this variable sharply increases the explanatory power of the model (the adjusted coefficient of determination increases from 0.15 to 0.55), which suggests that the initial occupational status is a key determinant of the magnitude of the loss of occupational status for immigrants in Spain.

Potential experience in the country of origin, as approximated by the immigrant's age¹⁶, does not significantly affect the occupational status of immigrants. Migration for economic reasons leads to a greater loss of occupational status when compared to migration for family or political reasons. This result is contrary to theoretical assumptions and to the empirical results of Chiswick, Lee and Miller (2005) and Akresh (2008). Political immigrants or immigrants coming for family reasons may have the help of family or groups or political or humanitarian associations that can provide economic support or contacts, giving them access to better jobs. This phenomenon might explain the difference in our results. Lastly, Spanish proficiency and legal status are clearly associated with a significantly lower loss of occupational status and with a higher status in Spain (the impact of both variables is between one and two ISEI points).

The second set of models (Table 6) estimate the effect of factors affecting the change in the occupational status between the last job in the country of origin and the first job in Spain (Models I and II) and the occupational status of the first job in Spain (Model III). The main interest in these estimations lies in the fact that, as showed previously, the occupational trajectory seen on arrival in Spain largely determines the current occupational status of immigrants. The results for the common explanatory factors are generally very similar to those of previous models (i.e., gender, region of origin and education). Interestingly, differentiated information for the first job in Spain available in the ENI facilitates an examination of the effect of additional factors on occupational status. Hence, the high positive impact associated with having resided in a developed country before the emigration to Spain suggests that human capital accumulated in other developed countries is easily transferable to the Spanish labour market. In contrast, it is also observed that the effect on occupational mobility of accessing to a first job in Spain through relatives or other personal contacts is clearly negative, consistent with the adverse impact of informal networks on the occupational attainment of immigrants found in some previous studies (Mahuteau and Junankar, 2008).

The third set of econometric models are used to identify the determinants of immigrants' occupational mobility during their stay in Spain. Therefore, Table 7 contains econometric estimates of models in which the dependent variable is the difference in occupational status between the current job and the first job in Spain.¹⁷ Interestingly, most of the coefficients of the variables in Model 1 are not statistically significant (the main exception observed is the positive impact of higher levels of education in the recovery of occupational status in Spain), which is consistent with the fact that occupational mobility in Spain tends to be rather similar for all types of immigrants. Moreover, this evidence confirms that years of residence in Spain have a limited positive effect on occupational mobility. Finally, it is also remarkable that the magnitude of the occupational improvement of immigrants is strongly influenced by the occupational status achieved in the first job in the Spain and by the type of occupational transition experienced when

entering the Spanish labour market (i.e., occupational downgrading or improvement). Therefore, a severe initial occupational downgrading is associated with a more intense subsequent recovery.

Finally, in order to deepen the analysis of the influence of the size of the secondary segment on the occupational mobility of immigrants by exploiting regional heterogeneity in the size of the secondary segment, previous econometric models have been re-estimated replacing regional dummies by a variable that reflects the regional size of the secondary segment as a proportion of the total labour market. Hence, Models in Table 8 estimate the determinants of the occupational trajectory of immigrants when their last occupation in the Spanish labour market is compared to the occupation held in their countries of origin. As can be observed, the coefficient of the variable that reflects the regional size of the secondary segment is negative and statistically significant at conventional levels in all the models estimated. Therefore, the larger the size of the regional secondary segment the higher the difference in occupational status between the current job in Spain and the last job in the country of origin (Models I and II) and the lower the occupational status achieved in the current job in Spain (Model III). On the other hand, Models in Table 9 estimate the determinants of immigrants' occupational mobility during their stay in Spain.¹⁸ In this case, although results are mixed, the coefficient of the variable that reflects the regional size of the secondary segment is again negative and statistically significant at conventional levels in one of the two specifications (Model 2). This finding suggests, in particular, that the size of the regional secondary segment could hinder the occupational improvement of immigrants during their stay in Spain.

5. Conclusions

This article examines the occupational mobility of immigrants from their countries of origin to Spain and its main determinants on the basis of one of the few statistical sources available internationally that includes longitudinal information on the employment of immigrants in their home and host countries. The obtained evidence complements the findings of the scarce

studies on the international occupational mobility of immigrants in Spain (Stanek and Viera 2009; Aysa-Lastra and Cachón 2013) and, very especially, in other advanced countries, where previous analyses focus on economies with very different employment structures (Akresh 2008; Chiswick, Lee and Miller 2005; Bauer and Zimmermann 1999; Rooth and Ekberg 2006). The analysis for a country like Spain, with a labour market characterized by a large secondary segment, allows for an appropriate examination of the contrasting hypotheses of assimilation versus segmented assimilation.

By using an international index of occupational status (the International Socio-Economic Index) that facilitates the comparison of the occupational status of immigrants from different countries and the quantification of their occupational trajectories, it is observed that their occupational status of immigrants in Spain tends to be substantially worse than in their countries of origin and that occupational downgrading is a general phenomenon. The severe loss of occupational status experienced by immigrants is explained by the combined effects of the intense downgrading they experience on arrival to Spain and by the slow subsequent occupational recovery.

The evidence that the occupational recovery of immigrants in Spain is related to the stay in the host country is consistent with the theoretical predictions that the human capital of immigrants tends to adapt to the requirements of the host labour market and that factors such as the recognition of foreign education and legal status are also influential in this process. Yet, the overall observed pattern of occupational mobility, characterised by an intense occupational degradation on arrival and limited subsequent progress, does not fit the prediction of the assimilation theory of a U-shaped pattern in the occupational status of immigrants. On the contrary, the evidence for Spain is more in line with alternative theories, such as the segmented assimilation theory, that suggests that immigrants experience limited or blocked occupational mobility. In this sense, the Spanish case contrasts sharply with previous evidence for other advanced countries, which tends to confirm the existence of a U-shaped pattern of occupational mobility and, consequently, to support the assimilation perspective.

Although it is something that could only be properly elucidated through an international comparative analysis with longitudinal data for several countries, a circumstance which is not currently possible by data limitations, overall, the empirical evidence suggests that one of the elements impeding the occupational mobility of immigrants in Spain is the significant size of the secondary segment of the labour market, which restricts immigrants' opportunities mainly to low-status occupations. On the one hand, from an international comparative perspective Spain is one of the advanced countries with a higher secondary segment of the labour market and a lower occupational status of immigrants. This finding is consistent with the negative correlation observed across a sample of representative advanced countries between the size of the secondary segment and the occupational status of immigrants and is in line with previous international evidence that shows the importance of the characteristics of labour markets in explaining the different patterns of assimilation of immigrants across countries (Reyneri and Fullin 2011; Kogan 2006). On the other hand, the evidence obtained by exploiting heterogeneity in the size of the secondary segment for Spanish regions is also compatible with a plausible influence of this factor, given that the occupational status of immigrants tends to be lower in Spanish regions with comparative larger secondary segments of the labour market. Finally, the influence of the size of the secondary segment on occupational mobility of immigrants is fully consistent with the fact that the intense occupational downgrading of immigrants in Spain is a wide-ranging phenomenon not generally restricted to specific groups and with previous studies for Spain that document that immigrants are segregated in a significant and persistent way into worse occupations than natives (Bernardi, Garrido and Miyar 2011; Amuedo and De la Rica 2007) and that immigrant occupational mobility is much lower within each segment (i.e. primary and secondary) of the Spanish labour market (Aysa-Lastra and Cachón 2013).

Even though limited occupational mobility tends to affect all immigrants in Spain, some significant differences in the specific occupational mobility profile are observed between certain groups. These differences tend to be particularly pronounced in the occupational trajectory associated with the incorporation into the host country, as occupational progress once there

tends to be similarly limited for all immigrants. Yet, it must be noted that the findings for Spain on the occupational mobility of immigrants support the influence of factors reported by previous empirical studies in other advanced countries (i.e., gender, education, reasons for migration and region of origin) but also confirm the additional effect of other relevant factors suggested by theoretical predictions (legal status, language proficiency and recognition of foreign education).

To conclude, although the period considered in our analysis corresponds to an expansion period prior to the subsequent crisis and end of the construction boom associated to the Great Recession, the evidence obtained in the research can also shed some light on how the deterioration of the Spanish labour market in the recent years could have affected immigrants' occupational status. In particular, as most immigrants are employed in low-skilled jobs, unemployment has affected them considerably, and competition with natives has probably intensified, even for less qualified occupational tasks. In this context, opportunities for the upward mobility of immigrants in Spain are probably even lower nowadays than in the period examined.

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Table A.1.
Descriptive statistics.

	Average	Standard deviation
Years of residence in Spain	4.14	2.25
Age	35.01	8.29
Age on arrival in Spain	30.73	8.14
Man	0.533	0.499
Primary education	0.184	0.387
Secondary education. First stage	0.160	0.366
Secondary education. Second stage	0.454	0.498
Tertiary education	0.202	0.402
Recognition of foreign education in Spain	0.052	0.222
Migration to Spain for work	0.707	0.455
Networks: first job through personal contacts	0.451	0.498
Networks: contacts at arrival	0.821	0.383
Previous residence in a developed country	0.063	0.243
Legal status in Spain	0.857	0.350
Spanish proficiency	0.818	0.386
Origin: developed countries	0.091	0.287
Origin: developing countries	0.909	0.287
Origin: Latin America	0.533	0.499
Origin: Eastern Europe	0.267	0.442
Origin: rest of developing countries	0.109	0.312
Observations	4,543	

Table A.2.
Occupational classification.
Correspondence and occupational status

Occupational classification CNO-94		Occupational classification ISCO-88	
Occupations	Occupational status ISEI	Occupations	Occupational status ISEI
1	68	1	55
2	51		
3	70	2	70
4	54	3	54
5	45	4	45
6	32		
7	25	5	40
8	43		
9	23	6	23
10	31		
11	34	7	34
12	34		
13	31	8	31
14	32		
15	16		
16	16		
17	16	9	20
18	21		
19	23		
20	47-32-25	5-8-9	40-31-20

Occupational classification CNO-94: 1-Legislators, senior officials and managers with 10 or more employees, 2-Managers with fewer than 10 employees, 3-Professionals with tertiary studies, 4-Technicians and associate professionals, 5-Clerks, 6-Restaurant services workers, 7-Personal and protective service workers, 8-Salespersons, models and demonstrators, 9-Skilled agricultural and fishery workers, 10-Semi-skilled and skilled building workers, 11-Skilled workers in extraction and machinery mechanics industries, 12-Skilled workers in printing, textile, food processing and wood industries, 13-Plant and machine operators and assemblers (except motor-vehicle drivers), 14-Motor-vehicle drivers, 15-Domestic helpers and cleaners, 16- Helpers and cleaners in establishments, 17-Agricultural and fishery labourers, 18-Construction labourers, 19-Laborers in manufacturing, mining and transport, 20-Others.

Occupational classification ISCO-88: 1- Legislators, senior officials and managers, 2-Professionals, 3- Technicians and associate professionals, 4-Clerks, 5- Service workers and shop and market sales workers, 6- Skilled agricultural and fishery workers, 7- Craft and related trade workers, 8-Plant and machine operators and assemblers, 9- Elementary occupations

Tables

Table 1.
Occupational status of immigrants in their country of origin and in Spain. ISEI scale points.

	Country of origin	First job in Spain	Total	Current job in Spain Full years of residence in Spain		
				Less than 3	Between 3 and 6	Between 7 and 9
Total immigrants	40.0	27.8	30.8	29.9	30.6	33.1
Man	37.6	29.3	32.2	31.8	31.8	34.5
Woman	42.8	26.1	29.2	27.9	29.2	31.4
Primary studies	30.8	23.5	25.6	24.3	25.8	26.7
Secondary studies. First stage	35.2	24.8	27.2	26.1	27.3	29.5
Secondary studies. Second stage	39.0	26.6	29.7	27.5	30.0	31.9
Tertiary studies	54.6	37.1	40.8	42.4	39.0	45.3
Recognition of foreign education in Spain	51.6	39.8	45.7	47.5	44.2	48.2
Without recognition of education in Spain	39.4	27.2	29.9	29.0	29.9	32.0
Migration to Spain to work	37.6	25.0	28.0	26.5	28.2	29.7
Migration to Spain for other reasons	45.9	34.7	37.5	37.8	36.8	39.7
Networks (first job through personal contacts)	37.5	24.9	27.9	26.8	28.0	29.8
Networks (contacts at arrival in Spain)	40.0	27.6	30.5	29.5	30.5	32.8
Networks (no contacts at arrival in Spain)	40.2	28.9	32.0	32.8	31.3	33.7
Legal status in Spain	40.5	28.6	31.8	33.1	30.9	33.6
Without legal status in Spain	37.2	23.5	24.8	24.1	26.1	32.8
Proficient in Spanish	40.5	28.1	31.2	30.3	31.0	33.3
Not proficient in Spanish	37.7	26.8	28.8	28.7	28.3	31.3
Origin: developed countries	46.5	44.5	45.8	42.5	48.4	47.0
Origin: developing countries	39.4	26.2	29.3	27.9	29.4	31.1
Origin: Latin America	41.0	27.6	30.6	29.6	30.7	31.7
Origin: Eastern Europe	38.0	24.0	27.1	25.5	27.4	31.0
Origin: Rest of developing regions	34.6	24.8	28.0	26.8	27.7	29.4

Table 2.
Occupational distribution of immigrants.

Type of occupation	Occupation	Relative share (%)		
		Country of origin	First job in Spain	Current job in Spain
Skilled occupations (1-4)	1	2.1	0.6	1.0
	2	3.5	0.9	1.6
	3	10.2	3.9	4.0
	4	9.8	3.2	4.4
Semi-skilled occupations (5-14)	5	8.8	2.7	4.4
	6	6.6	10.9	10.7
	7	3.9	7.9	4.8
	8	10.7	2.8	3.9
	9	1.8	2.2	1.2
	10	7.9	10.8	15.1
	11	4.8	2.3	3.6
	12	6.1	2.4	3.0
	13	4.2	1.9	3.3
	14	4.5	1.0	2.5
Unskilled occupations (15-19)	15	1.8	16.9	12.7
	16	1.2	4.7	5.7
	17	3.3	12.9	4.9
	18	2.2	7.2	6.8
	19	2.6	2.9	3.8
-	20	4.0	1.9	2.6
Total		100	100	100

Notes: Occupational disaggregation using CNO-94: see Table A.2.

Table 3.
Size of the secondary segment and occupational status of immigrants. Spanish regions.

	Secondary segment	Occupational status ISEI points		
		Country of origin	First job in Spain	Current job in Spain
Andalusia	63.43	41.13	29.31	31.80
Aragon	58.16	37.71	26.27	28.00
Asturias	60.85	41.55	28.79	31.18
Balearic Islands	61.29	42.49	29.63	32.25
Canary Islands	63.75	42.31	33.88	37.23
Cantabria	62.29	40.76	28.61	32.02
Castilla y León	61.74	36.16	27.09	29.71
Castilla-La Mancha	66.28	38.13	24.22	27.90
Catalonia	55.82	41.65	30.46	33.21
Comunidad Valenciana	63.16	40.18	27.95	30.52
Extremadura	62.82	41.05	31.43	32.85
Galicia	60.26	41.02	29.73	30.95
Madrid	47.15	42.45	28.96	32.40
Murcia	64.83	36.68	23.41	26.25
Navarra	60.33	38.14	25.51	29.60
Basque Country	54.98	39.18	28.22	30.86
Rioja	65.46	36.24	22.95	26.51
Ceuta and Melilla	55.72	41.50	37.50	37.50
<i>Average</i>	60.53	39.91	28.55	31.15
Regions with secondary segment below average	54.80	40.58	30.13	32.71
Regions with secondary segment above average	62.64	39.65	27.94	30.55

Notes: The source of information on the regional size of secondary segment is the Spanish *Labour Force Survey* and corresponds to 2007. The secondary segment corresponds to the share of workers employed in occupations 5 to 9 in occupational classification ISCO-88.

Table 4.
Size of the secondary segment and occupational status of immigrants. International evidence.

	Secondary segment		Relative share of occupational groups									Occupational status (ISEI points)	
	Total population	Immigrants	Immigrants									Immigrants	Total population
			1	2	3	4	5	6	7	8	9		
			Skilled Occupations (1-3)				Semi-skilled Occupations (4-8)				Unskilled (9)		
Austria	49.0	65.7	5.5	9.6	13.1	6.1	16.1	1.0	15.2	9.3	24.2	39.1	43.5
Belgium	40.0	46.9	14.6	18.5	8.8	11.1	13.3	1.2	11.0	7.0	14.4	45.1	47.1
Denmark	48.0	55.0	6.8	15.7	17.0	5.5	19.4	–	8.0	8.1	18.4	43.1	45.2
Finland	49.0	51.9	9.7	19.2	12.5	5.2	17.2	–	11.7	8.0	14.0	44.0	45.4
France	48.0	57.0	9.3	13.0	12.5	8.2	12.6	2.0	15.0	9.0	18.5	41.7	44.2
Germany	47.0	62.0	5.3	10.7	14.8	7.3	13.8	0.8	18.5	12.4	16.5	40.8	44.4
Greece	-	87.4	3.3	4.2	2.2	3.0	14.4	3.2	33.8	6.4	29.6	33.2	-
Ireland	49.0	54.7	10.5	18.6	6.1	9.3	19.3	–	14.6	7.4	13.4	43.9	45.3
Italy	-	75.7	5.1	4.7	9.4	5.1	12.6	1.6	23.9	12.5	25.1	35.9	-
Luxembourg	38.0	44.7	8.0	22.8	13.7	10.1	8.6	–	11.9	7.1	17.1	45.4	46.7
Netherlands	40.0	49.0	7.7	16.1	15.7	11.6	13.8	1.2	9.7	7.7	16.6	44.0	47.5
Portugal	63.0	58.6	7.1	14.1	10.3	10.0	16.2	1.4	16.5	6.3	18.2	41.8	40.0
Sweden	48.0	57.8	3.7	17.1	14.2	7.3	23.2	1.1	8.7	13.2	11.6	43.9	46.1
Norway	50.0	57.0	3.7	14.6	19.1	5.6	26.8	0.7	10.0	7.3	12.2	44.1	45.6
Switzerland	43.0	52.4	6.0	17.4	15.4	8.7	16.3	1.4	17.7	7.5	9.5	44.8	46.8
United Kingdom	44.0	42.6	15.0	18.5	13.6	10.3	17.4	0.4	5.4	6.8	12.6	46.7	45.8
United States	51.0	78.4	9.0	6.9	1.3	4.4	11.6	12.0	24.9	10.0	19.9	35.4	47.4
Spain	59.0	78.7	4.7	6.5	5.8	4.4	19.0	1.9	18.5	6.6	32.7	35.2	41.6
<i>Average</i>	47.9	59.8	7.5	13.8	11.4	7.4	16.2	2.1	15.3	8.5	18.0	41.6	45.2

Source: OECD (2008a, b).

Notes: Information corresponds to 2006. Occupational disaggregation using ISCO-88: see table A.2. The secondary segment corresponds to the share of workers employed in occupations 5 to 9 in occupational classification ISCO-88.

Table 5.
Determinants of the difference between the occupational statuses of the current job
and the last job in the country of origin (Models I and II) and of the occupational status of the current job in Spain (Model III).

	Difference between the occupational status of the current job and the last job in the country of origin		Occupational status of the current job	
	(I)	(II)	(III)	
	Coeff.	Standard error	Coeff.	Standard error
Years of residence in Spain	0.270**	(0.125)	0.297***	(0.082)
Women	-7.011***	(0.621)	-4.557***	(0.522)
Age	-0.407*	(0.230)	-0.123	(0.157)
Age squared	0.002	(0.003)	0.000	(0.002)
Origin: Latin America	-9.764***	(0.725)	-10.563***	(1.011)
Origin: Eastern Europe	-9.228***	(0.858)	-12.086***	(1.029)
Origin: Rest of developing countries	-9.460***	(1.018)	-11.860***	(1.394)
Secondary studies - first stage	-2.916***	(0.648)	0.583*	(0.304)
Secondary studies - second stage	-4.089***	(0.718)	2.070**	(0.499)
Tertiary studies	-9.397***	(0.771)	7.858***	(0.856)
Occupational status in the country of origin	-		-0.838***	(0.019)
Recognition of foreign education in Spain	4.513***	(1.329)	8.393***	(1.060)
Migration to Spain to work	-1.240**	(0.463)	-3.698***	(0.480)
Spanish proficiency	1.442**	(0.630)	1.086*	(0.583)
Legal status	1.808*	(0.874)	1.831***	(0.579)
Intercept	14.123***	(3.618)	38.164***	(2.570)
R squared	0.156		0.559	
Adjusted R squared	0.149		0.555	
Number of observations	4,543		4,543	

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: All models are estimated by ordinary least squares with errors clustered by region. The immigrant of reference is a man from a developed country with primary studies and without studies recognised in Spain who did not migrate for work, who is without Spanish proficiency and without legal status. Additional controls included in all models are marital status, number of children, having more than one job in the country of origin and in the current job in Spain, whether the immigrant was self-employed in the country of origin and in the current job in Spain, more than 1 month unemployed in Spain, number of residences in different towns in Spain and regional dummies.

Table 6.
Determinants of the difference between the occupational statuses of the first job in Spain
and the last job in the country of origin (Models I and II) and of the occupational status of the first job in Spain (Model III).

	Difference between the occupational status of the first job in Spain and the last job in the country of origin				Occupational status of the first job in Spain	
	(I)		(II)		(III)	
	Coeff.	Standard error	Coeff.	Standard error	Coeff.	Standard error
Women	-7.227***	(0.708)	-4.768***	(0.804)	-4.312***	(0.826)
Age at arrival in Spain	-0.381	(0.246)	-0.036	(0.146)	0.029	(0.137)
Age at arrival in Spain squared	0.003	(0.004)	-0.000	(0.002)	-0.001	(0.002)
Origin Latin America	-8.539***	(0.836)	-9.719***	(1.133)	-9.937***	(1.228)
Origin Eastern Europe	-9.394***	(1.076)	-12.544***	(1.142)	-13.128***	(1.217)
Origin Rest of developing regions	-10.060***	(0.983)	-12.740***	(1.269)	-13.236***	(1.403)
Secondary education - first stage	-3.125***	(0.668)	0.579	(0.379)	1.265***	(0.384)
Secondary education - second stage	-4.440***	(0.722)	1.991***	(0.464)	3.183***	(0.430)
Tertiary education	-10.692***	(0.903)	7.104***	(0.773)	10.402***	(0.706)
Occupational status in the country of origin	-		-0.844***	(0.020)	-	
Networks (first job through personal contacts)	-0.557	(0.458)	-2.167***	(0.351)	-2.466***	(0.385)
Networks (contacts at arrival)	0.031	(0.857)	-0.077	(0.514)	-0.097	(0.482)
Migration to Spain to work	-1.506***	(0.517)	-4.275***	(0.556)	-4.788***	(0.621)
Residence in developed country before emigrating to Spain	7.229***	(0.996)	3.488***	(0.675)	2.795***	(0.690)
Intercept	12.811***	(4.212)	36.838***	(2.725)	41.290***	(2.781)
R squared	0.178		0.578		0.347	
Adjusted R squared	0.174		0.576		0.344	
Number of observations	4,543		4,543		4,543	

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: All models are estimated by ordinary least squares with errors clustered by region. The immigrant of reference is a man from a developed country with primary studies and without access to networks who did not declare to migrate for work and who did not reside in a developed country (different to the country of birth) before migrating to Spain. Additional controls included in all models are having more than one job in the origin country and in the first job in Spain, self-employed or not in the origin country and in the first job in Spain, job offer before migration and dummies related to the job search in Spain.

Table 7.
Determinants of the difference between the occupational statuses of the current job
and the first job in Spain (Models I and II).

	Difference between the occupational status of the current job and the first job in Spain			
	(I)		(II)	
	Coeff.	Standard error	Coeff.	Standard error
Years of residence in Spain	0.659***	(0.103)	0.558***	(0.087)
Woman	0.275	(0.367)	-1.539***	(0.245)
Age	-0.122	(0.184)	-0.093	(0.156)
Age squared	0.000	(0.003)	-0.000	(0.002)
Origin Latin America	1.324*	(0.854)	-5.680***	(0.901)
Origin Eastern Europe	2.243**	(1.010)	-6.662***	(0.965)
Origin rest of developing regions	1.498*	(1.025)	-7.084***	(0.998)
Secondary studies - first stage	0.627	(0.765)	1.068*	(0.735)
Secondary studies - first stage	1.069*	(0.548)	2.088***	(0.548)
Tertiary studies	3.243***	(0.687)	6.692***	(0.668)
Occupational status of the first job in Spain	-		-0.557***	(0.021)
Downgrading between origin and the first job in Spain	-		1.322**	(0.510)
Recovery between origin and the first job in Spain	-		-2.335***	(0.653)
Migration to Spain to work	0.161	(0.425)	-2.511***	(0.421)
Intercept	2.778	(3.857)	26.696***	(3.254)
R squared	0.039		0.314	
Adjusted R squared	0.027		0.305	
Number of observations	3,032		3,032	

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: All models are estimated by ordinary least squares with errors clustered by region. The immigrant of reference is a man from a developed country with primary studies who did not migrate for work and whose occupational status did not change during the stay in Spain. Additional controls included in all models are marital status, number of children, having more than one job in the first and in the current job in Spain, self-employed or not in the first and in the current job in Spain, more than 1 month unemployed in Spain, number of residences in different towns in Spain and regional dummies.

Table 8.
Determinants of the difference between the occupational statuses of the current job
and the last job in the country of origin (Models I and II) and of the occupational status of the
current job in Spain (Model III). Specification with regional size of the secondary segment.

	Difference between the occupational status of the current job and the last job in the country of origin		Occupational status of the current job	
	(I)	(II)	(III)	
	Coeff.	Standard error	Coeff.	Standard error
Years of residence in Spain	0.232*	(0.122)	0.266***	(0.074)
Women	-6.931***	(0.609)	-4.510***	(0.516)
Age	-0.397	(0.229)	-0.101	(0.155)
Age squared	0.002	(0.003)	0.000	(0.002)
Origin: Latin America	-9.889***	(0.721)	-10.747***	(1.005)
Origin: Eastern Europe	-9.485***	(0.850)	-12.321***	(0.955)
Origin: Rest of developing countries	-9.679***	(0.950)	-12.183***	(1.331)
Secondary studies - first stage	-2.853***	(0.704)	0.769**	(0.355)
Secondary studies - second stage	-3.939***	(0.773)	2.311***	(0.534)
Tertiary studies	-9.268***	(0.794)	8.043***	(0.855)
Occupational status in the country of origin	-		-0.837***	(0.018)
Recognition of foreign education in Spain	4.847***	(1.330)	8.527***	(1.094)
Migration to Spain to work	-1.257**	(0.463)	-3.802***	(0.485)
Spanish proficiency	1.329**	(0.596)	0.993	(0.581)
Legal status	2.030**	(0.833)	1.876***	(0.567)
Regional size of secondary segment (%)	-0.073*	(0.036)	-0.121***	(0.035)
Intercept	18.228***	(3.782)	45.145***	(3.323)
R squared	0.152		0.555	
Adjusted R squared	0.147		0.553	
Number of observations	4,543		4,543	

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: All models are estimated by ordinary least squares with errors clustered by region. The immigrant of reference is a man from a developed country with primary studies and without studies recognised in Spain who did not migrate for work, who is without Spanish proficiency and without legal status. Additional controls included in all models are marital status, number of children, having more than one job in the country of origin and in the current job in Spain, whether the immigrant was self-employed in the country of origin and in the current job in Spain, more than 1 month unemployed in Spain and number of residences in different towns in Spain.

Table 9.
Determinants of the difference between the occupational statuses of the current job and the first job in Spain (Models I and II). Specification with regional size of the secondary segment.

	Difference between the occupational status of the current job and the first job in Spain			
	(I)		(II)	
	Coeff.	Standard error	Coeff.	Standard error
Years of residence in Spain	0.745***	(0.091)	0.610***	(0.086)
Woman	0.292	(0.744)	-1.592***	(0.474)
Age	-0.101	(0.214)	-0.110	(0.182)
Age squared	-0.000	(0.003)	-0.000	(0.002)
Origin Latin America	1.586*	(0.828)	-5.728***	(0.759)
Origin Eastern Europe	2.509***	(0.822)	-6.799***	(0.925)
Origin rest of developing regions	1.616*	(0.960)	-7.221***	(0.978)
Secondary studies - first stage	0.604	(0.496)	1.221**	(0.461)
Secondary studies - first stage	1.128*	(0.584)	2.371***	(0.567)
Tertiary studies	3.189***	(0.686)	6.857***	(0.490)
Occupational status of the first job in Spain	-		-0.543***	(0.033)
Downgrading between origin and the first job in Spain	-		1.237**	(0.532)
Recovery between origin and the first job in Spain	-		-2.485***	(0.409)
Migration to Spain to work	-		-2.520***	(0.391)
Regional size of secondary segment (%)	-0.007	(0.058)	-0.073***	(0.030)
Intercept	1.462	(4.414)	29.180***	(5.068)
R squared	0.027		0.301	
Adjusted R squared	0.022		0.296	
Number of observations	3,032		3,032	

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: All models are estimated by ordinary least squares with errors clustered by region. The immigrant of reference is a man from a developed country with primary studies who did not migrate for work and whose occupational status did not change during the stay in Spain. Additional controls included in all models are marital status, number of children, having more than one job in the first and in the current job in Spain, self-employed or not in the first and in the current job in Spain, more than 1 month unemployed in Spain and number of residences in different towns in Spain.

Figures

Figure 1.
Occupational status of immigrants in their country of origin and in Spain. ISEI scale points.

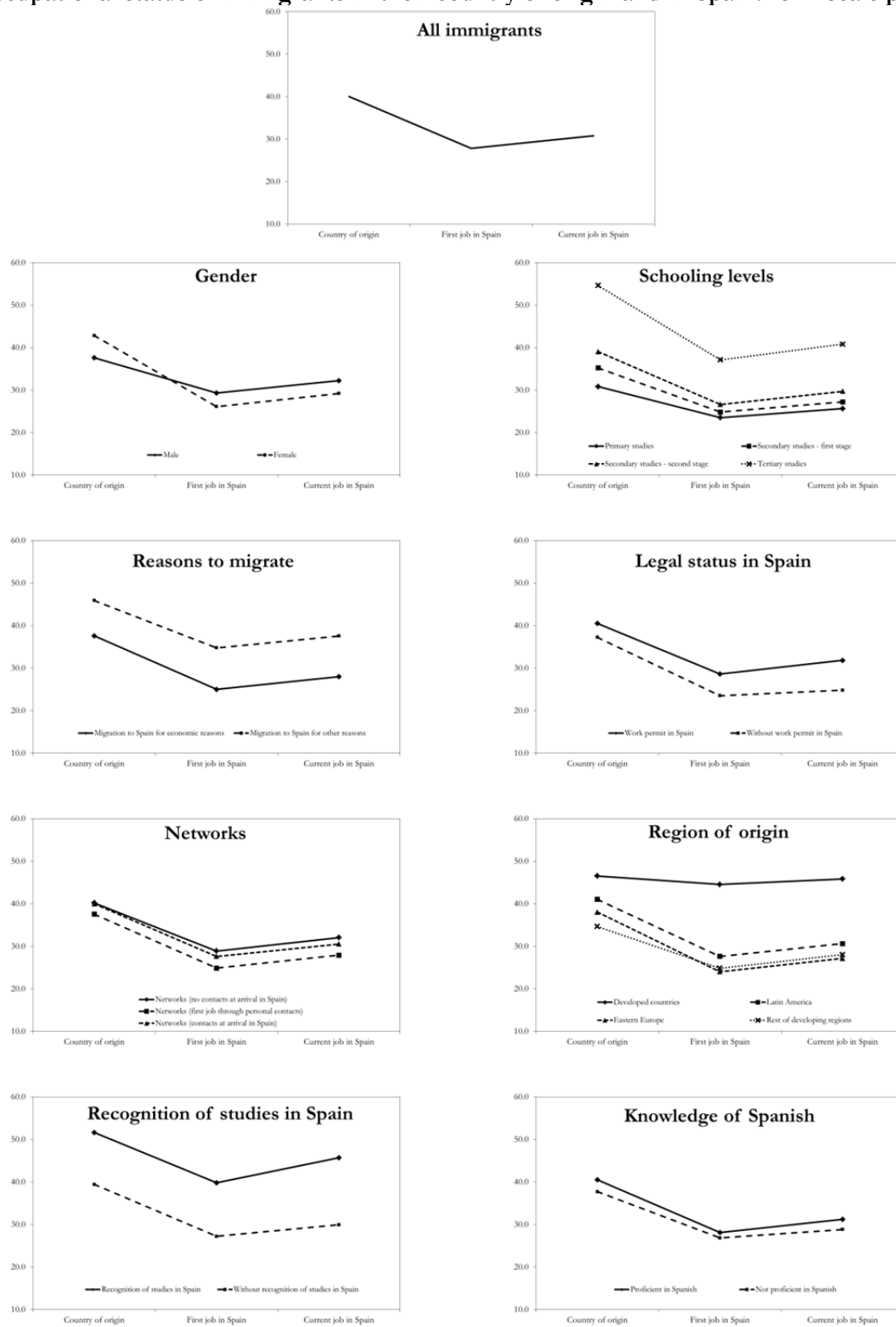
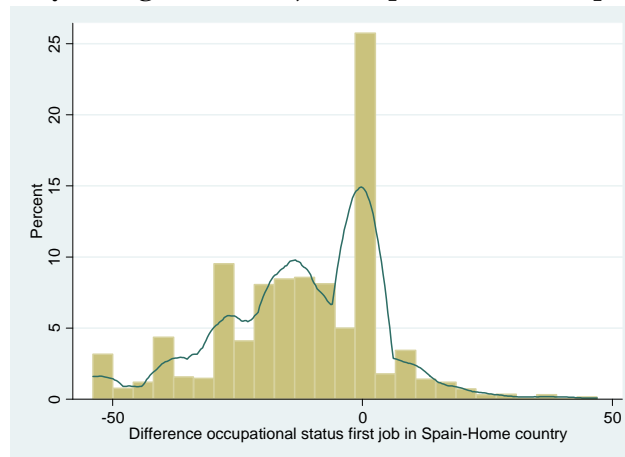
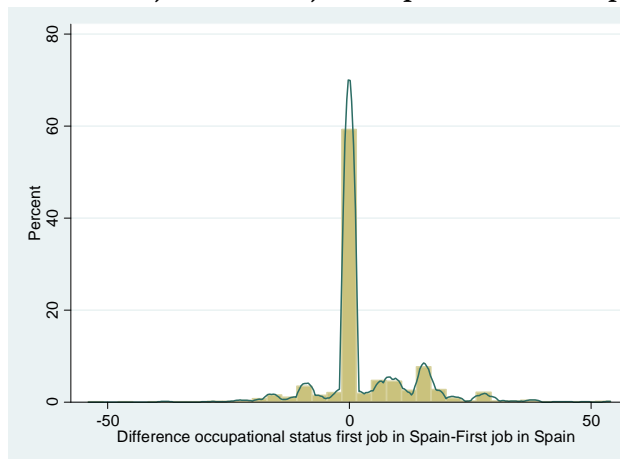


Figure 2.
Distribution of the difference in occupational status between last job in the country of origin and first job in Spain. ISEI scale points.



Notes: The figure contains the histogram graph and the kernel density plot of the distribution of the difference in occupational status.

Figure 3.
Distribution of the difference in occupational status between current job and first job in Spain. ISEI scale points.



Notes: The figure contains the histogram graph and the kernel density plot of the distribution of the difference in occupational status.

¹ In 2006, skilled occupations represented 32% of the total employment in Spain, semi-skilled occupations represented 54% of the total employment and unskilled occupations represented 15%. These values are far from the usual structure in developed countries: for the OECD average, skilled occupations represented 40% of total employment, semi-skilled occupations represented 51% and unskilled occupations represented 9% (OECD, 2008a).

² The literature on immigrant assimilation reports the limited transferability of human capital acquired by immigrants in their country of origin (Chiswick, 1978; Borjas, 1985 and 1995; Friedberg, 2000). One basic reason for the low valuation of immigrant human capital lies in an insufficient command of the language of the new country that conditions the productivity of the rest of the immigrant's skills. Additionally, the education system in the country of origin may suffer from shortcomings that translate into a lower quality of education acquired in origin by immigrants, while the work experience gained in origin might mean that the human capital acquired is specific to that country. As a result, the human capital imported by immigrants is comparatively less productive and job market opportunities and wages are worse than those for natives with similar levels of human capital.

³ There are several theories that explain the existence of discrimination in the labor market against collectives as immigrants: the taste for discrimination model (Becker, 1957), the statistical theory of discrimination (Phelps, 1972), and the crowding-out hypothesis (Bergmann, 1974). Discriminatory practices both by employers and institutions in the case of immigrants may exist particularly if they are visibly distinct from the native population (Burstein, 1994). Evidence documenting discrimination in the labour market against immigrants can be found in Zegers de Beijl (2000) and Siniver (2011).

⁴ Overall, the empirical evidence available on immigrant labour adjustment in host countries from international comparative analysis based on labour market data is overall very scarce due to data limitations. Reviews of this body of research can be found in Reyneri and Fullin (2011) and Kogan (2006).

⁵ From a different perspective, Simón, Sanromá and Ramos (2008) observed that occupational segregation is one of the main reasons for the significant gap in average earnings between immigrants and natives.

⁶ More detailed information on the contents of the ENI, the sample design and the data collection procedure used is available at the web page of the Spanish National Statistics Institute (www.inec.es).

⁷ The final sample included 15,465 interviews from a theoretical sample size of 17,700 households. The contact rate of the survey was approximately 88%, and the cooperation rate was nearly 55% (thus, 32,541 households were visited to obtain the mentioned number of interviews, giving a response rate of 48%, which is a usual value in voluntary household surveys). Moreover, it is important to highlight that the comparison of the results provided by the ENI and other sources like the *Labour Force Survey* and the *Municipal Population Register* shows no significant differences in relation to the characteristics of immigrant population.

⁸ It must be noted that in the case of the ENI, in which the occupational breakdown covers 20 occupations, it takes values between 16 and 70. More details on the occupational breakdowns used in the empirical analysis and the values of the status of occupations according to the ISEI scale can be found in Table A.2 of the Annex.

⁹ Despite these advantages, this international index of occupational status has barely been used previously for the examination of occupational mobility of immigrants. To our knowledge, the only precedent is Akresh (2008).

¹⁰ Developed countries include the European Union-15 countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom), Norway, Switzerland, Iceland, Cyprus, Malta, the small European principalities, the United States, Canada, Israel, Japan, Australia and New Zealand. All other countries have been considered developing countries.

¹¹ The corresponding dichotomous variable reflects, in particular, whether immigrants have any of the following documents: permanent residency authorisation; temporary residency authorisation; European Union residence permit (except in the case of Romanian and Bulgarian workers who, despite being European Union citizens, could not become legally contracted workers in Spain temporarily at the time of the survey); refugee status or asylum application. This category also includes immigrants whose nationality is Spanish but who come from other European Union member states (excluding Bulgaria and Romania) or from non-European Union members of the European Free Trade Association (i.e., Liechtenstein, Iceland, Switzerland and Norway), given the free mobility of workers among these countries.

¹² Reher et al. (2008) provides a complete description of immigrants according to the ENI survey.

¹³ We follow here the terminology of OECD (2008a) on the types of occupations in terms of their skill level. Note that with the occupational breakdown in the ENI, there is a particular occupation for which is not possible to assign a specific level of qualification.

¹⁴ We thank an anonymous referee the suggestion of exploiting heterogeneity in the size of the secondary segment for Spanish regions.

¹⁵ Although comparisons between the native population and the migrants can be distorting, given their plausibly different characteristics in terms of age, gender and education, this result is consistent with the evidence in Dustmann and Frattini (2011). These authors use the ISEI to compare the occupational status of natives and immigrants in European Union-15 countries and find that, even after controlling for the observed characteristics of both groups in terms of gender, regional distribution, age and education, the occupational disadvantage of immigrants in Spain is comparatively high.

¹⁶ Note that when the variable years of residence in Spain is included in the model, the variable related to the age approximates the effect of potential experience in the country of origin.

¹⁷ These models have been estimated only for immigrants changing their job during their stay in Spain.

¹⁸ Models in Tables 7 and 8 replicate those in Tables 5 and 7, respectively. Note that models in Table 6 do not include regional dummies, given that information on the region of residence in *Encuesta Nacional de Inmigrantes* corresponds just to the time of the survey.