



LUND UNIVERSITY

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Master in Economic Development and Growth

Immigration in Spain: A within migrant groups study

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Abstract: Since the mid-nineties the migratory flows towards Spain have reached an unprecedented level in a country typically accustomed to emigration. Using data from the National Immigrant Survey (ENI) for the year 2007, the objective of this work is to study the main characteristics of Eastern Europeans, Latin Americans and Africans and their situation in terms of earnings assimilation with respect to the benchmark used, migrants coming from Western Countries. In order to determine what factors are being more relevant in their labour market integration process, the interactions between the region of origin and certain factors (mainly educational attainment, language capabilities and network effects) had been included. The results show that on average the Latin Americans perform the better followed by the Eastern Europeans. However, it seems that the assimilation process in the Spanish context is mainly driven by the productive structure of the Spanish economy, in such a way that the absorption of a large part of the foreign born labour force by low-skill occupations have reduce the relevance of traditional determinants of the income level as the education and linguistic capabilities.

Key words: Immigration, integration, income level

EKHR92

Master thesis (15 credits ECTS)

June 2012

Supervisor: Jonas Helgertz

Examiner: Anders Nilsson

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1. INTRODUCTION

For several decades already the study of the migratory flows has become one of the most recurrent topics in the literature. In particular, much of the attention has focused in determine how well the migrants adapt to their host country. In this field and given the relatively easiness in its measurement, as well as its importance for both the receiving society and the migrants itself, the labour market assimilation¹ has focused much of the attention.

The two traditional ways to measure the labour assimilation have been to analyse the existing wage gap between migrants and natives, and how it evolves through time, together with the exploration of potential differences in the labour market participation or unemployment probability. The seminal work on the subject was written by Chiswick (1978) who claimed that there is a progressive assimilation of migrants as the length of their residence in the host country increases; in fact, according to the author this process is of such magnitude that after approximately a decade the catching-up has ended. Even though these results were quickly refuted by Borjas (1985), who stated that working with a cross-section might provide erroneous estimators as long as there have been any changes in the productivity level of the subsequent arrival cohorts, it was the beginning of a long way in the research of the main determinants of the assimilation and its speed.

Since that first step much has been done in the analysis of the involved factors influencing the integration, which would go from human capital mobility topics (Friedberg, 2000) to purely productive issues (Rosholm et al., 2006), without ignoring the potential networks effects, either through friendship ties (Munshi, 2003) or even marriage (Dribe & Lundh, 2008), and some issues related with purely social integration (as the outcomes obtained for subsequent generations of migrants for whom in theory the integration should be easier as they are born and raise in the host country, Portes et al, 2009).

Thus, it is clear by now that it is not possible or, at least, not too appropriate to talk about immigrant integration as a general phenomenon. There is not an average migrant whose assimilation path might be used as an approximation of the process for any others. The characteristics of immigrants are changing not only through time but also among origins, and therefore the integration route varies too. Not all groups will be able to catch up with their natives counterparts and even if so, the timing of the process might differ greatly.

Built on those premises the study of the how the integration process is developing in Spain is of high interest, as it has experienced a fast massive migration which has

¹ Technically speaking the concept of assimilation and integration are different, implying the first one a bigger identification with the host society at the expense of a deep separation from their original culture, whereas the integration can be define as a mid-point where both cultures are part of the immigrant identity (Constant & Zimmermann, 2009). Nevertheless, in the economic context these differences somewhat lose relevance, so both terms will be used indistinctively throughout the present work.

changed the society and the labour market. Contrary to the experience of other European countries Spain was an emigration country until 1970s, and it was not until the last decade of the past century when this situation transformed abruptly. In scarcely ten years the country went from barely 1.2% over the total population being foreign-born in 1996 to a figure close to 10% in 2007. At the same time the regions of origin and the characteristics of the migrants arriving to Spain were changing. While during the late 80s and early 90s the migrants come mostly from other European countries, at present Eastern Europe nationals and Latin Americans have become the main groups.

In this way, some questions have arisen about their integration process. While some of them have already been addressed by the literature, as their participation and unemployment rates (Fernández & Ortega, 2008), the matching between their qualifications and the job obtained (Amuedo-Dorantes & de la Rica, 2007) or the velocity in the wage assimilation (Izquierdo et al., 2009); there are some inquiries unresolved regarding how the different migrants groups are behaving and what characteristics are most important to determine their earnings level.

The aim of this study is precisely to study the income differences of the most numerous migrant groups in Spain, i.e. Eastern Europe, Latin America and Africa, in relation with the reference group, which in the present case and due to issues of data availability will be migrants from other developed countries (Western Countries). Among others variables, the interest will be focused on the returns to education and country-specific skills (language), the social integration (measured by the years since migration) as well as the role of networks for the analysis of the migrants' economic performance. In order to do that, the National Immigrant Survey 2007 (ENI by its acronym in Spanish) will be used. This survey is a comprehensive one, carried out with the intention of obtaining a clearer view of the immigrants' situation in Spain, their demographic characteristics and their family and social networks. The use of this dataset will provide us with a general view of the situation of migrants in Spain until the beginning of 2007, or, what is the same, the period of stronger and more continued economic growth in the recent Spanish history. Additionally the timing of the survey will allow us to have a complete study of the conditions right before the beginning of the deep economic crisis which affects the country now. Thus, the results will not be affected by the economic downturn yet so they might provide a benchmark for future research as well as facilitate to make some predictions about what migrants groups will be more vulnerable facing the present situation.

The work is organized as follows. The next section presents a brief summary of the immigration in Spain during the last decades. The third section contains the literature review. The fourth section contains the theoretical framework. The data and the methodology are included in the fifth section. The sixth one presents the results. Finally, section seven concludes this study.

2. SPAIN AS AN IMMIGRATION COUNTRY

The immigration phenomenon is relatively new in Spain which, as other Southern-European countries, has traditionally been a country of emigration since the late nineteenth century.

At that time the migratory outflows were initially directed to the ex-colonies in Latin America, trend that was partially stopped due to the two World Wars and the Spanish Civil War (1936-1939). Afterwards, the destination of the Spanish migrants changed and during the 60s and 70s other European countries, and especially Switzerland, Germany and France, became the main receptor. Subsequently the economic turmoil in these destination countries related with the oil crisis and the economic growth in Spain started changing the patterns once again. In this way, from the beginning of the 90s and mostly from mid-90s onwards Spain started to receive a large migrant inflow.

According to Reher & Silvestre (2009) the immigration to Spain has three main phases. The first one, until 1985, was not very significant in number and was mostly composed of other European nationals retired or working for multinationals, as well as Latin American political exiles. From then on and until the end of the century the inflow started to increase progressively and the origin of the new arrivals also changed. Latin America, North Africa (Morocco), Eastern Europe (Bulgaria and Rumania) and, at a lower level, Asia were the main origin regions. However, the beginning of the 21st century not only meant the consolidation of the new origin patterns but also a sharp and fast increase in the number of immigrants, partially motivated by the strong economic growth experienced by Spain during most of the last decade.

There are some other fundamental reasons, apart from the economic growth, which might help to explain the change in trend and the increasing immigration flows to Spain. The geographical location makes Spain (and other Southern Europe countries) a clear access door for those looking to enter the European Union from Africa. Additionally, the historical and linguistic links with Latin America makes potentially easier the arrival process and subsequent integration.

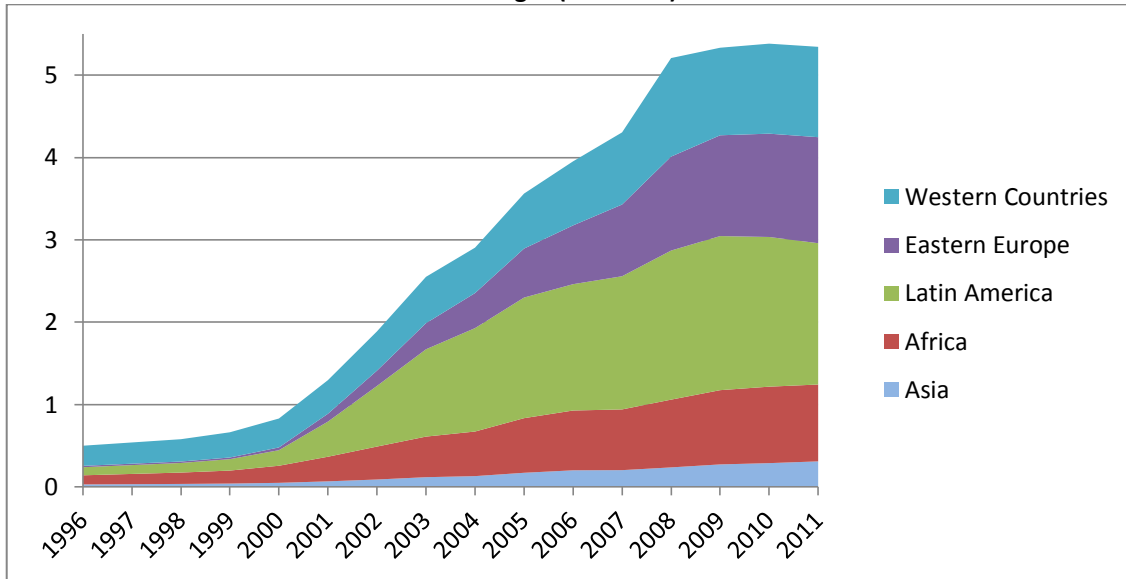
As a consequence of all that, in just a few years the immigrant² stock in Spain has gone from around half a million (and 1.26 % over the total population) during most of the 90s to almost 4,5 million in 2007; reaching a level which, in percentage over the total population (almost 10%) is comparable to that figure in other European countries with a longer history as immigration receptors, as Sweden³. In the figure 1 we can observe the intense increase in the migrant inflows and the change in the regions of origin. Figure 2

² These figures about the migrant flows as well as the graphs attached used a “foreign born person” as the definition of immigrant in order to keep the coherence with the definition utilized in the main source of data for the empirical study.

³ According with Edin et al. (2003) in 1997 an 11% of the Swedish population was foreign born.

allows us to have a clearer image of the latter. In this way, the Western Countries⁴ which represented almost 50% of the immigrant stock by 1999 have lost importance, being now just 20% of the total⁵. In the same way, Africans have lost relative importance when compared with Latin-Americans or Eastern Europeans.

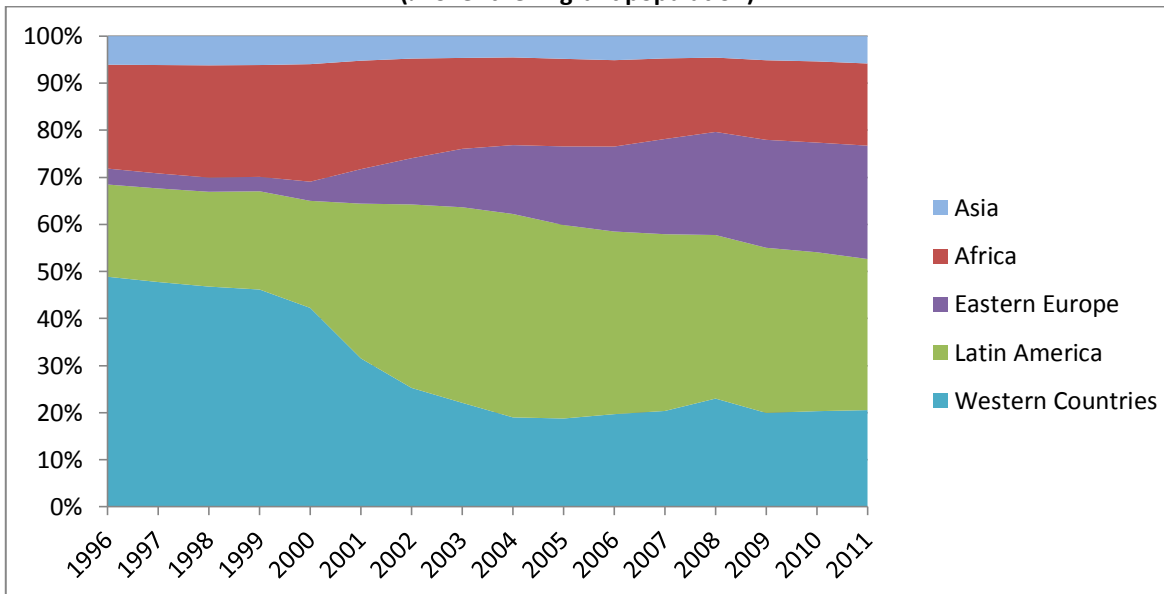
Figure 1. Evolution of Foreign Born by Region of Origin, 1996 – 2011 *
All ages (in million)



*Data for 1997 not available, estimated as an average of 1996 and 1998.

Source: Compiled by the author based on the data in the Padrón Municipal, Spanish Statistical Institute (INE).

Figure 2. Evolution of Foreign Born by Region of Origin, 1996 - 2011*
(% over the migrant population)



*Data for 1997 not available, estimated as an average of 1996 and 1998.

Source: Compiled by the author based on the data in the Padrón Municipal, Spanish Statistical Institute (INE).

⁴ The countries included in this category are the same than in the footnote 17, with the exception of Australia, due to unavailability of separate data for it during most of the 1996-2011 period.

⁵ This proportion is indeed quite large, being probably mostly due to the citizens of other European countries who select Spain as their place to retire.

It is noticeable that this strong increase took place even though the immigration laws on action were much more severe from the 90s when the renewals of work and residence permit started to be limited and a system of quotes were established. However, as Amuedo-Dorantes & de la Rica (2010) expose, the lax implementation of those laws and the lack of restriction to foreigners to enter as tourists limit the effectiveness of the restrictive measures. As a consequence, the number of undocumented migrants increased what lead to the implementation of different extraordinary regularizations processes or amnesties (in 1986, 1991, 1996, 2000 and 2005) with different target populations and requirements⁶ and the objective of normalize the actual presence of a big number of migrants without legal status.

The increasing path in the immigrant population in Spain has started to change recently as a result of the deep economic crisis in the country at the moment. As can be observed in the figure 1 since 2008 the increase has been almost negligible, and 2011 was the first year in a decade in which the number of emigrants exceeded the immigrants (with a negative balance of around 50,000 people⁷). It is still soon, and the data scarce, to state a long-term change in the trend but it is reasonable to assume this behaviour to continue at least for as long as it takes to get back to the path of economic growth. Besides, even if the immigration were to increase again it is doubtful if it will reach again the impressive numbers of the past decade.

Anyway, in spite of the latter development, the immigration phenomenon has already changed deeply the configuration of the Spanish society affecting, among others, the labour and housing markets as well as the demographic movements.

3. LITERATURE REVIEW

The economic integration of migrants has been extensively studied, being often the main focus of attention the comparative performance of migrants and natives in the labour market, measured either by the wage gap or by the employment status. The seminal study by Chiswick (1978) about how the foreign born integrated in the US during the 70s established that despite the existence of a wage gap among both groups, it was gradually closed as the length of their residence increased. And in fact, according to Chiswick this gap was completely overcome after approximately a decade. However, these results were questioned by Borjas (1985) who stated that in the presence of differences in the productivity level among immigrant arrivals the cross-section studies are bound to give erroneous conclusions. That is, subsequent arrival cohorts may present new characteristics which determine either their individual productivity to be

⁶ Some of the regularizations processes were applied only to workers while others applied to all foreigners. In the same way, the conditions regarding the proven previous residence or the requirements of having had a work/residence permit at some point in time varied. For a more comprehensive view on the issue see Appendix 1.

⁷ Spanish Statistical Institute (INE).

lower or their expected productivity to be lower⁸ which in any case will yield to worse results. These characteristics may change due to different reasons. As Fernández & Ortega (2008) state the cohort effects may be a result of changing economic conditions in either the origin or the host country, modifications in the immigration policy or non-random return migration.

Several studies have focused in different determinants of the assimilation gap. Among them, it is noteworthy the human capital and in particular its mobility issues given the lack of an educational common framework and the asymmetric information in the labour market, what impedes the proper portability even of the previous working experience (Friedberg, 2000). The effects of changes in the economic conditions of the host country and even changes in its productive structure have also been studied (Rosholm et al., 2006), as they might give a new relevance to the country-specific skills, as language or customs, making more difficult the adaptation to immigrants. Some attention has also been directed to the importance of networking, conformed for either immigrants (Munshi, 2003) or natives (Dribe & Lundh, 2008; or Schlueter, 2012), and their positive effect on the outcome due to the information provided or facilitating the acquisition of country specific skills.

Still, doubts remain regarding the feasibility of the immigrants' complete assimilation, especially in terms of salaries, and the period required for that. To further clarify this issue some authors have focused their attention in the second generation migrants, that is, those born in the host country with at least one parent born abroad. Given that the second or subsequent generations have grown up in the receiving country they should not be as different from natives in terms of education, language proficiency or other specific skills. Nevertheless, the results show that even in this situation the assimilation gap might remain, being observable strong differences in the catching-up process by region of origin (Rooth & Ekberg, 2003, and Hammarstedt & Palme, 2006, in the Swedish case; or Portes et al. (2008) for the United States).

Given the high relevance of the migrants as labour force during the last decade in the Spanish economy it is important to determine how well they have integrated. However, up to date there are rather few articles analysing the economic integration of migrants in Spain, even less in the particular field of earnings assimilation. The main reasons for this situation are the relatively novelty of the grand-scale immigration in the country as well as the lack of *appropriate* data to perform this research. In this way, until the publication of the National Immigrant Survey (ENI) in 2007 there were not a source covering systematically the situation of immigrants in Spain, and the general sources (Census, Earning Structure Survey or Labour Force Survey) quite commonly were

⁸ As an example, in the case of new origin countries it is possible that the employer who cannot estimate properly the productivity level of the worker, as they do not have enough information about the immigrants and have doubts about the quality of the education obtained or their potential performance, decide not to hire immigrants or base his decision on previous experience with someone from the same origin or general beliefs about certain group. That would be the so-called "statistical discrimination", which would tend to hinder the results of the newer migrants groups.

lacking either some basic demographic information or the data about some economic outcomes.

In spite of that, there are some recent studies regarding their economic integration as well as their effects on the native's workers results. Carrasco et al. (2008) carried out a study about the consequences of immigration on wages and employment probability of Spanish workers concluding that there was not a significant effect. Amuedo-Dorantes & de la Rica (2010) compared the responsiveness of immigrants and natives to the regional unemployment prospects, determining that the latter group choose to reside in regions where the likelihood of being employed is higher given their skill level. Moreover they stated that the ones coming from Africa or Latin-America seem more responsive than natives or Europeans outside the EU-15.

Also Amuedo-Dorantes & de la Rica (2007) studied both the employment and occupational assimilation of migrants when compared with an equivalent native. Given that having an employment might not be a good assimilation measure by itself, as it is probable than the job found represents a downward assimilation due to the issues of human capital mobility, the authors also try to study how good the matching process for migrants is in the labour market. In order to do that, they construct a ranking of occupations based on the average hourly wage. They conclude that migrants have a lower probability of being employed than a comparable native, being the gap larger for males and some migrants groups (Africa and European Union-15⁹). Similarly in comparison with natives the occupational attainment is better for the EU-15 citizens but it seems to be some catching-up for all the others groups except with Africans.

In the issue of integration trough the participation and unemployment rates, Fernández & Ortega (2008), using the Labour Force Survey (LFS) during 1996-2006, concluded that “compared to natives, immigrants face initially higher participation and unemployment rates, as well as higher incidence of overeducation and temporary contracts” (p. 104), but after a few years of residence there seems to be an assimilation process going on; however, that assimilation only affects the participation and the unemployment outcomes. Additionally the authors stated that the migrants from Eastern Europe are the ones with a better performance while the African ones are the less successful.

Regarding the earnings assimilation, Adsera & Chiswick (2007) in their comparative study of integration by geographic origin in different European countries cited Spain as one of the countries where the migrants, and particularly those from outside the EU, performed worse in relation to native. In fact, they estimate the difference in the earnings level between EU and non-EU born in approximately 14% for women and 26% for men, but only significant in the first case. Antón et al. (2010) analysed the wage differentials across the earnings distribution among immigrants from Latin

⁹ The result associated with the EU-15 natives might be surprising at first sight, but taking into account the characteristics of their sample it is likely that much of this effect is caused by older people going to Spain for their retire or students in exchange programmes.

America and the Caribbean and the Spanish natives. Using a quantile regression, they conclude that the differences are smaller the lower the wage (due to market institutions as the minimum wage), but as the earnings increase so does the difference that cannot be explained by observable factors.

Finally, Izquierdo et al. (2009) were the first study which tried to measure the earnings assimilation in the Spanish context, and they did it with a panel dataset. For obtaining this panel data they combined the information from the *Padrón Municipal* (Municipal Register) with the one from the Continuous Sample of Working Histories (*Muestra continua de vidas laborales*) which, being an administrative source, is limited to the formal economy what might affect until some extent the validity of the results. According to them, the initial wage gap is closing with time and the assimilation rate is pretty fast, as half of the initial difference is over after approximately six years in the country, but there does not seem to be a complete catch-up. The authors did not refer much to the differences among groups of migrants, though.

4. THEORETICAL PREDICTIONS

Thus, it seems clear that there are several difficulties that immigrants have to face during their integration process on the host country. The aim of this section is to explain what variables seem more important, and what results might be expected, when analysing the earnings assimilation in the particular case.

In the first place, it is noteworthy the role of human capital. Since the fundamental work by Mincer (1974), it has been accepted that the human capital stock, understood as the years of education and experience, is a basic determinant of the individual earnings level. However, as it was mentioned before, the empirical evidence also shows that in the migratory flows the differences in the quality of the education, the absence of a common educational framework and the asymmetric information in the labour market make difficult the mobility of human capital. Thus, limiting the potential returns to any kind of human capital obtained before the migratory experience (Friedberg, 2000). As a consequence, it is expected to be a greater occupational segregation and overeducation for immigrants than for natives (Antón et al., 2010). In fact, in the Spanish case seems to be a high level of overeducation among migrants (Fernández & Ortega, 2008), in such a way that the labour market has been able to absorb the increasing foreign labour force at the expense of a bad matching between the immigrant's capacities and the occupation performed (Amuedo-Dorantes & de la Rica, 2007). Therefore, taking all the previous evidence into account, the hypothesis for the Spanish context is that the educational attainment will not be a strong determinant of the income level, as an important amount of migrants are occupied in jobs which do not require those kind of skills. In spite of that, it is also expected that the educational level would be more valuable for those who either finished their studies in Spain or have validated their certificates, as the information asymmetries will be smaller in that case. Additionally,

and related with the latter, the returns to human capital for those born in the Western Countries should be higher since the educational framework is supposed to be more similar, especially, for the EU nationals.

Regarding the language abilities, even though *a priori* they should be highly relevant as income determinants (Helgertz, 2011), as Rosholm et al. (2006) expose the importance of any country specific skill is greatly conditioned to the productive structure of the receiving country. As an example, it is expected that the knowledge of Spanish of those employed in the service sector to be better than the linguistic capacities of those working in agriculture or construction. Consequently, the main sectors of employment for migrants in Spain will graduate the importance of the language. In that way, the initial advantage that could be assumed for Latin Americans as a group due to sharing the same language is expected to be reduced given that around 70% of male workers from Eastern Europe and Africa and 60% of Latin Americans work in agriculture, construction and industry (see Figure 3 below), that is, sectors where the linguistic skills might not be of such importance¹⁰. For the same reason, as the “other services” category employs a large share of the foreign-born females it would be reasonable that the returns to language were bigger for women.

Typically one would think too that the social integration in the host country would also help to the earnings assimilation, as it may reduce the initial differences in the country-specific skills endowments among groups. According to that, the years since migration, variable which usually proxies for the social integration, should have a positive effect on the earnings and this effect would be larger for those groups that are more culturally distant, i.e. more important for Eastern Europeans and Africans than for Latin Americans. However, as recently mentioned this type of skills might not be so important in the Spanish framework, if that were the case then it would also affect the relevance of years since migration as determinant.

Another factor that helps to explain the wage gap when comparing natives and immigrants or evaluating differences within migrants groups is the reserve wage (Antón et al, 2010). Basically it is related with the diverse circumstances faced by migrants, i.e. lower family support, lower unemployment benefits or more willingness to work in order to send remittances, what changes the elasticity of their labour supply and the minimum wage threshold. In this case, given that both their characteristics are different and the investment needed to migrate is smaller for the migrants coming from Western Countries, their reserve wage should be higher what would imply a lower participation rate at the same time than a higher minimum wage.

It is also remarkable the role of the social capital or networks in the earnings level. In this view, the presence of a larger share of immigrants of a certain origin, if forming a close enough network, may have positive effects on the labour outcome of the new

¹⁰ Even if the Latin Americans might not have any advantage due to their language skills at the time of the survey, it is worth to mention that their abilities make them more flexible (they might change to the services sector more easily) what would mean they are less vulnerable in the present economic crisis.

arrivals from the same origin due to either the information or direct help (i.e. financial, housing) provided (Munshi, 2003). The social capital idea can also work with inter-ethnic networks, in this way the social ties with natives would help not only facilitating information but also making easier the acquisition of country-specific skills (Dribe & Lundh, 2008; or Schlueter, 2012). In the Spanish case, and focusing in the migrants networks, it might be expected a positive effect due to the presence of more migrants from a common region. However, taking into account that the presence of most of the groups is quite recent it sounds reasonable to doubt about the capacity of the network to provide information or credible references. Moreover, even if the network is working properly there are limitations to its operation: the information and help will usually be restricted to the sector one is working on, so if the more established members of the network are occupied in low-skill jobs it may cause some sort of persistence for the newest arrivals, what would also help to explain the strong concentration of migrants in some sectors observable in Spain.

Finally, *a priori*, and in spite of the anticipated limitations in the explanatory power of both language and education in the present case, the Latin Americans are expected to be the group with the better performance (as they have a similar educational attainment than Eastern Europeans and better language proficiency), followed by the Eastern Europeans (as both their education and language skills are on average superior than those for Africans).

5. DATA AND METHODOLOGY

A. DATA

The data used comes from the 2007 National Immigrant Survey (ENI), a one-time survey which was carried out between November 2006 and February 2007 by the Spanish Statistical Institute¹¹ (INE). The survey contains information on 15,465 migrants and covers a wide range of subjects regarding their economic status and living conditions, their social integration, their family situation and their network. As the sample only covers immigrants it is important to clearly determine which definition was used by the survey. According to the ENI, and therefore in this work, immigrants are those who were born abroad, independently of the nationality they held at the time of

born abroad¹². Due to the latter it could be feasible to create a sort of proxy for natives in order to make some comparisons, however the small remaining sample size suggests that the results obtained in that way might not be too robust. For this reason, even though the summary statistics will include the natives as a group in order to help

¹¹ The microdata file is available in the INE webpage (http://www.ine.es/prodyser/micro_inmigra.htm) in ascii format; in order to generate an usable file, a data dictionary file available at the Population and Society Research Network (GEPS) was used (<http://www.geps.es/bases-de-datos/eni/>).

¹² According to Reher & Sánchez (coord., 2009) about 10% of the sample was in this situation.

obtaining a general overview of the situation, the econometric exercise will take those coming from western countries as the benchmark¹³.

The base to the selection of the sample was the information on the *Padrón Municipal* (Municipality Register) collected by the INE. This has some consequences on the structure of the data. First, it means our sample includes undocumented migrants¹⁴, as it is not necessary to have *legal* status to register on it and there are strong incentives for migrants to proceed with the registration, since it is a requirement to have access to some social services, as health care or education for their children¹⁵. In spite of that, it is quite accepted that the undocumented migrants are underrepresented in the *Padrón*, what in turn will mean an underrepresentation of this kind of immigrants in the sample. This same problem may happen with the seasonal workers, either in agriculture or other sectors, which not always proceed to officially register.

As it has been said the actual data was collected during the end of 2006 and first two months of 2007. This is positive for the consistence of the results, as the income level will not be highly affected by the present economic crisis. At the same time, this implies that the validity of the obtained results have to be limited temporally, since the present outlook will be quite different.

Working with survey information to analyse the income level has some benefits, as it is possible to include undocumented migrants, documented ones working in the informal sector and also self-employed individuals¹⁶. However, this kind of data has some other drawbacks extensively studied in the literature¹⁷. First, it might be an income non-response; if this is frequent and non-randomly distributed (some individuals might have a lower willingness to provide this kind of information) then the estimators may be inaccurate. Second, there is the possibility of an error in the report of the income sources, this kind of issue will be larger the more sources of income. Third, as it is

¹³ This decision might affect the results as the performance of those coming from Western Countries may be better than the native ones, in such a way that we can be overestimating the real differences among natives and migrants from other regions of origin. Nevertheless, it seems that the average income for the proxy for natives and immigrants from Western Countries by sector of occupation is not so different (Appendix 2); being the divergence a bit greater for women.

¹⁴ This means that those migrants do not have any sort of residence nor work permit. In spite of that, it is still possible that they are working in the informal economy in such a way that the survey will contain an income for them which would not be available in official sources. Although the hidden economy is not a big issue in some European countries, the estimations for Spain are not so encouraging; according to Schneider & Enste (2000) the size of the shadow economy was approximately a 22% of the GDP in the 90s, while the labour force employed in it would be around 11.5-32.3% for 1997-1998. Prado Domínguez (2004), on the other hand, calculated the size of the informal economy in 26.92% of GDP in 1995 and 17.75% of the official GDP in 2001.

¹⁵ Unfortunately, the variable collecting the kind of permit held by the particular migrant has too many missing values to successfully identify the undocumented ones.

¹⁶ It is quite common in the assimilation literature to exclude the self-employed from the study (Friedberg, 2000; Izquierdo et al., 2009). This decision is usually related with the use of administrative registers as information sources and the not uncommon difficulties to determine if the informed earnings are the real ones (they may have some freedom to choose the contribution bases and therefore the income may be downward biased with respect to the real one). In the present case, as in any other case working with surveys, all the information is self-reported so there is no reason to exclude those self-employed.

¹⁷ See among others Moore et al. (2000), National Research Council (2001).

referred to a single point in time the data may be affected by seasonality in the incomes. Finally, there might be an error in the income amount, that is, it being upward or downward bias; in relation with that, Moore et al. (2000) state that the potential bias and the random error when reporting wage incomes are quite small.

In the particular case the reported income, according to the survey questionnaire, should correspond to the average monthly income due to the main employment, including the proportional part of any extraordinary payment which is received regularly. Therefore, *a priori* the sample may suffer from underreporting caused by the existence of several income sources; however a closer analysis of the data tell us that only about 6% (374 over 6,046) of our restricted sample, which includes only individuals who have declared their income and accomplish some other requirements exposed later, have declared to have more than one job.

Taking into account the main regions of origin, the sample has been divided in four main groups plus the proxy for natives. These immigrants groups are Western countries¹⁸, Eastern Europe¹⁹, Africa²⁰ and Latin America²¹. Even though it would have been interesting to separately analyse the results for natives from North (Algeria, Egypt, Libya, Morocco and Tunisia) and the rest Africa, it has not been possible given the small sample size of the latter. For this same reason, Asia had to be excluded from the study.

In Table 1 we can observe some summary statistics of the working sample. We see that on average immigrants are younger, less likely to be married and have lower education (with a higher probability of not having any formal education) than natives. Not surprisingly, the Spanish nationality is held more commonly by those groups with a longer residence (especially Western Countries) and Latinos, who are favoured by the beneficial conditions that the Spanish law offer for naturalizing to those coming from territories with historical ties, among others a shorter period of residence. However, there are important differences in the characteristics depending on both the origin and the gender.

In this way, it is noteworthy the great differences on the educational attainment by different origins. Whereas those coming from Western Countries, Eastern Europe or Latin America have relatively similar proportion of people with some educational level finished, being the most important difference in the maximum level achieved (secondary or tertiary), around 30% of Africans (40% in the female sample) do not have any formal education completed.

¹⁸ Austria, Belgium, Denmark, Finland, France, Greece, Ireland, Iceland, Italy, Liechtenstein, Luxembourg, Monaco, Netherlands, Norway, Portugal, Andorra, United Kingdom, Germany, San Marino, Sweden, Switzerland, Canada, United States, Israel, Japan, Australia and New Zealand.

¹⁹ Following Fernández & Ortega (2008) the following countries have been categorized as Eastern European: Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Slovenia, Estonia, Georgia, Hungary, Latvia, Lithuania, Macedonia, Malta, Moldova, Montenegro, Poland, Czech Republic, Serbia, Slovak Republic, Romania, Russia and Ukraine.

²⁰ All the African countries.

²¹ Central American, the Caribbean, South America and Mexico.

Regarding demographic characteristics, and focusing particularly in the number of children living either together or away, it is remarkable that African women have more children than other groups on average; in the case of African men they tend to have less children than the females from the same region but still they have more children on average. Concerning the number of children living in a different household it is possible to observe that Western Europeans have on average much less children in this circumstances, what might be explained by the kind of migration that they face in relation with the other groups; that is, as they are usually not economic migrants they do not need to leave their children behind. In this sense, it seems that Latin men and women have a higher number of children in this situation, what could imply a bigger number of economic migrants who had to leave their families in their origin country; however, as the variable is limited only to not living in the same household we cannot disregard other explanations (divorce or separation) as being the cause.

With regards to labour market outcomes, the Table 1 show us a high level of labour force participation (defined as those people who has declared to be either employed or actively looking for a job at the time of the survey) which is around 85% in the general sample and over 90% for males. Although these results may be striking at first, it is necessary to stress that this sample has already been truncated to get only those individuals more likely to participate in the labour market (among 25 and 54 years old) trying to avoid any kind of self-selection in the participation decision. Nevertheless the general trend, a similar participation to natives for most of the migrants and higher in the case of women, it is the same than the one obtained in other analysis using administrative data (Fernández & Ortega, 2008) what gives some confidence in any inference we can make. It is worth to mention the considerable lower participation of the migrants from Western Countries in comparison with the other groups. It is plausible to assume that since this group is not compose of typical economic migrants their reservation wage, that is, the minimum wage necessary for them to take the decision of working, will be higher. Again, it is noteworthy how the immigrants coming from Africa tend to have a remarkably worse outcome than the other groups with a much higher likelihood of being unemployed in spite of having a similar participation rate (not in the women case).

Finally, regarding the average income level, it seems to follow what was expected, that is, those coming from Western Countries having better results (as they are not only the most educated group but also is mainly composed by highly developed European countries with a more similar educational system), followed by Latin Americans (which have the advantage of sharing a common language), Eastern Europeans and Africans. Somewhat surprisingly, in the female sample we observe that those from Eastern Europe have lower average income than the Africans one in spite of being more educated. A possible explanation for this situation could be that even though the percentage of Eastern European and African women in the sector “Other services” (Figure 3) is similar, in the former case the mean income is much smaller (see Appendix 2). It is difficult to be fully conclusive on the issue giving the heterogeneity of jobs which are included in that category, but taking into account that among others it

embraces jobs as household assistant which tend to be bad paid and in which the proportion of Eastern Europeans is higher, it is a reasonable possibility.

Analysing further the Figure 3, we can observe the huge importance of the construction sector in the male migrant's employment, representing almost 40% for Africans and Latin Americans and almost 60% for those coming from Eastern Europe. Taking in consideration that this sector has been the most affected one by the economic crisis in Spain, it is to be expected that those groups of immigrants will be greatly affected on their economic performance, even more if we consider that the wages in construction were among the highest (Appendix 2). It is also remarkable the small proportion, in comparison with females, of men from those three regions working in the "Other services". However, the Latin Americans are comparatively more employed in it, what can be related with the languages capacities.

Table 1. Summary statistics

	Natives (proxy)	All immigrants	Western Countries	Eastern Europe	Latin America	Africa
<i>Male and female</i>						
Income (€)*	1329.22	1053.548	1332.119	966.318	1021.186	993.575
Labour force participation	0.8561	0.8551	0.8176	0.8991	0.8808	0.7842
Employment	0.9301	0.8615	0.8859	0.8557	0.8819	0.7838
Age	39.35 6.2511	37.04 7.6069	39.24 7.1868	35.6 7.5346	36.85 7.7006	36.7 7.3859
Years since migration	34.242 6.5378	9.5652 9.1139	16.67 12.1809	5.28 3.4149	8.08 7.7948	10.31 8.1618
Married	0.6254 0.4844	0.5692 0.4952	0.5337 0.4989	0.6056 0.4888	0.5193 0.4997	0.6940 0.4609
Intermarriage**	-	0.0078 0.0882	0.0116 0.1071	0.0035 0.0587	0.0108 0.1035	0.0031 0.0559
Less than primary school	0.0185 0.1349	0.1045 0.3059	0.0531 0.2242	0.0513 0.2206	0.0511 0.2201	0.3484 0.4766
Primary school	0.1254 0.3314	0.1365 0.3433	0.1252 0.3310	0.0952 0.29355	0.1447 0.3518	0.1707 0.3763
Secondary school	0.5470 0.4981	0.5352 0.4988	0.5039 0.5001	0.6627 0.4729	0.5561 0.4969	0.3832 0.4863
University	0.3091 0.4625	0.2238 0.4168	0.3179 0.4657	0.1909 0.3931	0.2481 0.4320	0.0978 0.2972
Studies finished or validated in Spain	0.9786 0.1447	0.1957 0.3968	0.4096 0.4919	0.0779 0.2681	0.1847 0.3881	0.1201 0.3252
Temporary contract	0.1382	0.2865	0.1463	0.3630	0.3048	0.3092
Knowledge of Spanish good/very good	1	0.8298 0.3758	0.6347 0.4816	0.8091 0.3931	0.9851 0.1213	0.6667 0.4715
Spanish Nationality	1	0.2089 0.4065	0.3771 0.4848	0.0209 0.1432	0.2488 0.4323	0.1266 0.3326
Number of children living same house†	0.6068 0.7990	0.5362 0.8465	0.5430 0.7785	0.4043 0.6655	0.5297 0.8372	0.6821 1.0576
Number of children living other place†	0.020 0.1590	0.2210 0.6309	0.0479 0.2691	0.1496 0.4466	0.3169 0.7484	0.2370 0.6936
Number of obs.	702	10316	1907	1892	4569	1799

Table 1. *Summary statistics (Continued)*

	Natives (proxy)	All immigrants	Western Countries	Eastern Europe	Latin America	Africa
Male						
Income (€)*	1494.76	1240.793	1521.821	1192.702	1255.00	1052.582
Labour force participation	0.9623	0.9487	0.9269	0.9652	0.9541	0.9446
Employment	0.9578	0.8899	0.9199	0.8881	0.9148	0.8261
Age	38.88 <i>6.2985</i>	36.93 <i>7.4301</i>	39.04 <i>7.0615</i>	35.56 <i>7.2620</i>	36.71 <i>7.6785</i>	36.66 <i>7.0804</i>
Years since migration	33.704 <i>6.5013</i>	9.5616 <i>8.9495</i>	15.833 <i>12.1053</i>	5.2354 <i>3.2606</i>	8.3169 <i>8.2709</i>	9.9545 <i>7.1835</i>
Marriage	0.6029 <i>0.4900</i>	0.5782 <i>0.4939</i>	0.5234 <i>0.4997</i>	0.6242 <i>0.4846</i>	0.5278 <i>0.4994</i>	0.6706 <i>0.4702</i>
Intermarriage**	-	0.0045 <i>0.0667</i>	0.0044 <i>0.066</i>	0.0019 <i>0.0439</i>	0.0083 <i>0.0906</i>	0.0014 <i>0.3679</i>
Less than primary school	0.0261 <i>0.1596</i>	0.1084 <i>0.3109</i>	0.048 <i>0.2139</i>	0.0540 <i>0.2262</i>	0.0453 <i>0.208</i>	0.3022 <i>0.4594</i>
Primary school	0.1188 <i>0.3241</i>	0.1465 <i>0.3536</i>	0.1246 <i>0.3304</i>	0.0888 <i>0.2847</i>	0.1648 <i>0.3711</i>	0.1770 <i>0.3818</i>
Secondary school	0.5710 <i>0.4960</i>	0.5495 <i>0.4976</i>	0.5051 <i>0.5003</i>	0.7431 <i>0.4372</i>	0.5639 <i>0.4960</i>	0.4147 <i>0.4929</i>
University	0.2841 <i>0.4516</i>	0.1956 <i>0.3967</i>	0.3223 <i>0.4676</i>	0.1140 <i>0.3181</i>	0.2260 <i>0.4183</i>	0.1062 <i>0.3082</i>
Studies finished or validated in Spain	0.9710 <i>0.1680</i>	0.1872 <i>0.3901</i>	0.408 <i>0.4917</i>	0.0648 <i>0.2464</i>	0.1807 <i>0.3849</i>	0.1152 <i>0.3195</i>
Temporary contract	0.1130	0.3440	0.1486	0.4238	0.3564	0.4183
Knowledge of Spanish good/very good	1	0.8203 <i>0.3840</i>	0.6183 <i>0.4861</i>	0.7899 <i>0.4076</i>	0.9863 <i>0.1160</i>	0.7278 <i>0.4453</i>
Spanish Nationality	1	0.1941 <i>0.3955</i>	0.3611 <i>0.4806</i>	0.018 <i>0.1331</i>	0.2511 <i>0.4338</i>	0.0998 <i>0.2999</i>
Number of children living same house†	0.5942 <i>0.7982</i>	0.4627 <i>0.8141</i>	0.4697 <i>0.7441</i>	0.3649 <i>0.666</i>	0.4771 <i>0.8072</i>	0.5073 <i>0.9622</i>
Number of children living other place†	0.0406 <i>0.2251</i>	0.2865 <i>0.7160</i>	0.0937 <i>0.3771</i>	0.2077 <i>0.5405</i>	0.3870 <i>0.8205</i>	0.3321 <i>0.8090</i>
Number of obs.	345	4642	875	833	1832	1102
Female						
Income (€)*	1116.663	858.848	1110.138	759.002	840.204	805.725
Labour force participation	0.7535	0.7785	0.7280	0.8480	0.8327	0.5447
Employment	0.8959	0.8331	0.8506	0.8273	0.8571	0.6741
Age	39.80 <i>6.1804</i>	37.13 <i>7.7480</i>	39.41 <i>7.72868</i>	35.63 <i>7.7418</i>	36.94 <i>7.7152</i>	36.75 <i>7.8246</i>
Years since migration	34.762 <i>6.54</i>	9.57 <i>9.2463</i>	17.36 <i>12.2052</i>	5.306 <i>3.5295</i>	7.9268 <i>7.4641</i>	10.8407 <i>9.415</i>
Marriage	0.6471 <i>0.4785</i>	0.5619 <i>0.4962</i>	0.5422 <i>0.4984</i>	0.5913 <i>0.4918</i>	0.5138 <i>0.4999</i>	0.7289 <i>0.4448</i>
Intermarriage**	-	0.0107 <i>0.1027</i>	0.1730 <i>0.1305</i>	0.0047 <i>0.0685</i>	0.0126 <i>0.1114</i>	0.0056 <i>0.0745</i>
Less than primary school	0.01120 <i>0.1054</i>	0.1013 <i>0.3018</i>	0.05722 <i>0.2323</i>	0.0491 <i>0.2162</i>	0.05482 <i>0.2277</i>	0.4173 <i>0.4935</i>
Primary school	0.1317 <i>0.3386</i>	0.1283 <i>0.3345</i>	0.1257 <i>0.3317</i>	0.1001 <i>0.3003</i>	0.1315 <i>0.3380</i>	0.1612 <i>0.3680</i>

Table 1. *Summary statistics (Continued)*

	Natives (proxy)	All immigrants	Western Countries	Eastern Europe	Latin America	Africa
Secondary school	0.5238 <i>0.5001</i>	0.5234 <i>0.4995</i>	0.5028 <i>0.5002</i>	0.6006 <i>0.4900</i>	0.5511 <i>0.4975</i>	0.3360 <i>0.4727</i>
University	0.3333 <i>0.4721</i>	0.2469 <i>0.4312</i>	0.3143 <i>0.4644</i>	0.2502 <i>0.4333</i>	0.2626 <i>0.4401</i>	0.0854 <i>0.2796</i>
Studies finished or validated in Spain	0.9860 <i>0.1177</i>	0.2027 <i>0.4020</i>	0.4109 <i>0.4922</i>	0.0880 <i>0.2835</i>	0.1874 <i>0.3903</i>	0.1274 <i>0.3336</i>
Temporary contract	0.1625	0.2395	0.1445	0.3160	0.2708	0.1463
Knowledge of Spanish good/very good	1	0.8375 <i>0.3689</i>	0.6482 <i>0.4778</i>	0.8239 <i>0.3811</i>	0.9842 <i>0.1246</i>	0.5759 <i>0.4945</i>
Number of children living same house†	0.6190 <i>0.8006</i>	0.5962 <i>0.8676</i>	0.6032 <i>0.8009</i>	0.4347 <i>0.6639</i>	0.5643 <i>0.8547</i>	0.9431 <i>1.1375</i>
Number of children living other place†	-	0.1674 <i>0.5460</i>	0.0103 <i>0.11</i>	0.1047 <i>0.3515</i>	0.2709 <i>0.6933</i>	0.0949 <i>0.4348</i>
Spanish Nationality	1	0.2110 <i>0.415</i>	0.3902 <i>0.4880</i>	0.0232 <i>0.1505</i>	0.2472 <i>0.4315</i>	0.1667 <i>0.3729</i>
Number of obs.	357	5674	1066	1079	2791	738

*Given the absence of reported income for part of the sample the number of observations in the case of the mean income is smaller. In this way:

Male sample – Natives (217), Western Countries (502), Eastern Europe (598), Latin America (1288), Africa (694).

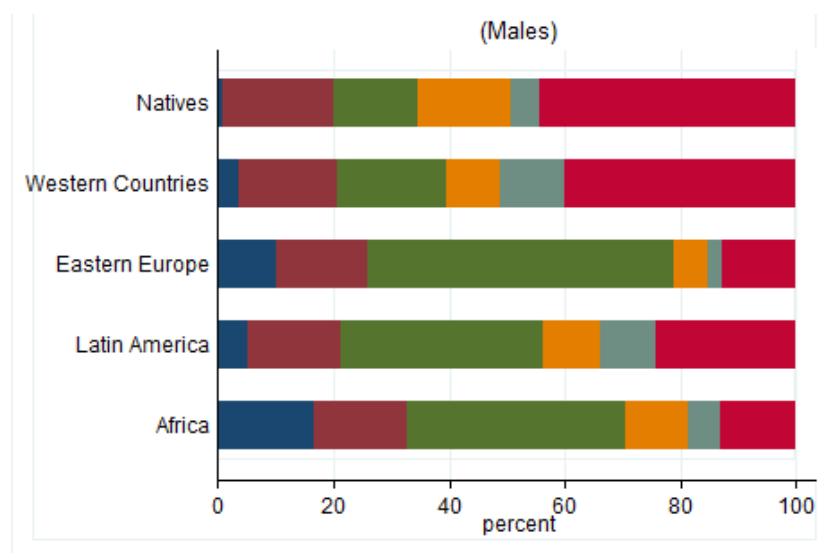
Female sample – Natives (169), Western Countries (429), Eastern Europe (653), Latin America (1664), Africa (218).

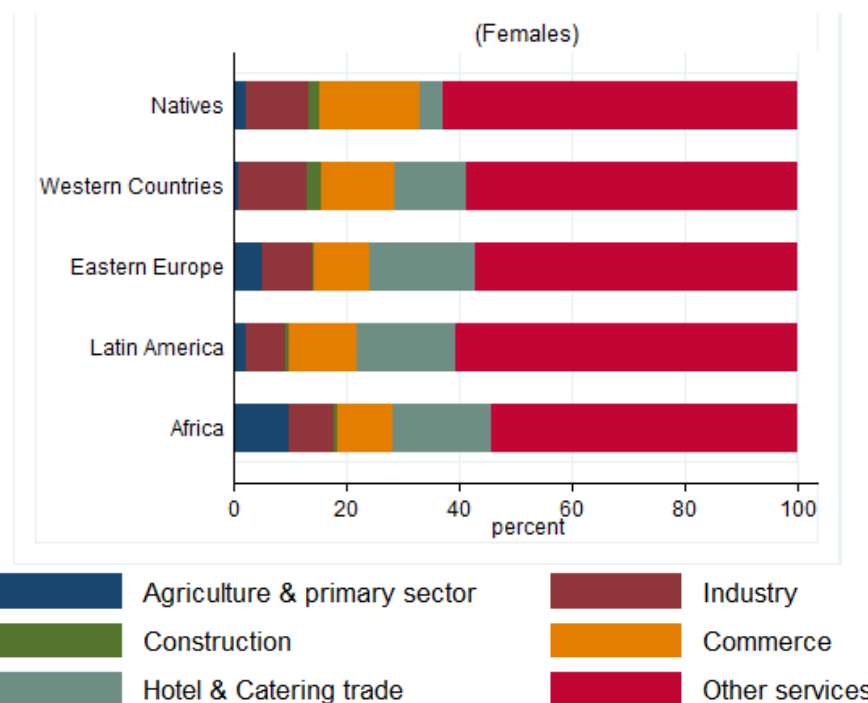
**Mean of people married with a native by birth over the married sample.

†Children living in the same house include those besides sharing household have not finished yet their mandatory education (in Spain until 16 years old). In the “Children living away” variable only those below 16 years old have been included.

Standard deviation reported in italics.

Figure 3. Economic sector of work at the time of the survey by region of origin





Source: Compiled by the author based on the ENI data

B. METHODOLOGY

The basic methodology for the analysis will be an OLS regression with the logarithm of income as the dependant variable. In the first place, a regression with a set of demographic information has been estimated by gender including just the regional dummies in order to get a general overview of the situation. Subsequently, a regression with the same explanatory variables but adding the correspondent interaction terms with the multiple origins has been performed. The latter will allow the explanatory variables to behave differently depending on the origin, giving us useful information about the across group differences. In all regressions, the sampling weights²² provided by the ENI are used:

$$\log(y) = a_0 + age + age^2 + ysm + \text{Dummies for educational attainment} + \text{Education in Spain} + \text{Marital status} + \text{Number of children (same household or away)} + \text{Other family members in the household} + \text{Self employed} + \text{Indefinite contract} + \text{Sector of activity} + \text{Arrival cohorts} + \text{Spanish language} + \text{Spanish nationality} + \text{Network size} + \text{Other variables controlling for exogenous conditions}$$

Since the variable of interest is the income level as an indicator of their integration in the labour market, it is necessary to exclude from the sample those who are already retired or permanently incapacitated. Additionally, as Izquierdo et al. (2009) expose the

²² This sampling weight is constructed to illustrate the representativeness of each subject surveyed over the total population target. In the particular case the reference population of migrants which the Spanish National Institute of Statistics took for their calculus was 4,526,522 (population projection for migrants over 16 years old at January first of 2007).

upper and lower age thresholds of the sample are highly relevant given that the decision of participating in the labour market may cause a self-selection bias²³. In order to reduce this potential source of bias I exclude from the sample those younger than 25 years old and older than 54. All those who did not report information on the income level must be excluded too. Besides, for the reasons previously exposed those who may be categorized as natives will be excluded from this part of the analysis what leaves us with approximately 6,000 observations.

A usual variable in these kind of estimations is the years of experience, which allows to control for different points at someone career. However, the database does not have a variable collecting this information neither referred to experience in the origin country nor in Spain. In this situation, the literature usually tries to construct a variable of potential experience from the information on age and education²⁴. Nevertheless, in the present case as the information on education is only collected as a categorical variable the actual number of schooling would be merely an approximation so I decide to work directly with age, which should be a proxy of the experience anyway.

The years since migration (ysm) are typically included as a proxy of the social integration of migrants. It is expected that as the residence in the host country lengthens other highly relevant factors as the language or other country-specific skills, the network or the perspective of the employers regarding the potential performance of the immigrants improves. However, and in relation with the previously mentioned bias due to variations in the productivity levels of different arrival cohorts, if this issue is not properly controlled the “years since migration” might also be collecting the cohort effect. Like that, it is important to consider if it is reasonable to expect a change in the immigrant qualities in Spain. We already know that the regions of origin have been changing, but any potential change within groups is also relevant. In that sense, the several extraordinary immigrant regularizations which took place in Spain during the period covered by the sample (1986, 1991, 1996, 2000 and 2005) might have had some effect as they could cause a sort of calling effect, diminishing the threshold level of skills necessary to migrate. In order to account for this possibility, the sample is divided in different periods: those who arrive before 1986 (as until that point most of the immigrants going to Spain were from Western Countries and working for multinational companies, it does not seem necessary to further split the sample), the arrivals from 1986 to 1990, from 1991 to 1995, from 1996 to 1999, from 2000 to 2004, and from 2005 to 2007. We can also observe (Figure 4) that even if small there are indeed some changes going on in the proportion of immigrants by educational attainment and cohort. Additionally, following Fernández & Ortega (2008), it is possible to compare the coefficients of years since migration between estimations with and without cohort

²³ The decision of start working at the legal age of 16 or leave the labour market before 65 may be affected by the individual characteristics and preferences as the economic situation, the type of occupation and even the success in the job performance.

²⁴ Basically it would consist in subtract the years of education and the age when the schooling began, typically 6 years old, from the age. So potential experience= age – (6 + years of education). That is why in order to avoid collinearity only the age or the experience are usually included.

effects in such a way that “[i]f the return to years since migration is invariant to the addition of those cohort dummies, then we can interpret that coefficient as a measure of assimilation”(p.87). In the present case, therefore, it is necessary to maintain the cohort dummies in order to have consistent estimations of years since migration²⁵.

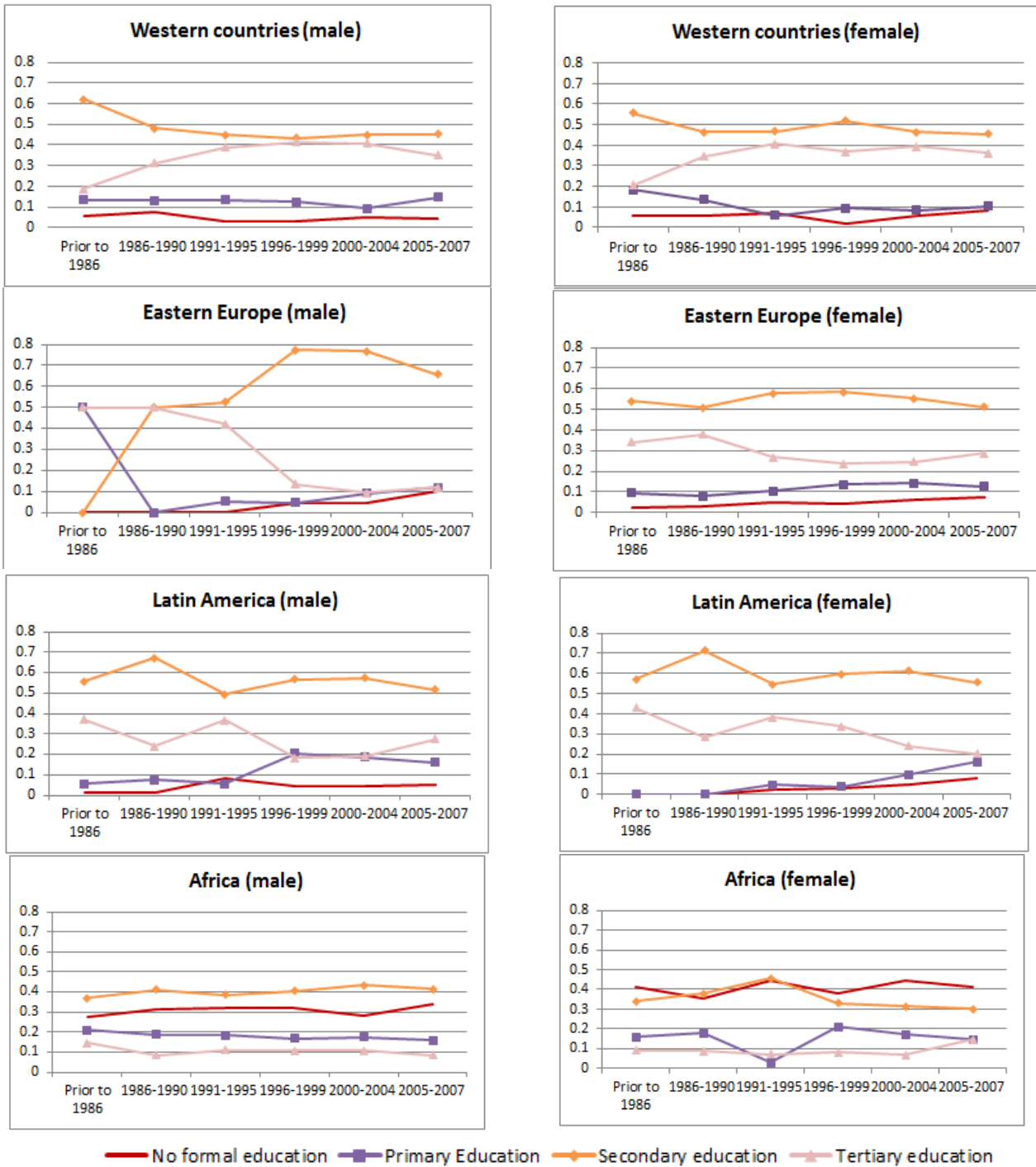
In order to include the educational performance in the empirical analysis four different dummies have been constructed, that is, less than primary school, primary, secondary or tertiary education. Additionally, information regarding if this educational level was obtained in Spain or if the certificate has been recognized for the authorities was included in the questionnaire. As has been several times emphasized in the literature (Friedberg, 2000) the human capital has severe problems of mobility. These issues come not only from the potential mismatch between the required capabilities in the host country and the ones possessed by the individual but also because of the asymmetric information in the labour market. In that way, the employer not only might not know the subject characteristics, he is probably also unaware of the specific skills which the formal education provided to the immigrant. Taking that into consideration, it is expected a higher returns to education for those that have either finished their studies in Spain or have already validated their degree, followed by those with an educational system more similar to the Spanish one (Western countries).

It has also been included in the regression the marital status (married or not) and the number of children (below 16 years old). In the latter case, the variable is separated between those who live with the subject, as they might imply a lower availability of working hours, and those who live away, who might have the opposite effect of increasing the work effort. Other family members or friends living in the same household have been taken into consideration, too. In that case, the expected effect is less clear: it might be positive as they can help to take care of the children, but also it is possible that they were somewhat dependent, i.e. older people, who would need care reducing the earnings level.

In order to obtain the language variable (and given the large amount of missing values in the Latin America subpopulation with regards to the language) it was assumed that all those born in a Latin American country with the Spanish as official language had a good command of it. For the rest of origins, they were considered to have a good level of the language only if they reported being able of writing, reading, comprehending and speaking.

²⁵ The results of the estimation controlling by the arrival cohort are presented in the Table 2, the results without controlling by the arrival cohort are available in Appendix 3.

Figure 4. Evolution of maximum educational attainment by Arrival Cohort and Region of Origin



Note: Proportion of people at each educational level over the total arrivals (of that region and gender) in that cohort. Due to the small number of observations in Eastern Europe until the cohort 1996-1999 the figures for the previous cohorts are not significant.

Some other explanatory variables regarding the labour market are “Self-employed” (dummy equal 1 if the individual is self-employed), as quite commonly the average level of income reported by them is higher what might affect the results in case of not being included; indefinite contract, since is reasonable to think that the earnings in that

situation will be higher; and the sector of occupation (“other services” is the one excluded from the regression and therefore represents the benchmark in this case).

The variable regarding nationality was included based on previous studies (Bratsberg et al., 2002) which concluded the positive effect of naturalization on the migrants’ outcomes (facilitating the access to certain jobs or giving a signal of commitment to stay to the employers). According to this hypothesis obtaining the citizenship may have both an immediate effect and also an effect on the slope of growth. In the present case the variable is included only to determine if it has an effect on the economic performance of the migrants, without paying attention to the timing of it (taken into account the nature of the data it would be impossible to check for the change in the growing path anyway). In particular, it is doubtful if the nationality would have a positive outcome in a context as the Spanish one where the process to naturalize basically requires a number of years of residence, and not making a particular effort as in the US case.

Given the potential important effect of the networks in the economic outcomes of the migrants, which may go from diminishing the cost of migrate providing valuable information to an active participation, i.e. providing references, in the search for employment of the new migrants (Munshi, 2003), some variables have been included in the model to account for their effect. In that way, both the ratio of foreign born over the total population of the province and the ratio of foreign born by region of origin over the total population of the province are part of the estimation. While the first one may seem unimportant, it might be seen as a proxy of how welcoming is the host society, as a greater presence of migrants could make it easier. However, it is plausible that the greater presence of migrants has a positive effect on the outcome merely because it is an indicator of the economic situation. In order to account for this possibility and trying to obtain a cleaner measure of the *network* effect it is also added the GDPpc of the *Comunidad Autónoma*²⁶ and the relative size of the province over the national population.

Finally, it is important to comment another possible source of bias for our results: the return migration being non-randomly distributed. The main idea is that depending on the characteristics of the ones who leave then the remaining sample may be positively (if those who return are the less-skilled) or negatively (if the high-skilled migrants leave the host country) selected²⁷. However the signed of this self-selection is not clearly established in the literature. In this way, while some authors as Borjas (1989) support the view of the less successful leaving, others (Jasso & Rosenzweig, 1988, as cited in Borjas & Bratsberg, 1994) said that the most successful ones tend to be less committed

²⁶ The *Comunidad Autónoma* is the primary regional division in Spain; there are 17 of them plus two autonomous cities (Ceuta and Melilla). Each *Comunidad Autónoma* is compound of one or more provinces.

²⁷ For example, if the immigration is considered as a temporary situation (or “part of an optimal life-cycle residential location sequence” in the words of Borjas & Bratsberg, 1994), the ones who might leave first would be the most successful ones, as they are more likely to achieve the hypothetical target of savings.

with the receiving country so they have a higher tendency to leave. In any case, according to Borjas & Bratsberg (1994) the “return migration intensifies the type of selection that generated the immigrant flow in the first place” (p. 25) or, in other words, if the immigrant inflow was more skilled than the average the returning migrants will be the less skilled reinforcing the initial positive selection, and vice versa. In our particular case, since the database is a cross section it is not possible to control for this problem but still it is feasible to make some comments about its importance.

The existing data on the subject is not too extensive, as it was not until the end of 2005 when some sort of statistical record started to be collected²⁸. Nevertheless, these statistics are far from conclusive according to the report on migrations and labour market of 2009 (*Inmigración y Mercado de Trabajo*, 2009), as there are numerous migrants who were excluded from the obligation to report (Europeans, those with Spanish nationality or with a permanent permit). In this way, given that these issues would in most cases determine an underestimation of the outmigration, we can assume that the figures for 2006 (Appendix 4) are a good estimation (the ones for 2007, on the other hand, have already been affected by the economic crisis) of the situation of the previous years. It would mean, therefore, that more than one hundred thousand foreigners leave the country each year, that is, a magnitude around 2-3% each year. Thus, it seems that the return migration is in fact a possible source of bias for the results, however as there is not much information available on the characteristics of the ones who leave it is not possible to determine the sign of the bias.

6. RESULTS

Focusing on the results obtained for the general regression²⁹ (Table 2), we can observe that years since migration is only significant for men, and in any case the effect is quite small (it would be expected an average increase of 0.7% in the income level per additional year of residence). As expected due to the productive structure of the Spanish economy the educational attainment importance is relative, as only having tertiary education (and also secondary for women) is having a significant effect with respect not having any formal education. That would agree with the conclusions reached by Amuedo-Dorantes & de la Rica (2007) as it seems to imply that males with primary or secondary education are performing jobs that can be accomplished by unskilled workers. It is also possible to observe a positive effect on the income level related with the validation or finalization of the studies in Spain, as it diminish the issues of human capital portability, and with the knowledge of the host country language.

²⁸ From that time on it was established the obligation to renew the register (*Padrón*) every two years for those coming from outside the EU or who do not have a permanent residence permit. In case of failing in this obligation the City Council must declare the expiration of the register. (Izquierdo et al., 2009).

²⁹ All the regressions have been done using the survey commands in Stata that provide heteroskedastic and cluster robust results (Cameron & Trivedi, 2010).

In general terms the income gap between the immigrants coming from Western Countries and those coming from other regions is much bigger for women, although Africa would be an unexpected exception. Agreeing with our initial assumptions Latin Americans perform better than any of the other two groups, followed by eastern Europeans and Africans. It is noteworthy that while the men from Eastern Europe obtain, *ceteris paribus*, a similar outcome than Latin Americans for the group of women their performance is closer to the Africans. A possible explanation for that situation would be related with the productive structure and the fact that while men are mostly employed in the construction, which has a high average income level, the Eastern European women are quite concentrated in the “other services” sector that in general for our sample of migrants, and particularly for them, is not well paid.

Regarding the network effect, there is no evidence of a positive influence on the income level for any group except African males. This suggests the existence of closer ties in this particular case. Anyway, it is a must to stress the fact that the variable that it is being used as proxy for measuring the network effect has been constructed at the province level (as the particular municipality of residence is codified) and, like the whole analysis, at the region of origin level (not at the country of birth level). In this way it is not possible to disregard the possibility of not finding any clear signal of the networking not because they are not present but because the level of analysis used is having a deluding effect on the importance of the networks.

Other results worth to mention would be the high significance of marriage for both genders but with different sign. Whereas for men being married has a positive effect, for women the fact of being married reduces the average income expected. This could be due to the maintenance of the traditional family roles more strongly in the migrants from regions other than the benchmark which would lead to fewer hours worked in the women case³⁰. Additionally, it seems than living together with other family members (apart from children) has a negative effect on the income of both men and women, suggesting that these individuals may be dependent (for example, older people) which need some kind of care reducing, in turn, the time available for work. The self-employment variable, as well as the fixed-term contract and the GDP pc of the region, this latter only for the male case, seem to have a positive and significant effect on the income level. Regarding the sector of occupation, the results are expected given the information on the average income by sector and gender (appendix 2); whereas for women working in any sector different than “other services” has a positive impact on their incomes, for males only the industry and construction implies a better average income than the benchmark.

³⁰ On the topic of differences in the outcomes of marriage for men and women see, among other, Becker (1985).

Table 2. OLS Regression of the Log (Income) by gender

Explanatory variables	Men	Women
Age	0.013 (1.47)	0.017 (1.42)
Age^2	-0.000 (1.58)	-0.000 (1.38)
Years since migration	0.007 (2.55)**	0.000 (0.03)
Less than primary education (Ref.)	----	----
Primary education	0.042 (1.06)	-0.005 (0.13)
Secondary education	0.038 (1.35)	0.083 (2.65)**
Tertiary education	0.155 (3.73)***	0.269 (8.91)***
Education finished or validated in Spain	0.069 (2.08)*	0.054 (1.93)*
Speak Spanish well/very well	0.053 (2.63)**	0.056 (2.46)**
Married	0.061 (3.45)***	-0.080 (2.65)**
Married with a Spanish citizen by birth	-0.424 (1.43)	0.328 (1.93)*
Spanish Nationality	0.026 (1.72)	0.034 (1.03)
Number of children living in the same house	0.002 (0.15)	-0.020 (1.07)
Number of children living away	-0.026 (2.65)**	0.008 (0.65)
Number of other family members or friends living in the household	-0.013 (3.21)***	-0.025 (4.56)***
Western Countries (Ref.)	----	----
Eastern Europe	-0.098 (1.78)*	-0.190 (5.52)***
Latin America	-0.091 (1.68)	-0.134 (3.73)***
Africa	-0.214 (5.36)***	-0.205 (4.13)***
Foreign born over the total population by province	0.203 (1.06)	0.769 (1.13)
Born in Eastern Europe over total population by province	0.170 (0.24)	-1.615 (2.08)*
Born in Latin America over total population by province	-0.476 (0.60)	-0.275 (0.21)
Born in Africa over total population by province	1.449 (2.36)**	1.233 (0.85)
Province pop. over Spanish pop.	0.148 (0.43)	0.438 (1.35)
Log GDP pc by <i>Com. Autónoma</i>	0.163 (2.98)***	0.125 (1.63)
Self employed	0.270 (4.00)***	0.135 (6.87)***
Indefinite contract	0.084 (3.17)***	0.106 (8.38)***
Other services (Ref.)	----	----
Industry	0.017 (0.71)	0.163 (4.27)***

Construction	0.077 (2.49)**	0.157 (3.78)***
Commerce	-0.137 (3.28)***	0.093 (2.08)*
Hotel & Catering trade	-0.129 (3.85)***	0.214 (11.23)***
Agriculture and primary sector	-0.117 (4.77)***	0.293 (7.95)***
2005-2007 Cohort (Ref.)	----	----
Cohort prior to 1986	-0.069 (0.48)	0.160 (1.14)
1986-1990 Cohort	0.080 (1.34)	0.243 (2.89)***
1991-1995 Cohort	0.018 (0.24)	0.108 (1.55)
1996-1999 Cohort	0.061 (1.19)	0.057 (1.00)
2000-2004 Cohort	0.082 (2.77)**	0.050 (1.40)
Constant	4.957 (8.83)***	4.827 (6.09)***
Observations	3025	2933
R-squared	0.24	0.22

t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Continuing with the analysis, Table 3 reports a similar regression to the previous one but in this case it incorporates interaction effects in some of the variables in the study. This procedure allows us to observe potential differences in the behaviour of the explanatory variables depending not only on the gender (as reported in Table 2) but also on the region of origin.

Firstly, we can observe that the number of years since migration is having an effect only for males, meaning that either the acquisition of country-specific skills which usually accompanies the social integration process is not taking place for women or, if it is taking place, they are not being able to obtain any return from it (this would be the case if there is absence of upward mobility). Moreover, the African men are not benefiting from the increase in the residence length what is surprising as the initial expectation is that years since migration will have a greater effect for those more culturally distant. This result suggests, therefore, that African men are having more troubles in their social integration, what could fit with the previous evidence on their network being the only one with positive outcomes. On the other hand, both men from Latin American and Eastern Europe increase their income as their residence in Spain extend.

In the second place, regarding the returns to education it is possible to observe that they are significant only for women with a university degree (not being possible to find any difference on the returns depending on the region of origin). These results seem to confirm the initial hypothesis, that is, the productive structure in Spain and the fact that the migrant workers are being included in the labour market at the expense of being employed in low-skill jobs minimize the relevance of education as a determinant of the

income level. In relation with the validation of the educative certificate (or finalization in Spain), having it means an increase of 15.48% in the income level of men with respect those who do not have it; this effect is basically the same with independence of the region of origin, excluding the case of Eastern Europeans where their returns in comparison with the individuals born in the Western countries will be a 13.31% lower.

In the case of the language skills, it is remarkable that whereas for men it does not have a significant effect on average (agreeing with our expectation given the characteristics of the main occupational sectors), there is a positive effect for women. In particular the difference in the income level for female migrants from Western Countries who have a good command of Spanish is of 23.12%. At the same time, we observe that the knowledge of the language for both Eastern European and Latin American women have a significantly negative effect on their incomes. This seems to contradict the theoretical prediction. Again, a possible explanation for that is the occupational distribution among regions of origin; in this way, the proportion of women from both origins working as household assistant is comparatively high, at the same time that occupation quite commonly implies taking care of the children or the elderly which in any case requires a good knowledge of the language. As a consequence it is possible that women with a good command of Spanish are performing activities at the lower level of the income distribution (this kind of work is usually in the informal economy), what would explain the negative sign.

With regards to other variables such as having the Spanish nationality, it seems that as expected the effect is generally negligible (since its acquisition does not require any kind of exam or specific knowledge), with the exception of men from Latin America, which increases their income with respect to those from Western countries in a 13.42%. However, it is worth mentioning that given how recent the immigration phenomena is in Spain it may be the case that we cannot observe any big effect on other origins incomes because there are not many migrants other than *Latinos* (which have easier requirements in the procedure of naturalization) with the Spanish nationality.

Finally, concerning the network effect it seems that once interactions are included we cannot observe any effect, neither positive nor negative, associated with a higher presence of migrants from the same country of origin in the province of residence. The exception would be the Latin American women which surprisingly present a huge negative effect. One plausible explanation in that case would be that the variable is not collecting the effect of the network but the effect of a higher labour supply on the market what may hinder their economic performance.

Table 3. OLS Regression of the Log (Income) by gender. With interactions

Explanatory variables	Men	Women
Age	0.015 (2.05)*	0.016 (1.22)
Age ²	-0.000 (2.15)**	-0.000 (1.20)
Years since migration	0.003	0.002

	(0.95)	(0.26)
Ysm x Eastern Europe	0.010	0.009
	(2.71)**	(1.49)
Ysm x Latin America	0.009	0.000
	(3.56)***	(0.09)
Ysm x Africa	0.003	-0.004
	(0.54)	(0.68)
Primary education	0.112	-0.142
	(0.89)	(0.75)
Secondary education	0.059	0.016
	(0.53)	(0.09)
Tertiary education	0.217	0.384
	(1.45)	(2.13)**
Primary education x Eastern Europe	-0.090	0.046
	(0.87)	(0.28)
Secondary education x Eastern Europe	-0.075	0.068
	(1.01)	(0.34)
Tertiary education x Eastern Europe	-0.214	-0.187
	(1.61)	(1.37)
Primary education x Latin America	-0.075	0.151
	(0.61)	(0.83)
Secondary education x Latin America	-0.019	0.043
	(0.17)	(0.22)
Tertiary education x Latin America	-0.060	-0.175
	(0.44)	(0.87)
Primary education x Africa	-0.050	0.177
	(0.50)	(0.67)
Secondary education x Africa	0.018	0.101
	(0.15)	(0.41)
Tertiary education x Africa	-0.067	-0.008
	(0.50)	(0.02)
Education finished or validated in Spain	0.144	-0.130
	(2.63)**	(1.02)
Education obtained/validated in Spain x EE	-0.125	0.203
	(3.07)***	(1.65)
Education obtained/validated in Spain x LA	-0.091	0.248
	(1.47)	(1.45)
Education obtained/validated in Spain x Africa	-0.090	0.223
	(1.35)	(1.36)
Speak Spanish well/very well	0.054	0.208
	(1.18)	(2.40)**
Speak Spanish well x Eastern Europe	0.012	-0.298
	(0.20)	(2.33)**
Speak Spanish well x Latin America	0.070	-0.430
	(0.71)	(2.97)***
Speak Spanish well x Africa	-0.062	-0.121
	(1.25)	(1.12)
Married	0.065	-0.073
	(4.43)***	(2.26)**
Married with a Spanish citizen by birth	-0.450	0.275
	(1.90)*	(1.79)*
Spanish Nationality	-0.083	0.199
	(1.67)	(1.62)
Spanish nationality x Eastern Europe	0.081	-0.152
	(0.63)	(0.95)
Spanish nationality x Latin America	0.126	-0.167
	(2.92)***	(1.48)
Spanish nationality x Africa	0.125	-0.197

	(1.38)	(1.84)*
Number of children living in the same house	0.002	-0.016
	(0.11)	(0.78)
Number of children living away	-0.023	0.007
	(2.54)**	(0.52)
Number of other family members or friends living in the household	-0.010	-0.025
	(2.42)**	(4.06)***
Foreign born over the total population by province	0.385	0.897
	(2.19)**	(2.60)**
Born EE over total x Eastern Europe	-1.434	-1.148
	(1.01)	(0.83)
Born LA over total x Latin America	-0.019	-1.290
	(0.02)	(2.73)**
Born Af over total x Africa	1.053	1.145
	(1.06)	(0.49)
Province pop. over Spanish pop.	-0.130	0.563
	(0.46)	(2.63)**
Log GDP pc by <i>Com. Autónoma</i>	0.170	0.103
	(3.08)***	(1.07)
Self employed	0.263	0.133
	(4.22)***	(7.01)***
Indefinite contract	0.084	0.106
	(3.23)***	(6.84)***
Industry	0.023	0.170
	(1.03)	(4.68)***
Construction	0.084	0.190
	(3.03)***	(4.25)***
Commerce	-0.122	0.103
	(2.79)**	(2.09)*
Hotel & Catering trade	-0.120	0.234
	(4.29)***	(12.41)***
Agriculture and primary sector	-0.111	0.279
	(4.29)***	(6.97)***
Eastern Europe	-0.047	0.013
	(0.36)	(0.16)
Latin America	-0.215	0.308
	(1.09)	(2.58)**
Africa	-0.217	-0.167
	(1.59)	(1.01)
Cohort prior to 1986	-0.024	0.141
	(0.17)	(0.95)
1986-1990 Cohort	0.082	0.203
	(1.38)	(2.35)**
1991-1995 Cohort	0.007	0.071
	(0.11)	(0.92)
1996-1999 Cohort	0.049	0.037
	(0.99)	(0.65)
2000-2004 Cohort	0.075	0.044
	(2.48)**	(1.35)
Constant	4.869	4.922
	(9.12)***	(4.53)***
Observations	3025	2933
R-squared	0.25	0.24

t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

7. CONCLUSIONS

The astonishing increase in the migratory inflows to Spain since the 1990s and especially during the last decade, going from a bit more of 1.2% of foreign-born people over the total population in 1996 to almost 10% in 2007, has raised some questions regarding the integration process of those new arrivals to the country. In this way, the literature has started to pay attention to the issue of their labour market assimilation, as the magnitude of the flows means that the economic performance of migrants will have an important weight in the evolution of the whole economy.

Using the data from the National Immigrants Survey of 2007, it has been possible to separately study the main four regions of origin of the migrants, that is, Western Countries, Eastern Europe, Latin America and Africa, taking the first as the comparison term given the absence of natives in the data used.

Thus, the objective of this study has been firstly to provide a general overview of the main characteristics, in demographic, educational and labour terms, of those principal groups of migrants present in Spain. Through the brief analysis of the descriptive statistics it has been possible to assert the existence of important differences both across regions of origin and by gender, confirming the idea of the integration process as non-unique.

Secondly, using an OLS regression we have checked some hypothesis regarding the effects on the average income level of the educational attainment, the language skills, the years of residence in Spain and the networks. The results have shown that the assimilation process in the Spanish context is highly determined by the main sectors in which the foreign workers have been allocated and the skills profile that those occupations require. In that way, the basic role of low-skill sectors, mainly construction, for men has diminished the power of education as explanatory variable. Similarly in the women case only the tertiary education represents a difference with regards not having any formal education. Also due to the productive sectors receiving the biggest share of migrants the language skills do not seem as important for the income level, although for women it can lead them to certain jobs, as household assistance, at the lowest level of the income distribution. Additionally, it seems that women and African men might be having some issues in their social integration given the lack of effect of the years since migration for their returns. Finally, there have not been found any evidence of a network effect taking place; however it is possible that these results were consequence of the proxy used to measure it.

Overall, the results show a strong mismatch between the immigrants' capacities and the skill level required by the occupations they were performing. As a consequence of this trade-off between being employed and the quality of the job, the human capital variables have not been relevant to determine the average income level of the different migrant groups in Spain, what implies an important loss of productivity. Moreover, the large concentration of migrants in certain occupations, and in particular the role of the

construction sector employing migrants, has left them in a pretty vulnerable position to confront the present crisis.

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9. APPENDICES

APPENDIX 1. REGULARIZATIONS IN SPAIN				
Year	Number regularized	Primary policy target	Benefit granted	Conditions
1985-1986	38,181	All foreigners	Residence and work permit	Applied to unauthorized workers and residents
1991	110,100	Workers	Residence and work permit	Illegal aliens working in Spain since May 15, 1991, rejected asylum seekers or those with asylum request pending.
1996	21,300	All foreigners (12,800 work permits and 7,500 residence)	One year residence and work permit	Applied to those residing in Spain since January 1, 1996.
2000	163,300	All foreigners	One year residence and work permit	Applied to those who had previously held or applied for either work of residence permits in the three years prior to 2000, or had filed an asylum application before 2000.
2001	216,400	Workers	One year residence and work permit	Applied to those who could prove employment as well as social ties in Spain.
2005	548,700	All foreigners	Six months residence and work permit	Applied to those who have an employment offer lasting for 6 months.

Source: Izquierdo et al. (2009), p. 15.

Note: The regularization of 2001 was in fact a revision of the one of 2000. In this way, during three months the applications of those who accomplished with all the requirements other than prove their presence in Spain before the first of June of 1999, were reviewed (Kostova Karaboytcheva, 2006).

APPENDIX 2. Mean Income by region of origin, sector of occupation and gender

Region of Origin	Sector of occupation by gender	N (Income)	Mean (Income)	p10 (Income)	p90 (Income)
Natives	Agriculture and primary sector				
	Female	4	850	600	1000
	Male	1	1500	1500	1500
	Industry				
	Female	16	1043.06	500	1300
	Male	45	1229.96	880	2000
	Construction				
	Female	3	1386	900	1658
	Male	29	1432.21	800	2420
	Commerce				
	Female	34	977.382	500	1500
	Male	37	1405.14	780	2500
	Restaurant activity				
	Female	6	812.667	445	1021
	Male	9	1294.44	400	3500
	Other services				
Female	102	1178.55	500	1800	
Male	96	1691.05	900	2600	
Western Countries	Agriculture and primary sector				
	Female	6	925	300	2000
	Male	19	1416.84	600	4300
	Industry				
	Female	56	1158.11	660	2000
	Male	85	1506.68	900	2000
	Construction				
	Female	13	1040	655	1300
	Male	96	1467.26	950	2100
	Commerce				
	Female	58	992.569	500	1800
	Male	49	1515.92	800	2700
	Restaurant activity				
	Female	47	984.617	546	1435
	Male	54	1309.22	600	1500
	Other services				
Female	249	1158.55	480	2000	
Male	199	1623.77	900	2800	
Eastern Europe	Agriculture and primary sector				
	Female	35	786	500	1000
	Male	65	893.338	700	1200
	Industry				
	Female	59	882.153	400	1200
	Male	90	1135.96	810	1503

APPENDIX 2. Continuation

Region of Origin	Sector of occupation by gender	N (Income)	Mean (Income)	p10 (Income)	p90 (Income)
Eastern Europe	Construction				
	<i>Female</i>	2	775	500	1050
	<i>Male</i>	322	1222.7	850	1600
	Commerce				
	<i>Female</i>	63	836.19	475	1000
	<i>Male</i>	33	1113.15	850	1500
	Restaurant activity				
	<i>Female</i>	121	848.157	500	1108
	<i>Male</i>	15	996.8	762	1450
	Other services				
<i>Female</i>	373	694.944	320	1000	
<i>Male</i>	73	1473.1	800	2200	
Latin America	Agriculture and primary sector				
	<i>Female</i>	41	860.244	700	1100
	<i>Male</i>	73	990.644	700	1200
	Industry				
	<i>Female</i>	110	933.018	675	1214
	<i>Male</i>	201	1220.67	800	1800
	Construction				
	<i>Female</i>	11	1177.27	900	1500
	<i>Male</i>	472	1264.9	900	1750
	Commerce				
	<i>Female</i>	191	848.073	500	1100
	<i>Male</i>	122	1099.43	700	1500
	Restaurant activity				
	<i>Female</i>	291	937.034	600	1200
<i>Male</i>	125	1121.9	700	1500	
Other services					
<i>Female</i>	1,020	796.656	400	1200	
<i>Male</i>	295	1448.71	750	2600	
Africa	Agriculture and primary sector				
	<i>Female</i>	23	729.913	500	900
	<i>Male</i>	113	903.044	700	1200
	Industry				
	<i>Female</i>	17	833	700	1000
	<i>Male</i>	105	1051.18	800	1450
	Construction				
	<i>Female</i>	2	700	400	1000
	<i>Male</i>	277	1128.52	900	1400
	Commerce				
<i>Female</i>	19	807.895	300	1200	
<i>Male</i>	78	973.32	500	1500	

APPENDIX 2. Continuation

Region of Origin	Sector of occupation by gender	N (Income)	Mean (Income)	p10 (Income)	p90 (Income)
Africa	Restaurant activity				
	<i>Female</i>	36	827.806	600	1000
	<i>Male</i>	35	1036.17	725	1500
	Other services				
	<i>Female</i>	121	811.141	325	1368
<i>Male</i>	85	1084.59	631	1700	

APPENDIX 3. OLS Regression of the Log (Income) by gender without Cohort effects

Explanatory variables	Men	Women
Age	0.017 (2.03)*	0.017 (1.32)
Age ²	-0.000 (2.19)**	-0.000 (1.28)
Years since migration	0.005 (1.59)	0.005 (3.72)***
Less than primary education (Ref.)	----	----
Primary education	0.044 (1.18)	-0.005 (0.14)
Secondary education	0.039 (1.44)	0.084 (2.61)**
Tertiary education	0.155 (3.99)***	0.269 (8.76)***
Education finished or validated in Spain	0.058 (1.84)*	0.057 (2.06)*
Speak Spanish well/very well	0.069 (3.34)***	0.065 (2.70)**
Married	0.059 (3.33)***	-0.080 (2.70)**
Married with a Spanish citizen by birth	-0.481 (1.75)*	0.349 (2.07)*
Spanish Nationality	0.020 (1.51)	0.036 (1.18)
Number of children living in the same house	0.005 (0.29)	-0.016 (0.89)
Number of children living away	-0.030 (3.05)***	0.008 (0.58)
Number of other family members or friends living in the household	-0.013 (3.52)***	-0.025 (4.31)***
Western Countries (Ref.)	----	----
Eastern Europe	-0.083 (1.51)	-0.194 (5.73)***
Latin America	-0.079 (1.52)	-0.141 (3.83)***
Africa	-0.195 (5.61)***	-0.203 (4.09)***
Foreign born over the total population by province	0.212 (1.05)	0.814 (1.20)
Born in Eastern Europe over total population by province	0.236 (0.33)	-1.622 (2.17)**
Born in Latin America over total population by province	-0.434 (0.51)	-0.398 (0.30)
Born in Africa over total population by province	1.461 (2.35)**	1.097 (0.75)
Province pop. over Spanish pop.	0.120 (0.34)	0.468 (1.39)
GDP pc by <i>Com. Autónoma</i>	0.159 (2.86)**	0.129 (1.69)
Self employed	0.272 (4.02)***	0.135 (6.84)***
Indefinite contract	0.089 (3.36)***	0.106 (8.30)***
Other services (Ref.)	----	----
Industry	0.019 (0.78)	0.165 (4.22)***

Construction	0.078	0.175
	(2.55)**	(4.54)***
Commerce	-0.132	0.093
	(3.04)***	(2.15)**
Hotel & Catering trade	-0.127	0.214
	(3.81)***	(10.60)***
Agriculture and primary sector	-0.117	0.296
	(4.74)***	(8.14)***
Constant	4.971	4.804
	(8.70)***	(6.03)***
Observations	3025	2933
R-squared	0.23	0.22

t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

APPENDIX 4. Total emigrations by country of nationality* and age groups

	2004		2005		2006	
	Total	Age 25-54	Total	Age 25-54	Total	Age 25-54
TOTAL	41,932	27,454	48,716	32,376	120,234	80,064
EUROPEAN UNION	6,325	3,483	7,360	4,320	10,731	6,352
REST OF EUROPE	6,621	4,476	7,039	4,708	25,613	16,961
AFRICA	7,821	5,385	10,339	7,196	23,983	16,846
AMERICA	16,262	10,398	17,002	10,867	44,046	28,577
ASIA	4,884	3,702	6,947	5,267	15,734	11,246
OCEANIA	19	10	29	18	127	82

Source: Compiled by the author based on *Estadísticas de Variaciones Residenciales (EVR) - INE*

*Do not include the emigrations of Spain nationals