

# **Spain: From (massive) immigration to (vast) emigration?**

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## **Abstract**

Since the start of the Great Recession the unemployment rate in Spain has increased by almost 20 percentage points. This unemployment crisis, which is affecting to all population groups, including the highly educated, is even more acute for the foreign population, whose unemployment rate is close to 40%. This situation follows a period of very high immigration flows (1995-2007) that brought the proportion of foreigners in the population living in Spain up to 11%. In this paper we document the characteristics of the recent migration inflows to and outflows from Spain. In particular, we focus on the different responses to unemployment differentials of recent immigrants and Spaniards with regards to migrating abroad and across Spanish regions. We also shed some insights on the selection of migrants by educational level and draw some conjectures on the implications of the observed migration outflows during the recent years for future potential growth in Spain.

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## 1. Introduction

During the years previous to the Great Recession, Spain received massive migration inflows (averaging about 1.4% of total domestic population per year during 2000-2007). In fact, these inflows continued to be high during the first phase of the recession (about 1.2% per year during 2008-2010). Outflows were negligible during 2000-2007 and about 0.4% per year during 2008-2010). In 2012, when Spain suffered a double dip, inflows decreased to 0.8% (although being still notable) and outflows increased to 1.2% of domestic population.

The immigration flows of the expansion period significantly changed the composition of the Spanish population: the proportion of non-Spanish nationals was 11.7% on January 2013, while the proportion of residents in Spain born-abroad is above 3.3% (see Table 1). The foreign population in Spain is mostly from other EU countries, Latin America, and North Africa. Immigrants (and foreign workers) are relatively younger than the Spanish population, especially in the case of females (Table 2).

The labor market effects of the Great Recession in Spain have been remarkable. Since 2008Q1 the loss of employment has been almost 18.5% and the average unemployment rate has increased to 27.2%, being the incidence of unemployment much higher among the youths (57.2%) and immigrants (39.2%). Nevertheless, the increases in unemployment rates have been quite general and have affected all regions and population groups, even those with high educational attainments and skills (Figure 1).

Hence, given the high weight of recent immigrants and the high unemployment rates for all population groups, it seems likely that Spain is in transition from a massive immigration regime to vast emigration. This seems to be an appropriate context to test some of the existing theories about migration, both in regards to return migration and to the importance of pull factors on emigration by nationals, which, in the case of advanced economies, it is not a well documented issue in the migration literature. Some questions that may be addressed in this context are, for instance: i) what is the propensity to migrate abroad of recent immigrants and of nationals in the case of an unemployment crisis?, ii) are the elasticities of migration outflows with respect to unemployment differentials different in a recession than those observed during an expansion?, and iii) is the selection of migrants different among the foreign and the domestic population in such a context?

This paper builds on the description of migration flows in Spain (inwards and outwards) during the Great Recession to drawing some conclusions about the role played by unemployment differentials as a driver of migration flows, and to the important of positive selection of migrants, both regarding return migration of recent immigrants and emigration by nationals. We use some of these findings to draw some conjectures about the Spanish “emigration potential” in the near future and to advance some cost-benefit analysis of the likely migration flows.

The structure of the paper is as follows. First, we describe the data sources being used for the measurement of inflows and outflows. Then, we briefly revisit the history of international migration in Spain since the mid-1900s to put the analysis of the current situation into a wider context. Then, we focus, alternatively, on the inflows, outflows, and inter-regional (within

Spain) flows of immigrants and Spaniards since the start of the Great Recession. Finally, in the concluding section, we advance some conjectures about the implications of recently observed migration flows for future potential growth in Spain.

## 2. Data

Data on gross migration flows in Spain are neither abundant nor extending long into the past. Historically, information on migration flows was limited to statistics drawn from registers of passengers that leave the country by ship and airplane, or from information of bilateral official programs of organized emigration to Europe. This is the reason why most of the studies on Spanish emigration used information from destination countries<sup>2</sup>. It is only after 1998 that there is some organized attempts at keeping registers of migration inflows and outflows (since 2002) based on municipality registers. However, this is subject to some drawbacks. Whereas foreigners have an incentive to enroll in the register, they do not have any incentive to drop from it when they leave the country. This is the reason why data on exits of foreigners is only reliable since 2006, moment in which a two year period renewal of the register is imposed on foreigners. Instead, emigration and immigration by Spaniards should be better captured.

The data from municipality registers provide information on gender, age, nationality, country of birth and the province of origin. One important piece of information that is lacking in the abovementioned dataset is the country of origin of immigrants and the country of destination of emigrants. In the case of foreigners we might assume that this should coincide with either the nationality or the country of birth<sup>3</sup>. In the case of Spaniards, that information is completely unknown.

Alternatively, data on stocks of foreigners in Spain is obtained by municipal registers. If one wants to add the educational dimension it is required to access Labour Force Survey data. Information on the stock of nationals living abroad might be taken from the registers of Spanish embassies, which, gathered by the Statistical Office since 2009 (Padrón de Españoles Residentes en el Extranjero). It provides information on the country of birth, province of last residence, province of birth and country of destination. If one wants to obtain more socio-demographic information on the emigrants must go to statistics of the main destination countries. Driven by anecdotal evidence and given availability restrictions, we do so using the French, British and Argentinian Labor Force Surveys.

Finally internal migration is gathered by municipal registers and the Labor Force Survey. Indeed, information on this particular flow is very comprehensive in terms of socio-demographic characteristics.

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<sup>2</sup> See, for instance, Garcia Fernandez (1965), Nadal (1984), and Instituto Español de Emigración (1973).

<sup>3</sup> Indeed, according to the New Immigration Survey conducted in 2007, more than 85% of immigrants with a plan of leaving the country in the following five years reported the intention to go back home.

### 3. Migration flows in Spain since 1950: A brief review

Spain was an emigration country through most of the XXth Century. At the beginning of the century there were large outflows of migrants to South America (mostly to Argentina). Those movements were motivated by i) the pass of free movement laws in both Spain and destination countries at the second half of the XIX century, ii) an increasing population, due to decrease in mortality at the end of the XIX century that was followed by a later decrease in fertility (population in Spain doubled from 1857 – 15 million- to 1950 – 27 million-), and iii) economic stagnation (GDP per capita in real terms is estimated to have increased slightly less than 1% between 1850 and 1950 whereas it increased an average of 5% during the following 50 years) and a weakened political situation after the loss of the American colonies.

However those movements froze after the First World War and the global crisis of the 1930s. And after the civil war (1936-1939) emigration was banned from Spain. When emigration is again freely allowed in 1946, outflows were smaller than those registered at the beginning of the Century. The main destination region was still South America.

Since 1950, just by looking at net migration outflows, three periods can be identified.

**The early emigration period (1950-1989).** Early in this period it was the times of emigration to South America, of about 50 thousands per year, and then, later on during the 1960s, to Europe (mostly France, Germany and Switzerland), with average annual flows of around 170 thousands (Table 3). In the 1960s around 80% of total emigrants went to Europe, and, on aggregate, they amounted at around 7 per thousand of the total population in the mid-1960s, when it reached its maximum. Emigration to Europe was mostly driven by the shortages of unskilled workers to fill jobs in agriculture or in manufacturing in the destination countries. Since the mid-1960s, these emigration flows decreased, first, due to economic growth in Spain, and, then, due to the increased protectionism in destination countries that followed the oil crisis in the early 1970s. However net emigration was still observed, although at a lower rate, during the first half of the 1980s, when Spain still was suffering important losses of employment.

**The immigration boom (1990-2007).** Starting at the early 1990s and, most noticeably, after 1997, Spain became a destination country for emigrates. Inflows increased steadily from less than 30 thousands per year in 1996 to 958 thousands in 2007, when they amounted to more than 2% of the total population. During this period inflows of foreigners are mainly driven by Romanians, Moroccans, Bolivians and Peruvians, but there were also many with Spanish nationality. Traditionally inflows of Spaniards represented returning migration. However, during the 1990s, these were Spaniards born abroad, who, under the Spanish legislation, acquired the nationality via their parents or even grandparents. Therefore, it is likely that many foreigners (in the sense that never lived in Spain before) were immigrating as Spaniards. Instead, inflows of Spaniards born in Spain but residents abroad were relatively inelastic to recent economic conditions. Finally, there was also an important component of retiree migration, mostly from Germany and the UK.

**Emigration during the crisis (2008-2012).** Emigration flows start increasing again since 2007, moment at which GDP growth in Spain started to decelerate. However the magnitude of those

flows was small up to 2011. Since then, outflows amounted to 500 thousands in 2011-2012 (more than 1% of the population), which is, both in absolute levels and in percentage of the population, the highest in the Spanish history. This is the case because of the high mobility of foreigners (group that now accounted for a bigger fraction of the total population). Indeed, the big majority of those outflows are composed by foreigners (in 2012 about 9% of foreigners residing in Spain left the country), while less than 0.1% of Spaniards born in Spain have emigrated. This level is smaller than the intensity of emigration by nationals observed in the 1960s (when return migration by foreigners was inexistent). Since 2011, those outflows have not been compensated by inflows so that net emigration is observed again for the first time since the 1970s (net outflows are estimated at around 180 thousands during 2012).

Table 5 gives some characteristics of the foreigners moving abroad in comparison with the recent immigrants, those moving across Spanish regions, and the total stock of foreigners living in Spain. Among recent emigrates, males, young, foreigners born in Spain and those who came from America, Asia and Africa are overrepresented. On the contrary, non-Spanish Europeans living in Spain are less likely to move abroad, something consistent with the idea that an important fraction of them are retirees. The fact that male foreigners are more likely to emigrate may be the result of male employment being most negatively affected by the crisis and that emigration by men is the usual starting point of emigration by other member of the household.

As for the characteristics of Spaniards-born in Spain who have emigrated recently (Table 6) males, the overrepresented groups are males, children, and young<sup>4</sup>. By region, it is mostly Madrid and Catalonia, together with Galicia (a region with high emigration to America in the early half of the XXth Century), those with higher relative shares in the migration outflows. As for the country of destination, which can only be approximated by the changes in the stock of Spanish population registered in Spanish Embassies, UK (31%), USA (23.1%) and Germany (7.6%) are the countries receiving the highest shares of Spanish emigrates, although there is also a surprisingly high share in the case of China (5.2%).

### **Inter-regional migration flows in Spain (2008-2012)**

A less costly alternative to international emigration is internal migration. During previous decades, the degree of inter-regional mobility in Spain was quite low, despite significant differences in unemployment rates and wages<sup>5</sup>. During the expansion and in more recent years foreigners had a higher likelihood to move internally than Spaniards. Indeed, the observed increase in internal migration during the 1990's can be fully associated to the higher share of foreigners in the population. However, more recently, the fraction of foreigners who move internally (about 0.35%) is lower than the fraction of them who move abroad (about 0.8%). In fact, internal movements of foreigners have decreased as opposed to the big increase of external emigration, resulting in a constant fraction of foreigners that either moves internally

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<sup>4</sup> The significant increase in children emigration, which has to do with the fact that Spanish nationality can be obtained after the first year of residence in Spain, for those born in Spain who had foreign parents, and, therefore, children of recent migrants are moving with their parents after having obtained the nationality

<sup>5</sup> See Bentolila and Dolado (1991), Antolín and Bover (1997), Bover and Velilla (2000) and Bover and Arellano (2002).

or externally. As for Spaniards, they had a clear preference to move internally (1.1%) respect to do it abroad (0.17%). However, during the Great Recession internal emigration has remained constant, while external movements have increased.

As for the characteristics of internal migrants (third column in Tables 5 and 6), in the case of foreigners the overrepresented groups are similar to those in the composition of international migration outflows (males, young -16-29-, and those with nationalities of American, Asian, and African countries). On the contrary, in the case of Spaniards born in Spain, there seems to be some differences between the compositions of international and regional migration outflows. In the case of the latter, females have a higher relative share and the regions of origins with more migrants, in relative terms, to other regions are Castilla-La Mancha, Castilla and Leon, and the Balearic Islands.

#### **4. Migration flows and unemployment differentials**

Typically the log odds of residing in country  $h$  for a person from country  $s$  is thought to be determined by absolute differences on earnings between the two countries and a cost of emigrating that is idiosyncratic to that particular pair of countries (see, for instance, Grogger and Hanson, 2011). However, when considering immigration to or from Spain, earnings do not appear to be a good proxy for economic opportunities, since high unemployment rates have been prevalent: 8% at the peak of the cycle, and, currently, 27%. Indeed, changes in unemployment appear to be more appropriate than changes in wages to approximate relative economic opportunities over time, in particular, during the current recession when wages reacted slowly to the worsening of the economic situation, showing, once more, significant real and relative rigidities<sup>6</sup>.

Also, it is usual to assume that migration flows respond symmetrically to changes in relative economic opportunities. This means that an improvement in relative economic conditions of one country should be fully compensated when economic conditions come back to the initial level. On this regard, Figure 2 shows that this is not the case in the Spanish current situation. The figure graphs the share of foreigners in Spain and the evolution of the unemployment rate. Between 1995 and 2001 there was a big decrease in unemployment (from 22.9% to 10.6%) that brought an increase in the share of foreigners in the Spanish economy. From that moment on unemployment did not change much but the share continued increasing. Since 2007 the Spanish unemployment rate went back to their previous high levels (even higher), but the share continued increasing during several years to only decrease slightly during 2012.

Hence, it seems that analyzing the stock of foreigners in Spain in the current scenario needs a more flexible specification. In this vain, we adapt Grogger and Hanson (2011) scale specification relating the log odds of residing in Spain to unemployment differentials, allowing for a time-varying elasticity coefficient, and to a time varying migration cost, as in the following equation:

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<sup>6</sup> On the adjustment of unemployment and wages across Spanish regions in previous recessions, see Bentolila and Jimeno (1998).

$$\ln \frac{F_{sh}}{1-F_{sh}} = \alpha(t)(U_h - U_s) + C_{sh}(t) \quad (1)$$

where  $F_{sh}$  is the fraction of foreign population of country origin  $s$  in region  $h$ ,  $U_i$  is the unemployment rate ( $i=s,h$ ), and  $C_{sh}$  is the cost of migrating from  $s$  to  $h$ . This generalized scale regression will be also estimated for the stock of Spaniards born in Spain that currently reside abroad<sup>7</sup>.

Given the big disparities in unemployment rates shown in Figure 1 across Spanish regions, we consider the log odds of residing in a Spanish region (we have access to data on 17 regions) for one person of a particular country (we have access to data on around 80 countries). The specification will be estimated for three periods (1995-2001 – period of decreasing unemployment; 2001-2007 – period of stabilization of unemployment; 2008-2012 – period of increasing unemployment). Within each range of years, the coefficients of the previous regression will be kept fixed. The cost of emigration will be a dummy for each pair of country and region of destination. Therefore, the variation that we are exploiting is the time dimension within each pair of country of origin and region of destination. To avoid small sample problems for particular countries, we also run the specification for grouping countries in bigger geographical areas (EU-15, rest of Europe, Africa, North America, Center America, South America, Asia and Oceania). For the stock of Spaniards abroad, everything applies the same way noticing that now the origin is a region in Spain and the destination an international country.

In order to get some insights on the selection of migrants by education we exploit the variation of the log odds of emigration by country of origin and characteristics of migrants of that particular origin in each Spanish region (average over the last decade) by incorporating, as co-variables, only fixed effects by country of origin and the average years of schooling of migrants in each region<sup>8</sup>:

$$\ln \frac{F_{sh}}{1-F_{sh}} = \alpha(U_h - U_s) + C_h + f(\text{education}_s) \quad (2)$$

Thus, the coefficient on the education variable gives information on the concentration of immigrants and the costs of emigration by educational levels.

Despite bilateral inflows and outflows might react as the theory predicts to economic conditions, changes in either costs of immigration or emigration may somehow blur the contemporaneous responses of the stock of migrants to economic conditions. For that reason, we also estimate the sensitivity of migration inflows ( $I$ ), and migration outflows ( $E$ ) to unemployment differentials between origin ( $h$ ) and destination ( $s$ )<sup>9</sup>

$$\ln \frac{I_{sh}}{1-I_{sh}} = \alpha^I(t)(U_h - U_s) + C_{sh}^I(t) \quad (3a)$$

<sup>7</sup> In that case, since Spanish emigration is a recent phenomenon and data only covers the stock of Spaniards born in Spain since 2009 we restrict the coefficients to be fixed during the period 2009-2013.

<sup>8</sup> Notice that, in the case of foreigners, we cannot estimate equation (1) by skill groups since we do not have access to unemployment rates by skill at the origin country. For the case of Spaniards we do not have information on the stock of migrants abroad by skills.

<sup>9</sup> This estimation can only be done for foreigners since the destination of the migration outflows of Spaniards is not available.

$$\ln \frac{E_{sh}}{1-I_{sh}} = \alpha^E(t)(U_h - U_s) + C_{sh}^E(t) \quad (3b)$$

Finally, we also analyze internal movements within Spanish across regions. As previously, we relate the log odds of migrate from one region to another residing in Spain to unemployment differentials, allowing both for an age/skill-varying elasticity coefficient and migration costs, as in the following equation:

$$\ln \frac{F_{shj}}{1-F_{shj}} = \alpha_j (U_{hj} - U_{sj}) + C_{shj}(t) \quad (4)$$

where  $F_{shj}$  is the fraction of population of region of origin  $s$  in region  $h$  of the age-skill groups  $j$ ,  $U_{ij}$  is the unemployment rate ( $i=s,h$ ) group  $j$ , and  $C_{shj}$  is the cost of migrating from  $s$  to  $h$  for group  $j$ <sup>10</sup>.

#### 4.1. Foreigners: Immigration and migration outflows

Table 7 reports the results of estimating how the log odds of foreigners living in Spain change with respect to the differences between the unemployment rates of origin country and that of the Spanish region of residence. The estimation has been obtained separately for three periods 1998-2001 (columns 1 and 4), 2001-2007 (columns 2 and 5), and 2008-2012 (columns 3 and 6). The first specification (columns 1 to 3) correspond to equation (1) in the which there are country-region fixed effects, while the second one corresponds to equation (2) in which the co-variables are fixed effects by country of origin and the average years of schooling of immigrants from the same country in the region of destination. While during the early period, immigrants seemed to choose the region of destination taking into account the differences in unemployment rates, in more recent periods the log odds are positively associated with relative unemployment rates in the destination regions. As for education, the log odds are higher in those regions where the educational level of immigrants is lower, which suggest that recent inflows and outflows are decreasing the skill level of immigrants living in Spain.

As a result, as Figure 2 shows, despite the big increase in unemployment rate the proportion of foreigners living of Spain has barely decreased up to now. Figure 3 plots the relationship between unemployment in Spain and migration flows. The big decrease in unemployment between 1995 and 2001 brought an increase in the number of inflows of foreigners in Spain. From that moment and since 2007 unemployment did not change much but immigration flows continued increasing. Since 2007 inflows decreased with the increase in unemployment. One must notice that the sensitivity of inflows to changes in unemployment is similar to that observed in the 90's but at a higher level. On the other hand, during these last 4 years, there is also an increase in outflows of foreigners that follows the unemployment rise.

A possible interpretation of the evolution of migration inflows to Spain since 1995 is that, starting with and sustained by the housing boom, over time the willingness to enter Spain increased notably trough network effects or reduction in costs due to different factors such as

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<sup>10</sup> We consider the interactions of three age groups (16-29, 30-44, and 45-64 years of age) with three skill groups (low, medium, and high education).



the entry into the EMU, or policy friendly actions (amnesties and regularizations). Therefore, when unemployment starts increasing, inflows decreased but remained at a much higher level than in the past at the same level of unemployment, and outflows start increasing but from a at very low levels since costs of returning for those who migrated were high. The fact that the educational level of foreigners living in Spain is decreasing is consistent with the hypothesis on the positive selection of international migrants by educational levels.

Nevertheless, as said above, estimating log odds from the stock of the total population may not convey all the information about the driving forces and directions of the recent migration flows. Hence, using inflows and outflows, we perform a similar estimation of the impact of unemployment -equation (3)-. Results, reported in Table 9, show that recent immigrants are reacting slightly more to unemployment differentials than in the immediately preceding (2001-2007) but not as much as in the early period (1998-2001). As for migration outflows, the corresponding semi-elasticity is positive which indicates higher flows from relatively low Spanish unemployment regions, which also points to foreigners living in Spain moving abroad being positively selected in terms of labor market potentials<sup>11</sup>.

#### **4.2. Spaniards: Migration outflows**

Emigration of Spaniards is a relatively new phenomenon so that changes in the stock are mainly the reflection of gross outflows. Figure 3 shows that this relationship is somehow similar when comparing inflows, for 1995-2012, and outflows, for 2007-2012, of Spaniards born in Spain. Table 8 reports the relationship between the log odds of Spaniards residing abroad and the unemployment differentials between the destination country and the Spanish region of origin. Although the semi-elasticity is estimated to be negative, it is only statistically significant in the first specification while the second one, which takes into account the educational level in the origin region, indicates a positive selection of migrants by educational levels.

To investigate further the individual characteristics of Spaniards who have recently emigrated abroad, we take advantage of the information provided by the Labor Force Surveys of the main destination countries which are available to us (UK, France, and Argentina). Using that information we perform two types of comparisons (Table 10): i) between Spaniards emigrates to each of those countries in 2008-2012 versus 1998-2007, and ii) between Spaniards who have recently emigrated to the UK and other immigrants into the UK during the same period.

As can be seen in the Table, the recent migration inflows into these three countries are different in terms of age and educational levels from previous inflows and, in the case of the UK, from the inflows from other countries. Spaniards emigrates are younger and more educated than they used to be. Those going to the UK are more educated than immigrants from other countries but in this case there is an important share of emigrates aged 45-64 years.

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<sup>11</sup> Regarding characteristics of foreigners international migrants, the literature finds that the option of returning migration exacerbates the selection of migration. See, for instance, Borjas and Bratsberg (1996) and Lacuesta (2010). For instance, if migrants were positively selected, returning migrants would be in the lower part of this positive selection.

These findings suggest that emigration from Spain is taking place mostly among those with high skill levels.

#### **4.3. Foreigners and Spaniards: Cross-regional migration within Spain**

The results of the estimation of the impact of unemployment differentials across Spanish regions on the log odds of internal migration for foreigners and Spaniards are reported in Figure 4. As seen in the first panel of Figure, Spaniards are less likely to migrate to another region than foreigners, whatever the age/education group. Moreover, in the case of Spaniards the log odds are decreasing with age, and increasing with education only in the case of older workers. As for foreigners, the log odds are less different across age/education group, being highest for the youngest with low and high education.

The other two panels of the Figure show that these log odds do not necessarily increase with unemployment differentials across regions. In the case of foreigners, their responses to unemployment differentials are negative and barely statistically significant in the case of young migrants with high level of education and older workers with a medium level of education. In the case of Spaniards, that response is positive and statistically significant for most age/education groups, which indicates that, as happened in the past in Spain, interregional migration flows are not contributing to the convergence of regional unemployment rates.

#### **5. Concluding remarks**

This paper provides a first look at the data on migration flows in Spain during the Great Recession. Given the high proportion of recent immigrants to Spain and the high unemployment rates for all population groups and regions, one may expect significant migration flows and varying composition among them depending on recent immigration status. Our results are still preliminary but we can already hint at significant changes in the size and composition of migration inflows and outflows. In particular, emigrates, both Spaniards and recent foreign immigrants, seem to be positive selected on education, while this does not seem to be the case regarding the composition of internal migration flows. This finding needs to be further investigated, as more data become available, but hints at the possibility of the start of a significant brain drain that, if extended too long, as the crisis persists, or if Spanish emigrates remain in their destination country, could create grave consequences for future potential growth.

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**Table 1. Population in Spain by nationality, place of birth, and gender**

		Nationality							
2013QI (Thousands)		Total		Spain		Foreign			
Total		47,059.5		41,539.4		5,520.1			
	Born in Spain	40,441.4		39,976.8		464.6			
	Born abroad	6,618.2		15,626.3		5,055.6			
		Spain		Double		Foreign			
(%)		2008QI	2013QI	2008QI	2013QI	2008QI	2013QI		
Total		88.0	87.6	0.9	1.5	11.1	10.9		
	Male	88.0	87.9	0.8	1.4	11.2	10.7		
	Female	88.1	87.3	1.0	1.7	10.8	11.1		
		EU		Rest of Europe- Non.EU		Latin America		Rest of the world	
(%)		2008QI	2013QI	2008QI	2013QI	2008QI	2013QI	2008QI	2013QI
Total		3.4	3.7	0.5	0.5	4.8	3.7	2.5	3.0
	Male	3.5	3.7	0.4	0.3	4.5	3.3	2.9	3.4
	Female	3.3	3.7	0.6	0.6	5.0	4.1	2.0	2.7

Source: Municipality registers and Labour Force Survey

**Table 2. Population and employment shares by age and gender  
(differences between foreigners and nationals)**

(%)	Population		Employed		
	2008Q1	2013Q1		2008Q1	2013Q1
<b>All</b>			<b>All</b>		
16-24	4.8	4.2	16-24	2.4	1.9
25-34	19	12.8	25-34	14.8	9
35-44	7.1	10.1	35-44	1.7	6.5
45-54	-4.6	-2.1	45-54	-10.3	-8.8
Over 55	-26.3	-24.9	Over 55	-8.6	-8.5
<b>Males</b>			<b>Males</b>		
16-24	2.9	3.8	16-24	2	2.1
25-34	17.9	8.3	25-34	15.4	6.3
35-44	7.9	11.7	35-44	3.1	8.9
45-54	-4.5	-1.6	45-54	-10.3	-8.3
Over 55	-24.1	-22.2	Over 55	-10.2	-9
<b>Females</b>			<b>Females</b>		
16-24	6.5	4.5	16-24	2.7	1.5
25-34	20.1	16.9	25-34	14	11.4
35-44	6.2	8.8	35-44	-0.2	4.2
45-54	-4.6	-2.5	45-54	-10.1	-9.2
Over 55	-28.3	-27.6	Over 55	-6.4	-7.8

Source: Labour Force Survey

**Table 3: Emigration in the 60's and recent flows by nationality and country of birth**

	Flow (persons)					Ratio respect to population ('000)				
	Total	Spanish nationality		Spanish nationality	Foreign nationality	Total	Spanish nationality		Spanish nationality	Foreign nationality
		Born in Spain	Born abroad	Total	Total		Born in Spain	Born abroad	Total	Total
<b>PERIOD OF EARLY EMIGRATION 60'S</b>										
1960	105.420					3,5				
1961	176.821					5,7				
1962	216.381					6,9				
1963	200.539					6,3				
1964	230.124					7,2				
1965	203.609					6,3				
1966	155.093					4,8				
1967	89.484					2,7				
<b>PERIOD OF RECENT IMMIGRATION</b>										
1996	29.895	9.359	3.850	13.209	16.686	0,8	0,2	6,8	0,3	28,6
1997	57.877	15.401	6.860	22.261	35.616	1,4	0,3	10,3	0,5	59,2
1998	81.227	15.876	8.156	24.032	57.195	2,0	0,4	13,7	0,6	89,8
1999	127.364	17.494	10.800	28.294	99.070	3,2	0,5	18,2	0,7	132,3
2000	362.468	17.592	13.995	31.587	330.881	8,9	0,5	21,8	0,8	358,1
2001	414.772	9.517	11.207	20.724	394.048	10,1	0,2	16,7	0,5	287,5
2002	483.260	17.826	22.349	40.175	443.085	11,6	0,5	31,7	1,0	224,0
2003	470.010	19.201	21.285	40.486	429.524	11,0	0,5	28,4	1,0	161,2
2004	684.561	19.934	18.783	38.717	645.844	15,8	0,5	23,9	1,0	212,8
2005	719.284	18.468	18.105	36.573	682.711	16,3	0,5	21,9	0,9	183,0
2006	840.844	18.936	18.937	37.873	802.971	18,8	0,5	21,5	0,9	193,8
2007	958.266	18.997	18.735	37.732	920.534	21,2	0,5	19,9	0,9	203,7
2008	726.009	17.044	16.737	33.781	692.228	15,7	0,4	16,1	0,8	131,4
2009	498.977	15.841	13.794	29.635	469.342	10,7	0,4	12,2	0,7	83,1
2010	464.443	15.628	17.481	33.109	431.334	9,9	0,4	14,3	0,8	75,0
2011	454.686	18.617	19.787	38.404	416.282	9,6	0,5	14,8	0,9	72,4
2012*	376.696			39.164	337.532	8,0			0,9	61,1
<b>PERIOD OF RECENT EMIGRATION</b>										
2002		26.092		26.092			0,67			
2003		13.867		13.867			0,35			
2004		10.980		10.980			0,28			
2005		15.910		15.910			0,40			
2006		17.895		17.895			0,45			
2007	312.987	22.517	5.574	28.091	284.896	6,9	0,57	5,92	0,69	63,04
2008	276.727	25.863	8.590	34.453	242.274	6,0	0,65	8,28	0,84	45,98
2009	433.681	25.532	9.840	35.372	398.309	9,3	0,64	8,69	0,86	70,51
2010	403.324	26.675	10.603	37.278	366.046	8,6	0,67	8,69	0,90	63,69
2011	497.970	37.890	14.951	52.841	445.129	10,6	0,94	11,21	1,28	77,39
2012*	560.199			73.215	486.984	11,9			1,76	88,22

Sources: Emigration from Spain during the period of early migration is from Nadal ( ) and García Fernández ( ).

It is computed as the sum of emigration to America based on passengers on ships and planes and emigration to Europe based on destination countries statistics. Population in that period is from census data 1960 and 1970. The years in between are the result of a geometric interpolation.

Immigration and emigration flows in all the following periods but 2012 from municipal registers (Encuesta de Variaciones Residenciales).

Immigration and emigration in 2012 comes from Nowcast (Población actual). Real time data on population constructed from municipal registers.

Population since 1996 comes from municipal registers (Padrón Continuo).

**Table 4: Internal migration**

	Flow (persons)					Ratio respect to population ('000)				
	Total	Spanish nationality		Spanish nationality Total	Foreign nationality Total	Total	Spanish nationality		Spanish nationality Total	Foreign nationality Total
		Born in Spain	Born abroad				Born in Spain	Born abroad		
<b>INTERNAL MIGRATION</b>										
2002	533.445	407593	15966	423559	109886	12,8	10,4	22,7	10,6	55,6
2003	586.987	436143	17901	454044	132943	13,7	11,1	23,9	11,3	49,9
2004	619.461	434179	18339	452518	166943	14,3	11,0	23,3	11,3	55,0
2005	626.324	428054	18147	446201	180123	14,2	10,8	21,9	11,1	48,3
2006	682.606	463270	20287	483557	199049	15,3	11,7	23,0	11,9	48,0
2007	744.716	470812	22694	493506	251210	16,5	11,8	24,1	12,1	55,6
2008	684.384	432492	23984	456476	227908	14,8	10,9	23,1	11,2	43,3
2009	669.573	430840	26119	456959	212614	14,3	10,8	23,1	11,1	37,6
2010	671.198	444581	27526	472107	199091	14,3	11,1	22,5	11,4	34,6
2011	672.003	447626	30329	477955	194048	14,2	11,2	22,7	11,5	33,7

Source: Flows in all periods from municipal registers (Encuesta de Variaciones Residenciales)

**Table 5: Characteristics of foreigners depending on their moving status**

	Recent immigrants 2008-2011	Recent emigrants 2008-2011	Internal migrants 2008-2011	Stock of foreigners 2008-2011
<b>Gender</b>				
Males	51.9%	58.7%	57.7%	52.7%
Females	48.1%	41.3%	42.3%	47.3%
<b>Age structure</b>				
Less than 16	15.0%	10.7%	34.4%	14.4%
Over 16	85.0%	89.3%	65.6%	85.6%
<b>Age of those above 16</b>				
16-29	45.1%	32.8%	64.6%	32.3%
30-44	35.9%	44.7%	17.1%	41.7%
45-64	15.3%	18.4%	16.8%	19.8%
>=65	3.6%	4.2%	1.5%	6.1%
<b>Country of birth</b>				
Spain	12.3%	9.4%	4.5%	6.0%
Rest of the world	87.7%	90.6%	95.5%	94.0%
<b>Within the rest</b>				
Europe	25.4%	22.7%	22.3%	42.9%
Romania	14.0%	10.4%	10.2%	15.3%
Bulgaria	2.6%	2.3%	2.1%	3.1%
Germany	2.2%	1.9%	0.7%	3.3%
UK	4.3%	2.4%	1.0%	6.8%
America	40.1%	46.9%	39.7%	34.7%
Argentina	2.9%	4.9%	3.2%	3.6%
Ecuador	4.3%	6.4%	6.4%	7.6%
Bolivia	2.2%	7.1%	4.8%	4.2%
Colombia	6.0%	5.3%	8.8%	5.4%
Peru	3.9%	2.8%	2.7%	2.5%
Asia	11.8%	9.2%	12.3%	5.3%
Africa	22.5%	21.1%	30.4%	17.0%
Morocco	13.9%	12.3%	19.1%	11.9%
Oceania	0.1%	0.1%	0.0%	0.1%

Source: Municipal registers (Encuesta de Variaciones Residenciales and padrón continuo)



**Table 6: Characteristics of Spaniards born in Spain depending on their moving status**

	Recent immigrants 2008-2011	Recent emigrants 2008-2011	Internal migrants 2008-2011	Stock of Spaniards 2008-2011
<b>Gender</b>				
Males	51.1%	51.9%	49.0%	49.1%
Females	48.9%	48.1%	51.0%	50.9%
<b>Children</b>				
Less than 16	11.0%	21.9%	25.3%	14.9%
Over 16	89.0%	78.1%	74.7%	85.1%
<b>Age of those above 16</b>				
16-29	14.3%	24.4%	44.1%	20.0%
30-44	32.6%	46.0%	20.7%	27.9%
45-64	30.0%	19.0%	20.9%	30.2%
>=65	23.1%	10.6%	14.3%	21.9%
<b>Region</b>				
Andalucía	12.1%	12.4%	17.5%	19.1%
Aragón	1.9%	2.2%	2.9%	2.9%
Asturias, Principado de	2.7%	2.0%	1.8%	2.5%
Balears, Illes	1.5%	2.1%	3.7%	2.1%
Canarias	4.5%	4.6%	4.2%	4.3%
Cantabria	1.1%	1.0%	1.4%	1.3%
Castilla - La Mancha	1.9%	2.1%	8.4%	4.6%
Castilla y León	4.7%	4.3%	6.8%	5.9%
Cataluña	15.8%	16.9%	14.1%	15.2%
Comunitat Valenciana	9.2%	9.0%	8.9%	10.2%
Extremadura	1.2%	1.1%	2.8%	2.6%
Galicia	13.1%	8.4%	5.8%	6.4%
Rioja, La	0.4%	0.5%	0.8%	0.7%
Madrid, Comunidad de	22.4%	24.2%	13.9%	12.8%
Murcia, Región de	1.9%	2.3%	2.3%	3.0%
Navarra, Comunidad Foral de	1.0%	1.3%	1.2%	1.4%
País Vasco	4.6%	5.6%	3.5%	5.0%
<b>Country of destination (*)</b>				
Europe		62.4%		
	UK		31.0%	
	Germany		7.6%	
	France		4.1%	
	Switzerland		3.5%	
America		12.2%		
	USA		23.1%	
Asia		18.3%		
	China		5.2%	
Africa		2.1%		
Oceania		4.9%		

Source: Municipal registers (Encuesta de Variaciones Residenciales and padrón continuo)  
 (\*)Destination is from the change in the stock by country of destination 2008-2012 in  
 Embassy registers

**Table 7: Log odds of residing in Spain by foreigners**

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Log odds 1998-2001	Log odds 2001-2007	Log odds 2008-2012	Log odds 1998-2001	Log odds 2001-2007	Log odds 2008-2012
U(destination)-U(origin)	-0.1036 (0.003)***	0.0093 (0.0031)***	0.0086 (0.0005)***	0.0667 (0.005)***	0.03205 (0.0059)***	0.0547 (0.0029)***
Years of schooling				-0.0077 (0.015)	-0.0360 (0.0119)***	-0.0326 (0.0122)***
Fixed effects pair country-region	YES	YES	YES			
Fixed effects country				YES	YES	YES
Constant	-19.11 (0.007)***	-18.00 (0.005)***	-17.55 (0.005)***	-18.92 (0.1905)***	-17.22 (0.1429)***	-17.20 (0.1495)***
Observations	4959	8307	6921	3963	6475	5357
Pairs of country-region	1349	1405	1406			
R-squared	0,974	0,982	0,997	0,617	0,69	0,7315

Source: Regression (1) and (2) from the paper. One observation is a pair region of destination in Spain /country of birth per year. The dependent variable is the log odds of residing in Spain. This log odds ratio is computed in such a way that the stock of migrants by country of birth in each region is taken from municipal registers and the population in the country of birth is from WEO database. Unemployment rates of regions in Spain are from the labour force survey and unemployment in origin countries at the WEO. The variable years of schooling is from the labour force survey. Average years of schooling by country of birth and region for the period 2000-2012. We compute an average years of schooling for each degree in educational attainment. Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 8: Log odds of Spaniards living abroad**

	(1)	(2)
VARIABLES	Log odds 2008-2012	Log odds 2008-2012
U(destination)-U(origin)	-0.0372 (0.0023)***	-0.019 (0.0020)
Years of schooling		0.6690 (0.0275)***
Fixed effects pair country-region	YES	
Fixed effects country		YES
Constant	-20.39 (0.0202)***	-16.29 (0.2871)***
Observations	4488	3777
Pairs of country-region	1281	
R-squared	0,9939	0,8689

Source: Regression (1) and (2) from the paper. One observation is a pair country of destination /region of origin in Spain per year. The dependent variable is the log odds of residing abroad Spain. This log odds ratio is computed in such a way that the stock of Spaniards by country of destination and region of origin is taken from embassy registers and the population in the region in Spain is from municipal registers. Unemployment rates of regions in Spain are from the labour force survey and unemployment in origin countries at the WEO. The variable years of schooling is from the labour force survey. Average years of schooling by country of birth and region for the period 2000-2012. We compute an average years of schooling for each degree in educational attainment. Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 9: Log odds of immigrating and emigrating to/from Spain**

VARIABLES	Immigration of foreigners			Emigration of foreigners		
	(1)	(2)	(3)	(4)	(5)	(6)
	Log odds 1998-2001	Log odds 2001-2007	Log odds 2008-2012	Log odds 1998-2001	Log odds 2001-2007	Log odds 2008-2012
U(destination)-U(origin)	-0.2418 (0.004)***	-0.0241 (0.0054)***	-0.0378 (0.0017)***			-0.0372 (0.0023)***
Fixed effects pair country-region	YES	YES	YES			YES
Constant	-20.40 (0.0155)***	-19.49 (0.008)***	-19.22 (0.0149)***			-20.39 (0.0202)***
Observations	5584	7210	4941			4488
Pairs of country-region	1203	1338	1321			1281
R-squared	0,898	0,949	0,982			0,9721

Source: Regression (3) and (4) from the paper. One observation is a pair region of destination in Spain /country of birth per year. The dependent variable is the log odds of moving to/from Spain. This log odds ratio is computed in such a way that the flow of migrants by country of birth in each region is taken from municipal registers and the population in the country of birth is from WEO database. Unemployment rates of regions in Spain are from the labour force survey and unemployment in origin countries at the WEO.

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 10: Composition of recent Spanish Emigrants to UK, France and Argentina.**

	UNITED KINGDOM		FRANCE		ARGENTINA	
	Year of arrival		Year of arrival		Recent emigrants (less than 5 years)	
	1998-2007	2008-2012	1998-2007	2008-2012	2003-2007	2008-2012
Total Emigrants	24,052	42,775	4,413	12,319	11,507	18,002
	Age distribution					
<16	23.2	15.9	0.0	0.0	1.2	32.6
16-29	42.7	41.6	100.0	91.6	17.6	13.0
30-44	10.3	12.7	0.0	8.4	10.8	26.6
45-64	0.0	29.7	0.0	0.0	23.1	9.4
>65	0.0	0.0	0.0	0.0	47.3	18.5
	Skill distribution					
High	48.1	60.0	40.8	61.9	5.1	31.7
Medium	19.2	6.6	50.4	21.1	42.2	8.6
Low	8.9	6.1	8.7	17.0	52.7	59.7
NA	23.8	27.4				

**Composition of recent emigrants to UK (2008-2012)**

	Share in total recent emigrants (%)	By age group				
		<16	16-29	30-44	45-64	>65
Euro Area	21.1	28.5	53.8	15.3	1.9	0.6
Rest of Europe	24.6	17.4	54.1	24.2	4.2	0.1
North America	3.8	17.8	34.4	38.2	8.3	1.3
Rest of America	13.7	27.1	38.4	24.2	5.3	5.0
Asia	34.2	20.3	58.0	17.5	4.0	0.3
Oceania	2.5	14.4	38.7	35.5	9.6	1.8
SPAIN	0.04	15.9	41.6	12.7	29.7	0.0
	Share in total recent emigrants (%)	By educational attainment				
		Unknown	High	Medium	Low	
Euro Area	21.1	25.7	49.0	10.4	14.9	
Rest of Europe	24.6	16.4	25.9	12.7	45.0	
North America	3.8	15.2	55.8	16.5	12.5	
Rest of America	13.7	28.7	34.1	12.7	24.5	
Asia	34.2	17.8	50.7	11.1	20.4	
Oceania	2.5	14.4	75.8	3.7	6.1	
SPAIN	0.04	27.4	60.0	6.6	6.1	

Source: LFS from UK and France, and Encuesta Permanente de Hogares Argentina

Figure 1. Unemployment rates

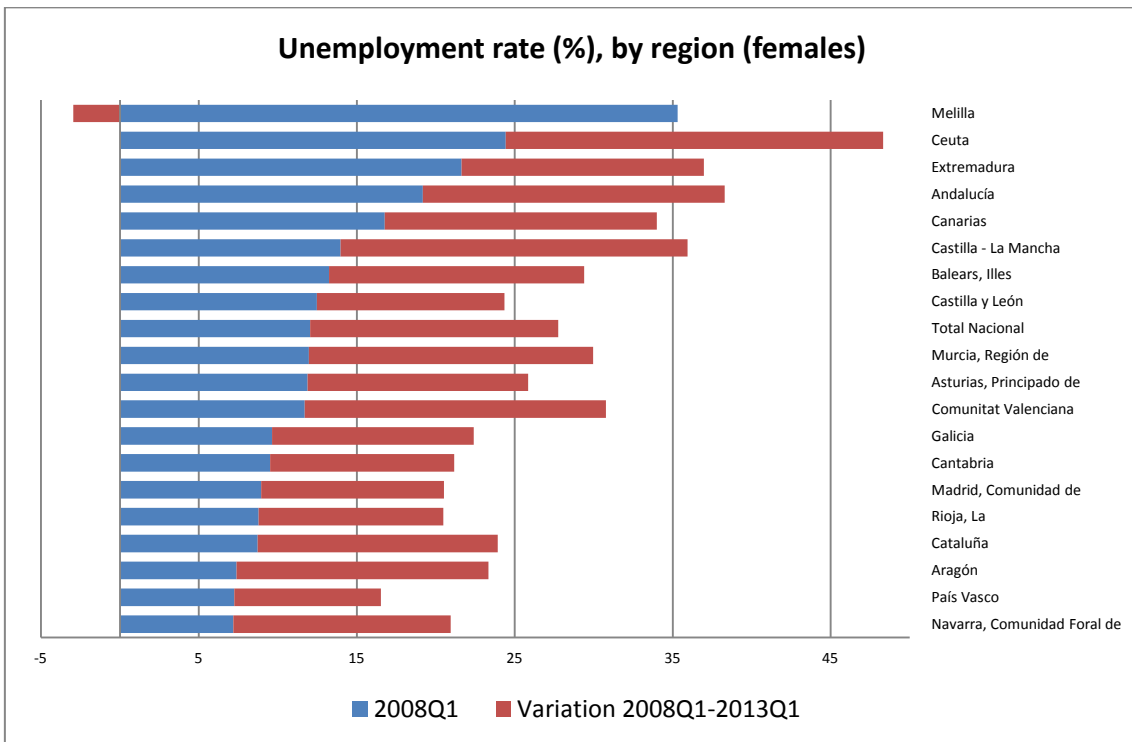
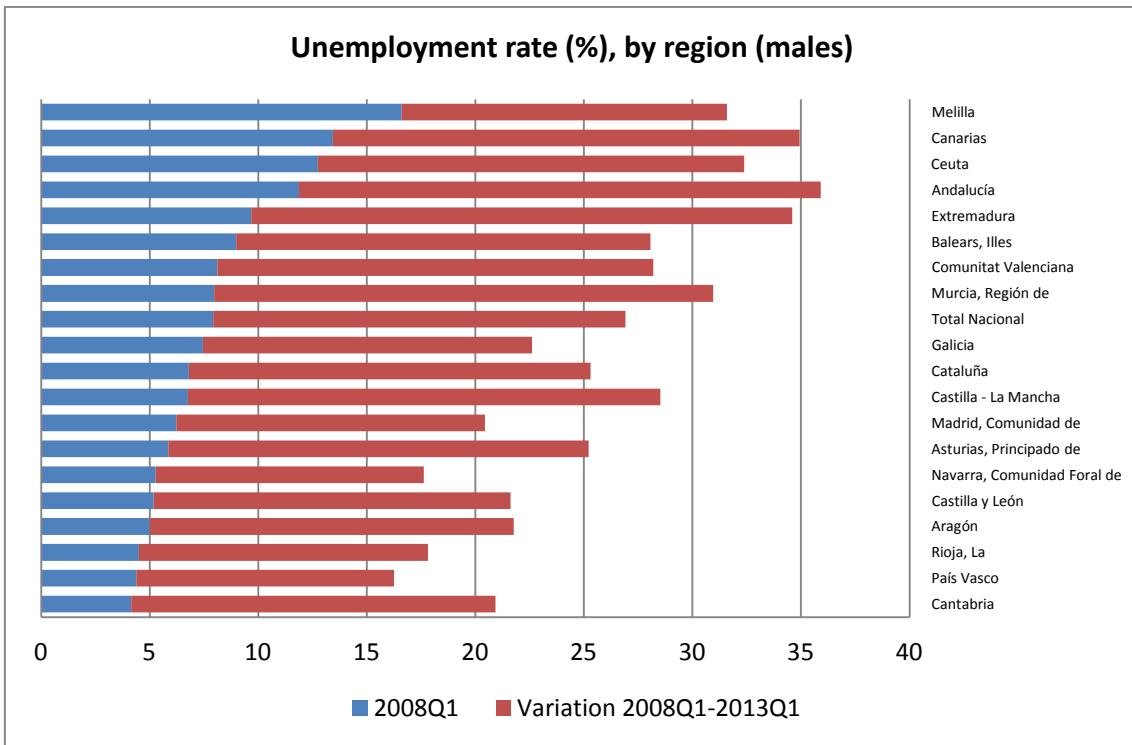


Figure 1 (continued)

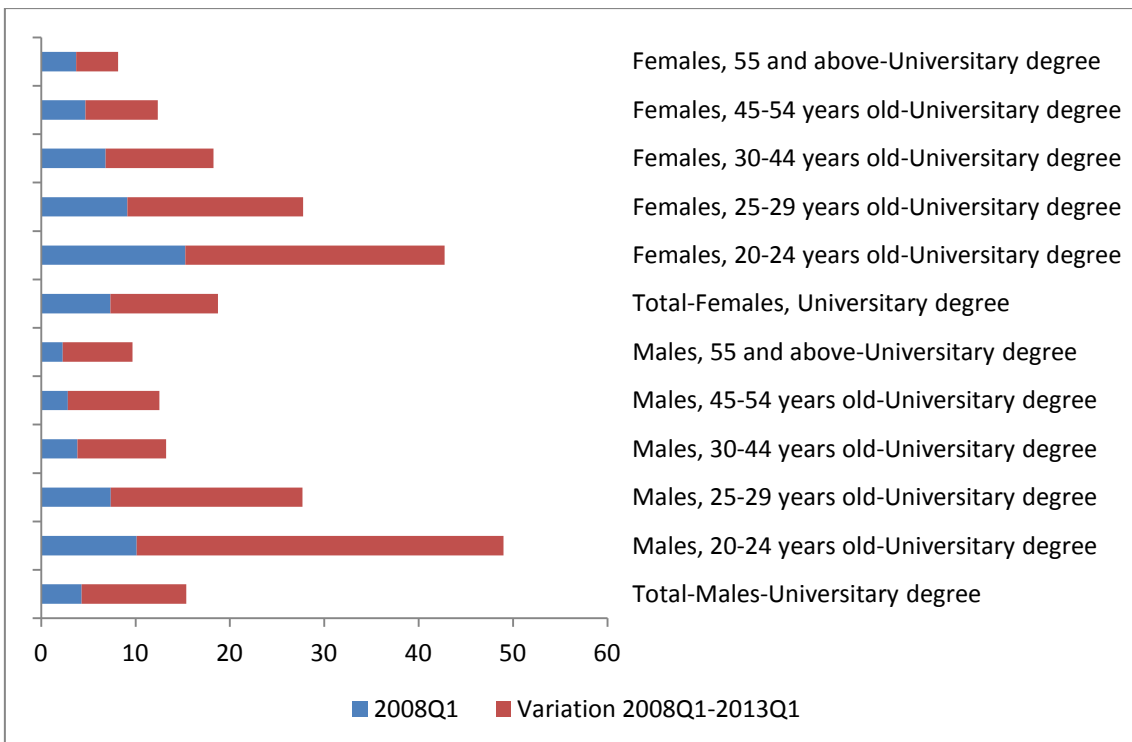
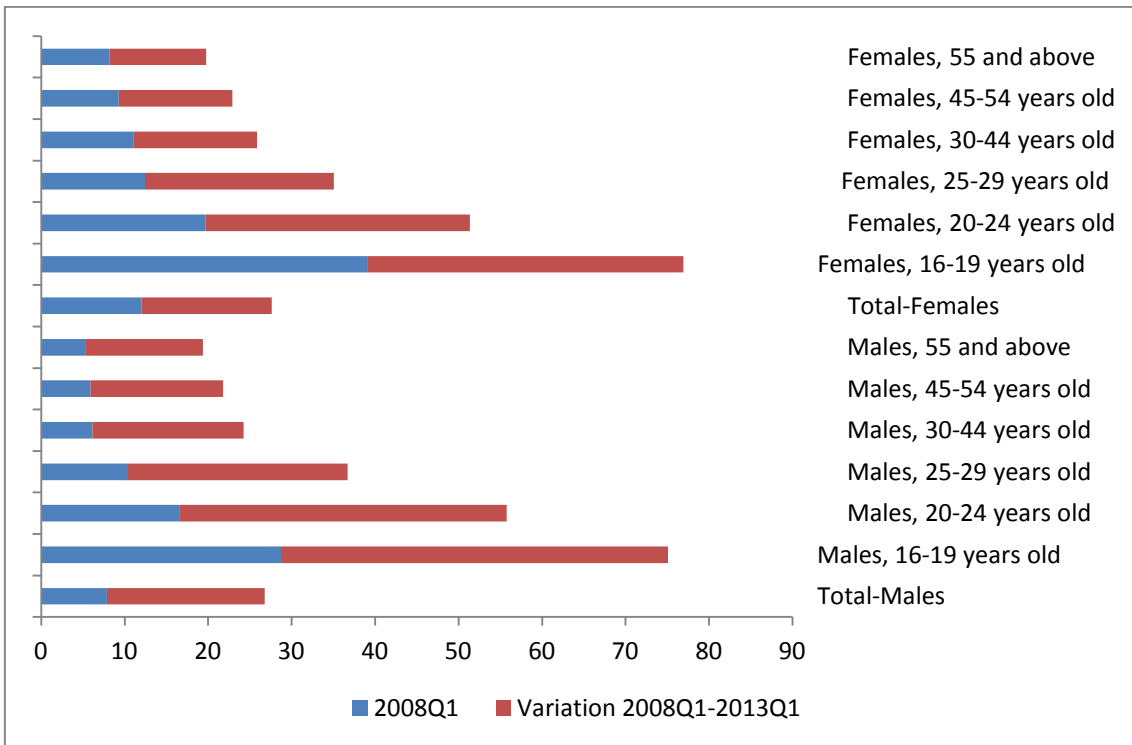
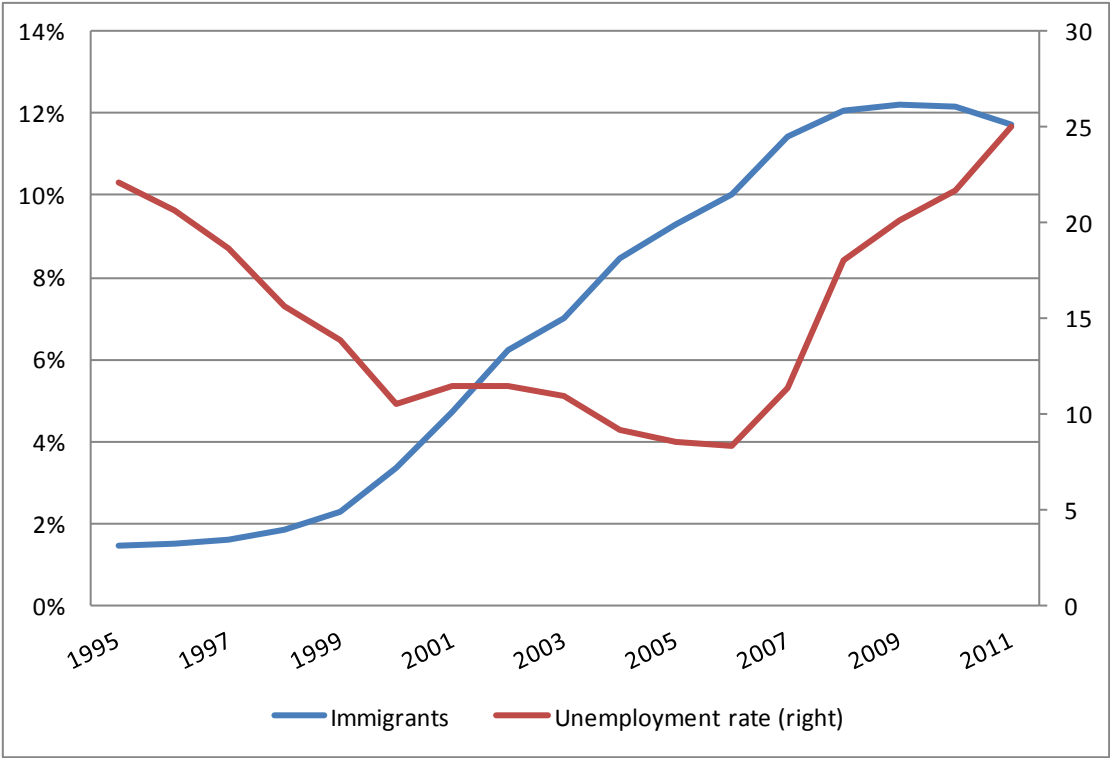
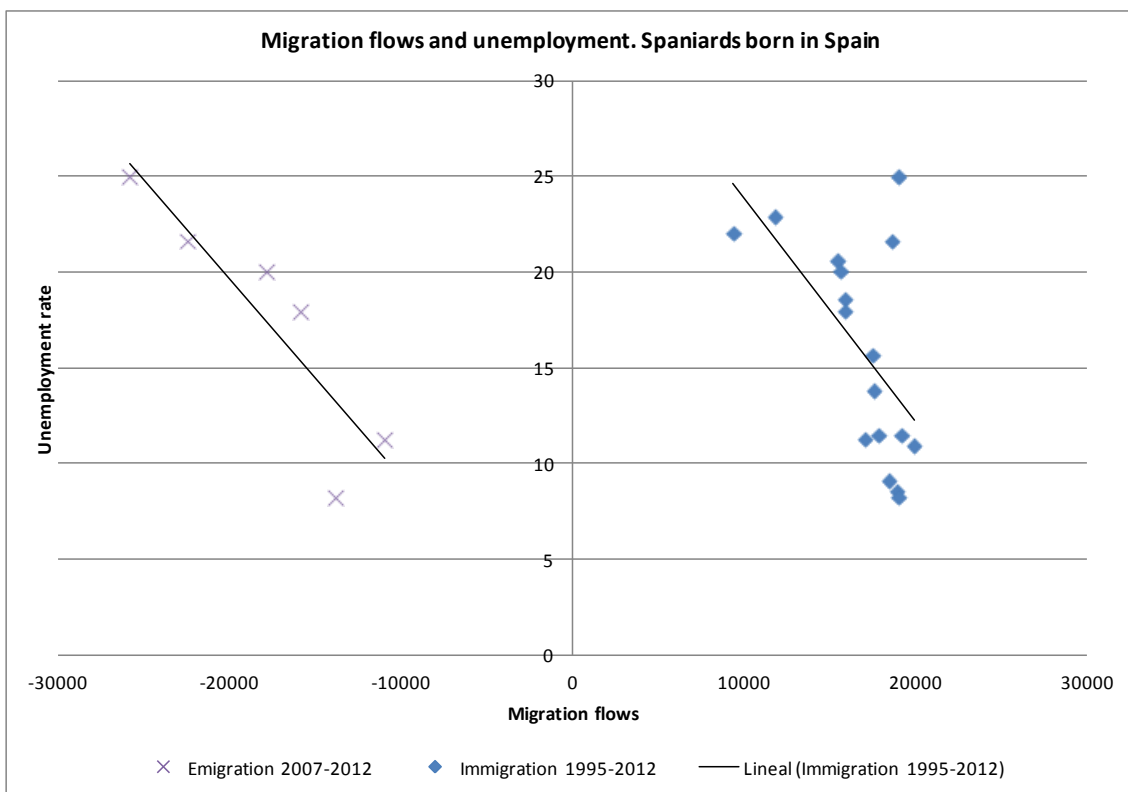
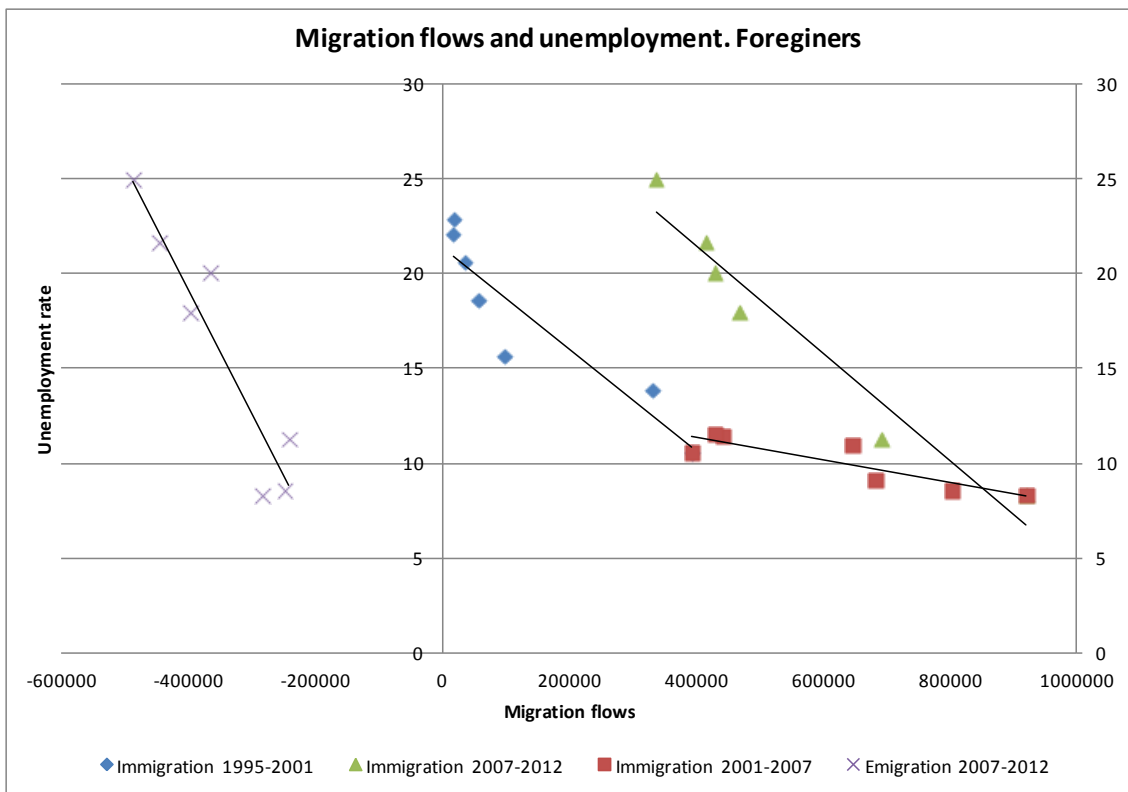


Figure 2: Share of foreigners in Spain and evolution of unemployment rate

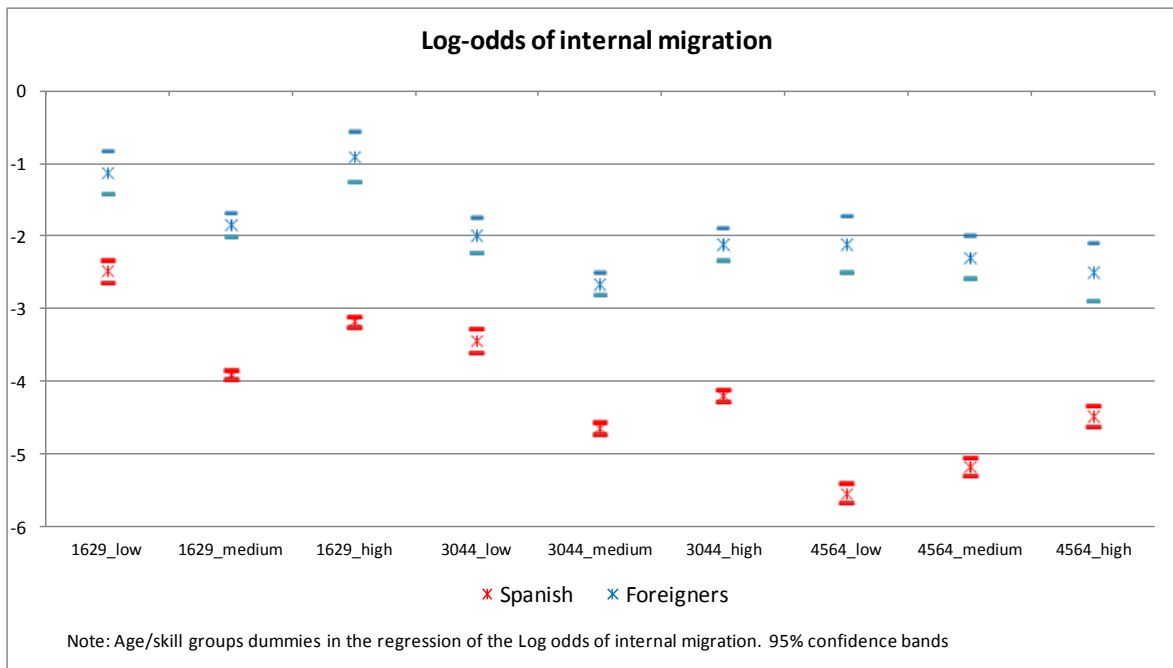




**Figure 3: Migration flows and unemployment rate**



**Figure 4: Constant on a regressions of log odds of internal migrating by nationality representing costs of emigrating internally**



**Figure 4 (continued): Sensitivity of log odds of internally moving to unemployment differentials by nationality**

