*Faculty of Spatial Sciences*
*University of Groningen*

# Migration flows in Spain; an analysis of the crisis years 2008-2012

**Mathijs de Jong**
**s1608827**

Supervisors:
Prof. dr. P. McCann
Dr. V. Venhorst

## Preface

*"Nothing has such power to broaden the mind as the ability to investigate systematically and truly all that comes under thy observation in life"* – Marcus Aurelius, Mediations iii

This thesis marks the end of my academic education, and the beginning of a new phase in life. In my opinion, writing a thesis has been the most rewarding from an educational standpoint. Beside the freedom to choose and write your own research, it is where you apply the skills you have learned. The ability to research an idea or an interest by means of a structured research project is a skill which I have come to appreciate tremendously over the past years. Furthermore, what I think is more important, is the ability to think critically, to ask questions, and to search for answers in a constructive and scientific manner. I am thankful to the staff of the Faculty of Spatial Sciences, as well as the University of Groningen, for creating an environment in which I have been able to enrich myself academically, and personally.

In terms of this specific thesis, my supervisors Philip McCann and Viktor Venhorst challenged me with their ideas, motivated me, and gave me invaluable advice. For that I am grateful. I would also like to thank my family and friends for their unconditional love and support. Last but not least, I would like to thank you, the reader, for taking the time to read my thesis. I hope you enjoy it.

Mathijs de Jong

## Abstract

Migration flows in Spain from 2000 until 2007 were characterized by massive immigration from abroad. The booming construction sector grew rapidly, providing employment for millions of immigrants. However, when the crisis hit, the construction sector in particular experienced declining investments, and unemployment went up dramatically. As a consequence, immigration declined, and emigration increased. In this thesis, the migration flows of Spaniards and foreigners have been examined for Spain's 17 autonomous communities. The goal of this thesis is to find out whether migration patterns have changed during the crisis years, and if this can be explained by the impacts of the economic crisis. Data analysis has shown that Spaniards react differently than foreigners, in migration decisions. Whereas foreigners are more likely to migrate abroad, Spaniards tend to predominantly migrate interregionally. There are also sectoral differences which help to explain migration patterns. Regions with a relatively large construction sector (compared to the sectors agriculture, industry and services) experience a bigger change in migration flows. As several migration theories suggest, and what is reflected in the analysis, migration decisions are partly economic in nature (for example, unemployment), and dependent on the risks of unemployment and migrating to find a job.

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# 1. Introduction

## 1.1 Introduction

The economic crisis is one of the most debated items over the past years. Along with disrupting trade and financial markets, unemployment has risen dramatically. Especially countries in Southern Europe, like Greece, Portugal and Spain have been hit hard in this respect. For Spain, regular and youth unemployment rates were around 25% and 55%, respectively (INE, 2013a).

Studying the literature I came across research aimed at finding out the link between crises, and (im)migration. As research by Koser (2009), Hatton & Williamson (2009) and Green & Winters (2010) shows, these effects vary across place and across time. Global outcomes can be very different from regional or local outcomes, and the world is different than it was 40 years ago. Furthermore, migration decisions might have changed. Is it the individual, or the family which decides to migrate? Is this decision influenced by purely economic incentives? Or do we see specific host-country networks play a pivotal role in facilitating the arrival of new migrants? It is therefore useful to take a contemporary look at how migration patterns change over time (in this case, in a very turbulent time). The focus of this thesis will be on the effects of an economic crisis, measured by several economic indicators, on specific migration flows.

Because of differences in economic structure, labor markets, general policies and political systems, it is not easy to compare European countries with each other. Therefore, in order to try to find out whether a link exists between economic downturns and specific migration patterns, I will take a look at Spain as a case study. Spain is an interesting country in terms of researching changes in migration patterns because of its size, as well as dynamism in terms of migration. The influx of millions of immigrant workers in the beginning of the 21st century (INE, 2013a) has no doubt had its influence on Spain's labor market and consequently, its economy. Millions of people are currently unemployed, unsure whether they will find jobs in the foreseeable future. This might mean they will have to look somewhere else, and migrate in order to find employment, whether it is interregional or international migration. This presents Spain and other host countries around the world with a variety of challenges. Why is it that this country which experienced rapid economic growth since joining the EU, and managed to create so many jobs which increased labor demand since the start of this century, has been hit so hard? And, even more so, what are the immediate effects of these processes on migration patterns in Spain?

Answering these questions will add to existing literature by helping to understand how complex migration patterns can be (partly) explained by economic indicators, if at all. Furthermore, this research will attempt to grasp how Spain has been impacted by the financial crisis, and how its population attempts to react to challenges in the labor market and overall economy.

**1.2 Research questions**

Following this theoretical backdrop, I intend to examine specific migration patterns in Spain since 2008. Looking at and describing the trends, but also analyzing the more specific directions of migration flows, will result in the ability to answer the following research questions:

"Does the economic crisis, measured by economic indicators for the period 2008-2012, have an effect on migration patterns in Spain?"

- 1. What is, in the literature, the relationship between (im)migration and economic crises?

- 2a. What were the patterns of Spanish interregional and international migration before the crisis?

- 2b. What are the patterns of Spanish interregional and international migration during the crisis?

- 2c. How did economic indicators such as GDP or unemployment develop before and during the crisis?

- 2d. Is it possible to explain the observed difference over time and across regions in migration patterns by phenomena which are a result of external shocks (economic crisis)?

Before diving into the data, I will provide a theoretical framework and a chapter about Spain's economic development and migration trends since joining the European Union, up until pre-crisis years.

# 2. Theoretical Framework

## 2.1 Financial Crises

**Economic crisis:** "*A situation in which the economy of a country experiences a sudden downturn brought on by a financial crisis. An economy facing an economic crisis will most likely experience a falling GDP, a drying up of liquidity and rising/falling prices due to inflation/deflation"* (Business Dictionary, 2013).

**Financial crisis:** *"A situation in which the supply of money is outpaced by the demand for money. This means that liquidity is quickly evaporated because available money is withdrawn from banks, forcing banks either to sell other investments to make up for the shortfall or to collapse"* (Business Dictionary, 2013).

**Recession:** *"Period of general economic decline, defined usually as a contraction in the GDP for six months (two consecutive quarters) or longer. Marked by high unemployment, stagnant wages, and fall in retail sales, a recession generally does not last longer than one year and is much milder than a depression. Although recessions are considered a normal part of a capitalist economy, there is no unanimity of economists on its causes"* (Business Dictionary, 2013).

### 2.1.1 The global financial crisis

The current economic crisis has been generally dubbed the "deepest, most synchronous across countries and most global one since the Great Depression of the 1930s" (European Commission, 2009).

In 2007, uncertainty rose about the value of subprime mortgages in the United States, causing a liquidity crisis. Financial injections to save financial institutions proved futile, and the bankruptcy of Lehman Brothers in 2008 and consequent global stock market panic, marked the start of a deep recession. Because of extensive lending and trading networks, banks in countries around the world faced the risk of falling like dominoes. This in turn resulted in governments attempting to bail out banks in order to save the financial system from collapsing completely (European Commission, 2009). Although this has been the immediate cause for the financial crisis, it is believed to have been an almost inevitable outcome of the way the financial system functions. As Crotty (2009:575) concludes: *"The past quarter century of deregulation and the globalization of financial markets, combined with the rapid pace of financial innovation and the moral hazard caused by frequent government bailouts helped create conditions that led to this devastating financial crisis".*

In terms of trade, the global financial crisis caused the biggest contraction since 60 years (Jansen & Von Uexkull, 2010). From 2011 onwards, the global economy has seemed to recover steadily with a GDP growth of about 3-4% a year. However, when looking at the Euro area specifically, GDP growth is still negative over 2012 and most likely also over 2013 (IMF, 2013).

### 2.1.2 Financial crises and unemployment

In times of recession, mainly due to declining investments, global trade and falling output, unemployment increases. According to Bernal-Verdugo et al., (2012) the severity of the effects of economic crises on employment is related to labor market institutions. Countries with more flexible labor markets experience sharper but more short-lived effects of crises, whereas in countries with less flexible labor markets, crises are more persistent but initially not as severe. Research by Junankar (2011) also shows that impacts differ from country to country. However, unemployment was highest in countries

which suffered from a collapse in the housing market, and in which the manufacturing and construction sectors were hit hardest. This in turn negatively affected labor mobility, which led to a decrease in regional migration of unemployed workers. Unable to find a job and stuck in long-term unemployment, consumer spending then drops and slows down economic recovery (Junankar, 2011).

### 2.1.3 Financial crises and migration

What exactly is the relationship between migration patterns and (global) financial crises? If we assume migration is dependent on factors such as searching for a better job and higher wages, it might be logical to assume migration decreases in times of economic hardship, because of high unemployment (less jobs available in destination regions) and more uncertainty (and thus higher risk). However, the case can also be made for the opposite; workers in regions facing high unemployment may be more inclined to migrate, precisely because they cannot find a job in that specific region, and are forced to migrate to where the chance of getting a job is higher. The impacts of a crisis surely affect migration to some degree; and will vary regionally. To find out what the relationship is between financial crises and migration patterns, we have to take a look at previous crises, and see if there are some similarities.

The first difficulty is that we cannot compare the current financial crisis to crises of the past that easily. Koser (2009:9) argues that "*during earlier recessions, one region tended to benefit economically at the expense of another, thus allowing migrants to shift to alternative destinations. In contrast, the current crisis takes place in a world more interconnected than ever before, and is predicted to have impacts on global migration patterns and trends*".

Secondly, migration could also be caused by policies or other structural changes, where crises only accelerate processes which are already underway. Examples can be found in 1970's Latin America where oppressive political regimes caused a brain drain of intellectuals, when the Latin American crisis hit (Koser, 2009). Hatton & Williamson (2009) argue that while long-run migration patterns are mainly caused by economic and social processes, short-run migration patterns are caused by temporary labor market conditions in host and sending countries. When both host and sending countries experience an economic downturn, it appears that the situation in the host country is dominant in affecting migration patterns. For example, "*the rise in unemployment abroad had nearly three times the effect on emigration from the UK between 1870 and 1913 as a rise in unemployment at home*" (Hatton & Williamson, 2009).

Evidence from migration flows after the Great Depression, the 1973 Oil Crisis and the 1997-8 Asian Crisis suggest that firstly, immigration declines when the host country is going through a recession. The lack of job creation and the policy response to keep unemployment down caused a stricter immigration law, which means less people coming in. Secondly, return migration occurs, but is not as prevalent as changes in immigration. Unemployed workers do not immediately react and search for a job elsewhere, the reason being that they are still rooted in their region by more than just their job. Thirdly, emigration from some countries is hardly affected, although this has usually more to do with the sector in which emigrants are working (Green & Winters, 2010).

Another briefly mentioned of crises on migration can be found in policy measures. Historically, anti-immigrant sentiments have been rising in times of recession, which

often leads to more restrictive immigration policies. Nevertheless, broad migration patterns dominate the long term, which leads us to believe that crises only influence migration for a relatively short period of time (Hatton & Williamson, 2009).

## 2.2 Theories on Migration

***Migration**: "A process of moving, either across an international border, or within a State. It is a population movement, encompassing any kind of movement of people, whatever its length, composition and causes; it includes migration of refugees, displaced persons, uprooted people, and economic migrants"* (IOM, 2004).

### 2.2.1 Core, periphery, and World Systems Theory

A theory central to explaining (economic) spatial diversity is the concept of core and periphery. It emphasizes a dichotomy of social, economic and political power. As Stadel (2009:14) puts it; "*The core is the dominating 'central' realm, while the peripheries tend to be isolated, dependent, and underprivileged"*. Core and periphery phenomena can be observed at any scale level. Often, the terms core and periphery coincide with First-World (developed) and Third-World (developing) classifications. Globally, the Netherlands can be considered a 'core country'. However, on a national scale, a city like Amsterdam ranks as core, whereas rural areas in Groningen would be periphery. On yet another scale level, the city of Groningen is a 'core city', when comparing it to smaller towns in the province. This concept follows the World Systems Theory, put forth by Wallerstein (1974). In this model, countries are all assigned a role in the capitalist world system, based on its connection to the system. For example, in the 17$^{th}$ century, Holland and England were 'core' countries, playing a leading role in trade and expansion of capitalism in the world at that time. Beside core countries, there are peripheral, external, and semi-peripheral countries. In the 17$^{th}$ century, Latin America could be considered a peripheral country, from which resources were extracted, whereas Portugal or Italy ranked as semi-peripheral. Several Eastern European countries and Russia were 'external'. These countries maintained their own economic systems, and did not participate in trade with the world economy. Today, virtually no country could be classified as 'external', for even North Korea engages in trade with neighboring countries.

Central to the World Systems Theory is the interconnectedness of the mobility of capital and labor. Migration is determined by "*the increased interdependence of economies and the emergence of new forms of production",* and structural change in world markets (Kureková, 2010:4). The historical capitalist expansion led to political and economic inequalities, and thus migration. For example, growing economies in the core generate demand for labor, which can be found in the periphery. Even though this theory does not provide individual reasons to migrate, it helps to understand the dynamics of supply and demand on a world market, and the consequences this has on migration patterns.

### 2.2.2 The neo-classical equilibrium perspective

This perspective firstly views migration as "*an individual decision for income maximization"* (Massey et al. 1993). Secondly, migration from rural to urban areas is seen as a crucial step in the development of countries (De Haas, 2008). Migration is understood to occur as a result of differences in returns to labor in different markets.

Examples of this theory are found in the Lewis and Harris-Todaro models. The Lewis model explains how a developing economy can grow by transferring labor from a sector with low productivity to a sector with a higher marginal productivity, exemplified in this case by the agricultural (rural) and manufacturing (urban) sectors (Lewis, 1954). Central to this theory is that *"migration results from actual wage differentials across markets or countries that emerge from heterogeneous degrees of labor market tightness"* (Kureková, 2010:3). The Harris-Todaro model describes how rural-urban migration is based on expected income differentials, instead of just wage differentials like the Lewis model. Thus, according to these theories, it would be rewarding for migrants from labor-intensive and low-wage (often rural) sectors or countries to move to high productivity and high-wage (often urban) sectors or countries, regardless of high unemployment in the urban sector. As we've seen in the World Systems Theory, according to this perspective, migration is also a result of supply and demand mechanisms, based on wage differentials. Migrants are understood to be rational beings that move to the place where they can earn the highest wage. Naturally, where they can be the most productive and earn the highest wage depends on the skills of the individual and the structure of the labor market (De Haas, 2008).

### 2.2.3 New economics of labor migration

Opposing the neoclassical approach, the New Economics theory of migration emphasizes that migration decisions are made by households, instead of being merely individual decisions. Purely individual, rational decisions regarding migration are not very realistic. A migrant is part of a situation in which his or her decisions are influenced by, and influence other people. In this theory, the household tries to maximize income and status, while minimizing risks as much as possible. These households often send one member to migrate, and to earn income in the form of remittances. Outcomes of migration are a central point in the decision making process whether to migrate (Hagen-Zanker, 2008).
This also means that conditions in the home country play a role in migration behavior and individuals are seen as receptive to external factors, instead of being merely utility-maximizing actors (Massey et al., 1993). Earning a higher real income does lead to increased migration behavior, but so does the relative income of the household, which is influenced by factors such as social status and analyzing possible risks associated with migration (Hagen-Zanker 2008; Stark, 1991). Besides pointing out that migration is a complex decision made by households instead of individuals, the new economics of labor migration does not offer possible answers to where migrants go specifically.

### 2.2.4 Human Capital Model

In human capital theory, a person's education and abilities boost economic production (De Haas, 2008). On an individual level, education is seen as an investment, associated with higher future earnings. As in the neoclassical approach, positive expected returns lead to migration (Hagen-Zanker, 2008). Young and highly educated individuals are the ones who can benefit the most from migration, and engage the most in migration. First of all, young migrants have more time to receive positive returns to migration, and second of all, they are most mobile because they are not yet deeply rooted in certain places (for example, having a family). On a micro-level, migration is seen as an investment decision, to "*increase the productivity of human capital"* (Hagen-Zanker, 2008:10). If it's

beneficial to migrate in terms of income or future expected income, then from a neoclassical point of view, migration occurs. The Human Capital model also tries to explain the composition of migrants. Due to *"diverging returns on their migration investment"* (De Haas, 2008:6), migrants are usually not representative of their home communities. After all, various individual characteristics of a migrant such as educational level, personality or age influence how much that migrant can benefit from migration. Groups of migrants with different skills, educations and characteristics move to different places. Thus, this theory provides an explanation for the selectivity of migration (De Haas, 2008). A place like Silicon Valley, with its enormous ICT sector, will most likely attract different kinds of migrants than industrial Katowice, Poland.

### 2.2.5 Network Theory and Migration Systems Theory

Network theory helps to understand why migration continues even when, according to neoclassical theories, migration is not as beneficial in terms of wage differentials or expected relative income increases (Massey et al., 1993). Like in the human capital model, it explains why migration patterns vary from country to country, and migration is selective. The reason is that, like cumulative causation theory, networks of migrants help perpetuate existing patterns of migration. It is beneficial for migrants to have access to a network in the host country, because it can minimize risks associated with migration. As Hagen-Zanker (2008:18) puts it; "*Networks expand, migration becomes part of local culture and this makes migration more and more accessible to all levels of the population*". Examples of networks of migrants can be found in Irish or Italian neighborhoods in 19$^{th}$ and 20$^{th}$ century New York. Very specific types of migrants move to specific places, over time strengthening a local identity. Furthermore, personal relations between migrants and non-migrants play a central role in network theory (Kureková, 2010), which often leads to phenomena such as chain migration. Closely related to network theory, migration systems theory assumes that *"migration alters the social, cultural, economic, and institutional conditions at both the sending and receiving ends—that is, the entire developmental space within which migration processes operate"* (De Haas, 2008:21). Beyond merely looking at the personal relations between migrants and non-migrants, migration restructures the entire context of spaces in which migration takes place, and there is a reciprocal and dynamic link between migration and development (De Haas, 2008). Also, according to Kureková (2010), migratory movements are not random, but rather a result of existing links between areas. Examples of such links are colonial ties, trade or investment flows. Thus, migration systems theory sees not only basic supply and demand mechanics which are a factor in the occurrence of migration, but it understands migration to be a complex system that continuously adapts and changes itself, and changes the socio-cultural and economic system it operates in. As in network theory, an important feature of a migration system is feedback from migrants at their destination to the place of origin. Because of this feedback, migration flows continue, even if there is little to gain on an individual financial level.

### 2.2.6 Interregional and international migration

What are the main differences concerning migration between regions, and migration between nations? First of all, it is clear that the difference in scale level can increase or decrease the obstacles to migrate. For example, migrating to another country may be

complicated because of social or political barriers. Furthermore, migration decreases as distance between regions (or nations) increases. This is also known as distance decay. According to Biswas et al. (2008), international migration is characterized by a unidirectional flow; from poorer to richer countries. Following this logic, we can also understand international migration as a result of economic differences. It implies that incentives to migrate are at least partially monetary. Supposedly, there is more to earn in richer countries compared to the poorer countries, as the wages are higher in the former. This is also an important aspect in the previously mentioned theories. Interregional migration however, is a two-way flow (Biswas et al., 2008). Similar to a human capital type approach, the skills of workers and the demand in different regions for specific skills is what drives interregional migration.

## 2.3 Conclusion

These theories help to better understand the context of this thesis. A research of migration flows is not complete without asking the question why people migrate, and why people migrate is not so clear. Most theories discussed above have in common that economic incentives play a role in migration. The extent of that role, however, is not always easy to identify. Therefore I predict that interregional and international migration in Spain will be dependent on a mix of these theoretical approaches, with fluctuations in the construction sector and housing market (Junankar, 2011) at the center. Moreover, there will most likely be differences in the way Spaniards and foreigners react to the crisis, which will be identifiable in different migration flows in regards to these groups.

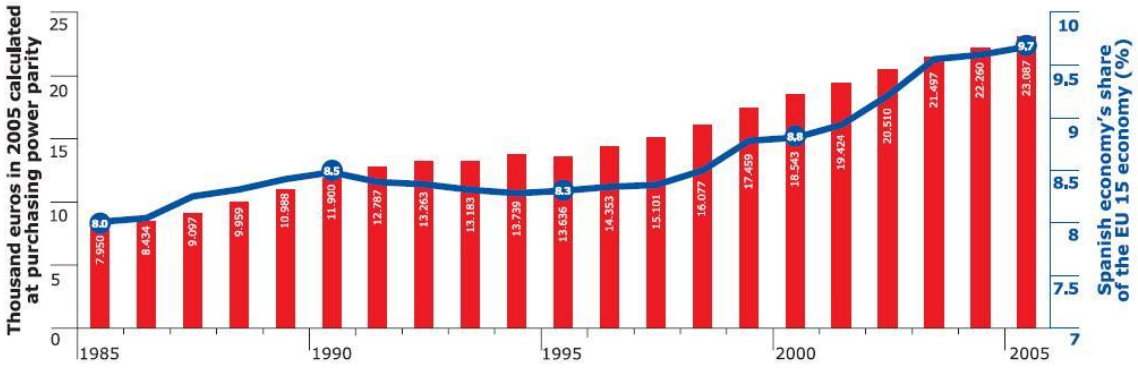
# 3. Spain: Background

## 3.1 Spain's Economy

*"In the last twenty years Spain has experienced a period of rapid growth followed by a very deep crisis. Until 2007, it was named 'the Spanish economic miracle' and now it is the country with the highest unemployment rate in the EU amongst many other very serious troubles"* (Etxezarreta et al., 2011:2).

Between 1985 and 2005, since joining the European Community and later European Union, Spain's per capita GDP rose from 8,000 to 23,000 euros. At that time it was the eighth largest economy in the world, and according to the Elcano Royal Institute (2006:2) "*one of the most dynamic economies in Europe".* In the same period, income convergence between Spain and the EU took place, however this also had to do with lower income countries joining the EU in 2004. Still, in 2005, Spain's per capita GDP was 99.2% of the EU 25 average (Elcano Royal Institute, 2006).

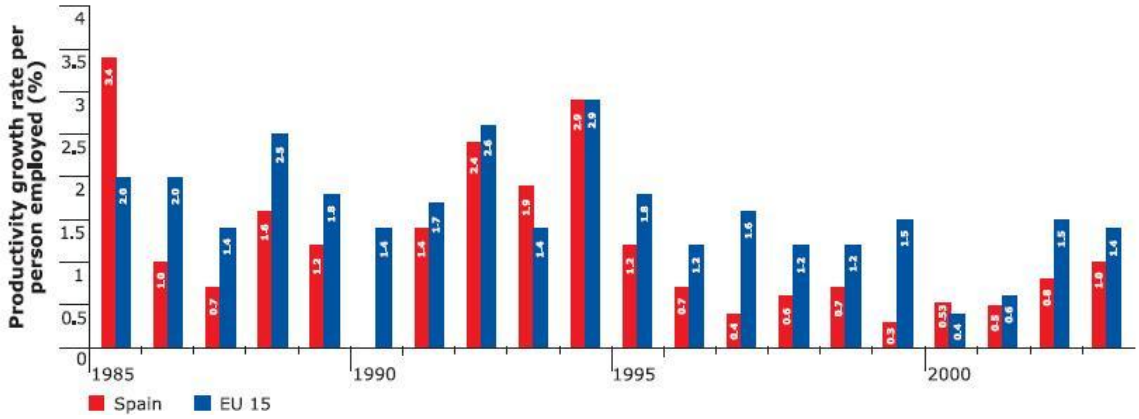
Figure 1: **GDP and per capita GDP; trend and growth**




Source: Elcano Royal Institute, 2006

The Spanish economy was able to grow especially rapidly from 1994 until the financial crisis. Low interest rates, an expansion of credit facilities, investment growth and a reduction of public debt, together with a decrease in unemployment, saw Spain converging to EU averages (Andrés et al., 2009). However, productivity was declining year after year, whereas in 1985 it exceeded the EU average. Possible explanations are to be found in the use of temporary contracts (31% in 2005), which prevent employees from gaining enough skills and training to increase productivity. The reason the Spanish economy was able to grow, while at the same time not increasing its productivity, was that the major part of (employment) growth was realized in the construction and services sectors (Andrés et al., 2009). These are sectors with relatively low productivity levels. Also, the Spanish economy is lagging behind the EU 15 average in terms of technological modernization. Only a small part (6%) of Spanish exports is of high technological nature, not having changed much since 1990. Similarly, countries like Greece and Portugal are also not able to increase production of these high skills, knowledge intensive capital goods (Elcano Royal Institute, 2006).

Figure 2: **Levels of productivity growth in Spain**




Source: Elcano Royal Institute, 2006

It seems that although Spain has made progress in innovation and in expanding the technological capital stock, it has not yet been able to transform the economy into a competitive one on par with other advanced European countries. The relative number of patents (an indicator of technological advance) is extremely low (less than 20% of the EU average), even though the number of people in the working age population with a higher education is 92% of the EU 15 average (Elcano Royal Institute, 2006). Also, investments in research and development are persistently low. Since joining the European Union, Spain has doubled its share of investments in R&D to GDP, but has not been able to catch up with the average EU 15, which is still twice that of Spain (Elcano Royal Institute, 2006).

So, when Spain joined the European Community in 1986, its productive model was "*based on low labour costs and low level technology"* (Etxezarreta et al., 2011:4). The lack of complete adaptation to a more competitive world had its impacts on unemployment, which rose to 24.1% of the working population in 1994 (Etxezarreta et al., 2011). In order to improve employment rates, a lot of capital was invested in sectors which were thought to be shielded from external pressures, such as the domestic (low-productivity) construction sector. Andrés et al., (2009) also argue that competitiveness was negatively affected by low productivity per worker. Furthermore, the booming construction sector and housing market created high levels of debt amongst households because of increases of real estate prices from 2000 to 2007 (Andrés et al., 2009).

### 3.2 Spain's labor market

Overall, Spain improved significantly from 1985 to 2005 in terms of job creation. The unemployment rate has roughly been halved, although the decline has not been stable over the years. As mentioned before, since the mid-1990s, Spain was able to create a lot of jobs which further lowered unemployment rates, but mainly in the construction and services sectors. However, there remain fairly distinct regional differences in unemployment, as well as differences in unemployment between men and women. Research from Andrés et al., (2009) and Carballo-Cruz (2011) shows that the Spanish labor market is suffering from a high degree of duality. First of all, wages and hours

worked are very rigid. To remain profitable, crisis-hit firms have to increase productivity, since neither devaluing the currency nor lowering wages is an option. This means workers have to be dismissed (Carballo-Cruz, 2011). Secondly, on the one hand there are workers with high protection and high dismissal costs, on the other workers with low protection and low dismissal costs. The largest number of worker dismissals is within the second group. This is supposedly why *"the Spanish economy has suffered the effects of the world recession far more intensively than most advanced countries"* (Andrés et al., 2009:3). Whereas the fall in economic activity has not been as severe as in other countries, the loss of jobs has been more intense. The key reason for this is the fact that there are so many low productivity firms, in sectors such as tourism and construction (Andrés et al., 2009). This is also an indication that unemployment will most likely be very long-term, since neither the construction nor the tourism sectors will probably any more be the growth engines of the Spanish economy (Andrés et al., 2009). Shifting investment to high value-added industries and focusing on productivity will be of more importance in the recovery of the Spanish economy (Carballo-Cruz, 2011).

### 3.3 Immigrants in Spain

Spain's economic growth between 2000 and 2007 was mainly based on the already mentioned construction sector, as well as the services sector. The booming economy and consequent job creation led to an increase of immigration to Spain. In the first decade of the 21st century, no less than 5 million immigrants entered the country, making Spain the third European country with regards to share of immigrants. Besides job creation, immigration increased because of several other reasons. The Latin-American economic crisis around 2000 saw many people from South America migrate to Europe, most notably to Spain because of its language. By 2007, around 35% of foreigners in Spain were Latin-American (Éltető, 2011). Also, September 11th 2001 caused a change in immigration policy in the United States, redirecting migrants to Europe (Palma Martos & Martín Navarro, 2010). Furthermore, the share of Romanians and Bulgarians rose sharply in 2007 when these countries joined the EU (Éltető, 2011). Because immigrants moved to areas with plenty of job vacancies and a more dynamic labor market, immigration did not proceed spatially evenly**.** In some cases, it has contributed to slow down depopulation of rural areas (Cuadrado et al., 2006). Furthermore, immigration affected *"regional growth, development of employment and productivity"* (Éltető, 2011:70). For example, immigrants becoming household employees enabled Spanish women to participate on the labor market. There seems to be compelling evidence that immigration has benefited Spain's labor market tremendously.

The effect of immigration on productivity growth is not as clear. According to Éltető (2011), increases in employment did not lead to increases in productivity. This may be due to the fact that many immigrants worked in low-productivity jobs like the construction sector, agriculture or as household employees. As we can see, immigrants are twice as likely to work in the construction sector as natives.

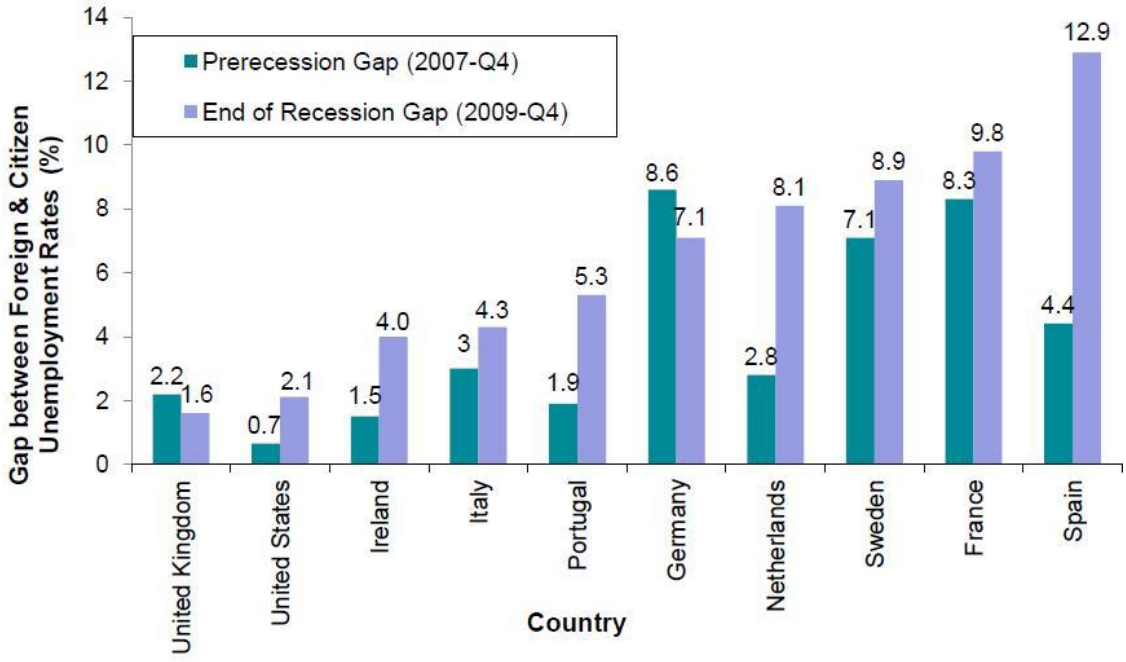
Table 1. **Distribution of employment in Spain among main sectors in 2008, percentage**

| | Spanish | Foreign |
|---|---|---|
| Agriculture | 3.8 | 5.3 |
| Industry | 16.7 | 11.6 |
| Construction | 10.9 | 21.7 |
| Services | 68.6 | 61.4 |
| Total | 100 | 100 |

Source: Perez Infante, 2009

So we see various effects on the labor market. On the one hand, immigration enables other groups to increasingly participate, on the other hand a large share of immigrants work in low productivity sectors like construction. In these sectors, immigrants have a higher risk of becoming unemployed in times of economic hardship, something which we see when we look at the difference between immigrant and nonimmigrant unemployment:

Figure 3: **Gap between Immigrant and Nonimmigrant Unemployment, 2007/2009**




Source: Papademetriou et al., 2010

In most countries mentioned, foreigners have a higher chance of being unemployed than native citizens, however, there are large differences between countries. For instance, in

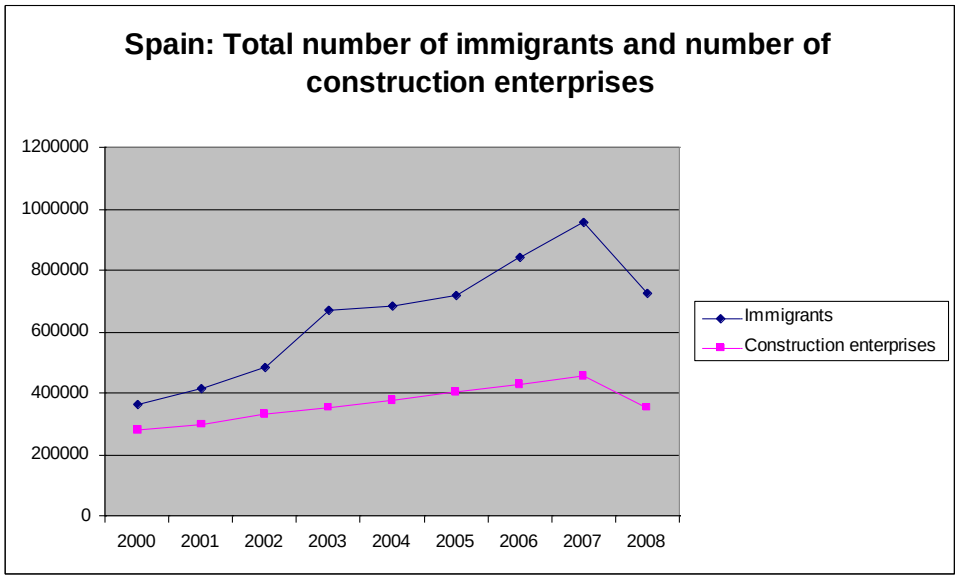
the UK and Germany the gap in unemployment rates actually declined, indicating that foreigners in those countries are most likely not overrepresented in those sectors which are hit hardest. The opposite seems true for countries like the US, Portugal, the Netherlands and Spain, where this gap roughly tripled. Also, Spain's unemployment gap skyrocketed to a 12.9% since the crisis, indicating that foreigners have been hit very hard.

For this thesis, I will look at differences in unemployment between Spaniards and foreigners for every Spanish autonomous community, to see if the data matches the unemployment data between countries, as described in Figure 3.

### 3.4 Spain in Crisis

Similar to the United States, the cause of the Spanish economic downturn was to be found in the housing market. Besides providing housing for immigrants who worked in the construction sector, the demand for buying houses increased because of low interest rates and fewer restrictions on obtaining credit. Providing housing for these immigrants by the booming construction sector, indicated by the number of construction enterprises, helped perpetuate a cycle which eventually would not be able to sustain itself (Harrington, 2011).

Figure 4: **Immigrants and construction enterprises**



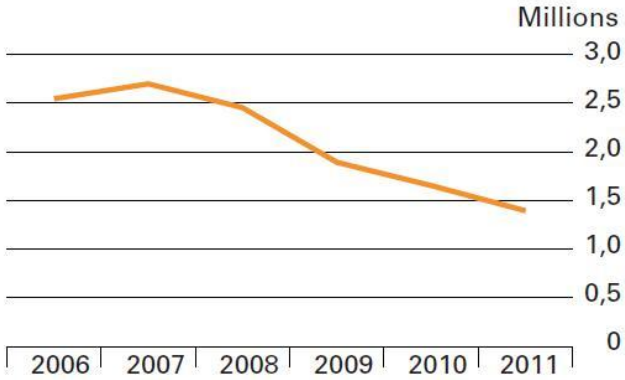

Source: Eurostat, 2013b

Furthermore, the role of the Spanish regional savings and loan banks, called 'cajas', hindered the attempts to mitigate effects of the crisis. In short, these cajas were under control of regional politicians instead of shareholders, and *"relatively unregulated, and they were not required to disclose certain information such as collateral on loans, repayment history, and loan-to-value ratios"* (Harrington, 2011:7). This only made it harder for the Spanish government to act accordingly when trying to salvage already troubled parts of the economy. Finally, Harrington (2011) provides another underlying cause of Spain's crisis: the framework of Spanish financial institutions and the Eurozone itself. Lack of central regulatory authority, leaving nations to self-regulate in complex integrated policies, only fuelled confusion and hindered uniform solutions. Also, as

Crotty (2009) believed to be a crucial cause of the global financial crisis, a deregulated real estate market and deregulated lending institutions were too eager to make loans to corporations and people who were less likely to repay (Harrington, 2011).

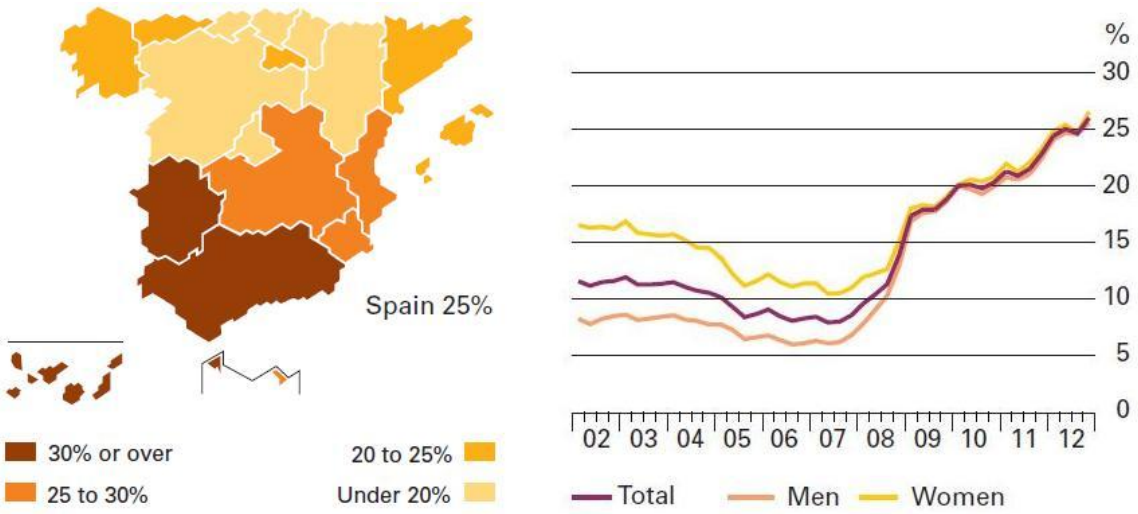
So how has the financial crisis affected Spain? Spain's economy contracted severely which manifested itself primarily in the loss of jobs. When the demand for housing slowed down in 2007, around 13 percent of employment in Spain was construction related (Harrington, 2011). This inevitably led to unemployment. In the first quarter of 2013, over 6 million people were unemployed, with unemployment rates of 27.2%, and for young people under 25 around 55%. Figure 6 highlights the differences in unemployment rates by region. To see whether migration flows are affected by economic indicators such as unemployment, I will have to look at the Spanish autonomous communities separately to come to any conclusions about the links between the two variables.

Figure 5: **Persons employed in construction**




Source: INE, 2013b

Figure 6: **Unemployment rates, 2012**




Source: INE, 2013b

When we take a look at unemployment rates, educational level and age, we see that for every age group and educational level, unemployment rates have gone up. The group aged 20 to 24 years old is almost twice as likely to be unemployed as the 15-64 year group. Also, the higher one's education, the more likely that person is to be employed. This fits in well with the fact that there was a high degree of unemployment in the relatively unskilled immigrant group in the construction sector. But still, the increase in unemployment among high skilled workers is alarming.

Table 2: **Unemployment rates**

| Unemployment rates | Primary education | | | | |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| men and women | | | | | |
| 15 to 64 years | 16,67 | 25,98 | 29,77 | 31,92 | 37,54 |
| 20 to 24 years | 29,98 | 46,98 | 52,73 | 51,42 | 63,27 |

| Unemployment rates | First stage of secondary education and the corresponding training and labour insertion | | | | |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| men and women | | | | | |
| 15 to 64 years | 14,31 | 23,49 | 25,7 | 27,31 | 31,87 |
| 20 to 24 years | 22,25 | 37,06 | 40,96 | 46,93 | 51,14 |

| Unemployment rates | Second stage of secondary education and the corresponding training and labour insertion | | | | |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| men and women | | | | | |
| 15 to 64 years | 10,66 | 17,2 | 19,32 | 21,55 | 24,61 |
| 20 to 24 years | 17,4 | 28,87 | 31,98 | 39,51 | 48,09 |

| Unemployment rates | Training and labour insertion with secondary degree (2nd stage) | | | | |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| men and women | | | | | |
| 15 to 64 years | 12,79 | 18,17 | 24,32 | 19,13 | 27,19 |
| 20 to 24 years | 34,57 | 35,31 | 33,12 | 22,82 | 40,17 |

| Unemployment rates | Higher education, except doctorate | | | | |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| men and women | | | | | |
| 15 to 64 years | 6,44 | 9,86 | 11,42 | 12,82 | 15,22 |
| 20 to 24 years | 15,87 | 25,8 | 28,54 | 34,92 | 39,71 |

Source:INE, 2013a

In terms of sectors of the economy, employment dropped most severely in the construction sector, but every sector saw a decline.

Table 3: **Employment in sector**

| Employment in sector, Total amount, x1000 | Agriculture | | | | |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| Both sexes | | | | | |
| Total | 818,9 | 786,1 | 793 | 760,2 | 753,2 |

| Employment in sector, Total amount, x1000 | Industry | | | | |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| Both sexes | | | | | |
| Total | 3198,9 | 2775 | 2610,5 | 2555,3 | 2430,7 |

| Employment in sector, Total amount, x1000 | Construction | | | | |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| Both sexes | | | | | |
| Total | 2453,4 | 1888,3 | 1650,8 | 1393 | 1147,6 |

| Employment in sector, Total amount, x1000 | Services | | | | |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| Both sexes | | | | | |
| Total | 13786,4 | 13438,6 | 13402,2 | 13396,2 | 12950,4 |

Source:INE, 2013a

Furthermore, there has been a sharp increase in search time to find another job. Whereas in 2008, about 250,000 people were searching for a job for over 2 years or more, by 2012 this were over 1.7 million.

Table 4: **Time searching a job**

| Time searching a job, Total amount, x1000 | 2 years or more | | | | |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| Both sexes | | | | | |
| Total | 254,4 | 434,5 | 784,2 | 1234,2 | 1730,5 |

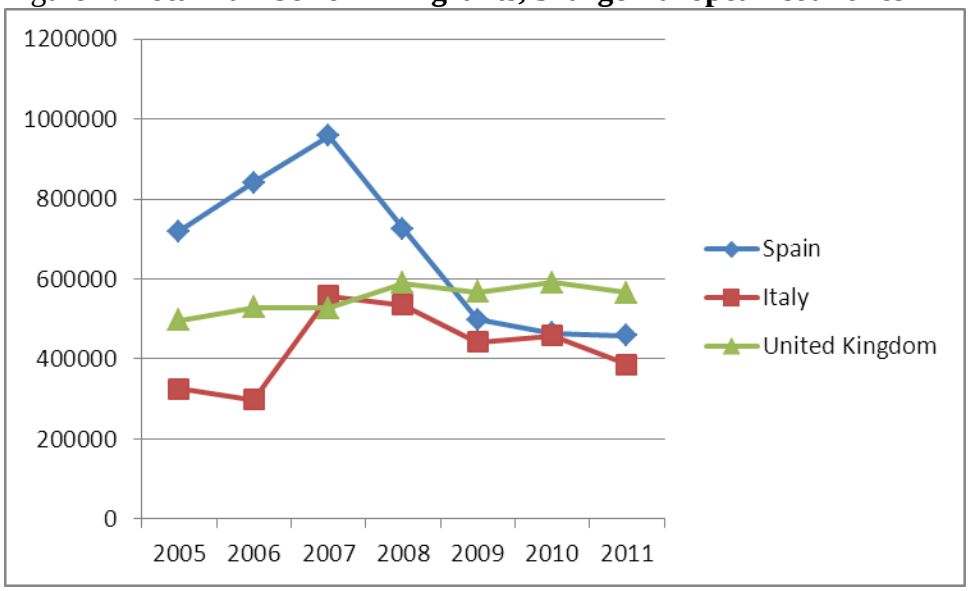
| Time searching a job, Total amount, x1000 | 2 years or more | | | | |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| Both sexes | | | | | |
| From 20 to 24 years | 19,6 | 41 | 74,5 | 124,9 | 170,7 |

Source:INE, 2013a

### 3.5 Description of migration patterns 2000-2009

From 2000 until 2009, Spain has received around 5 million immigrants in total, with annual immigration increasing up until 2007, where it saw nearly a million immigrants come into the country. By 2012 this number had dropped to under 450,000 (Eurostat, 2013b), which indicates a sharp decline in immigration. The exact opposite happened with emigration, which went from about 225,000 people in 2007, to half a million in 2012. In 2005, around 36 percent of male immigrants were employed in the construction sector (Arango, 2013). When the sector 'collapsed' during the crisis, a logical result was that this group suffered high unemployment. Even though unemployment among immigrants is not as high as unemployment for youth, around 36% of immigrants are currently jobless (Arango, 2013).

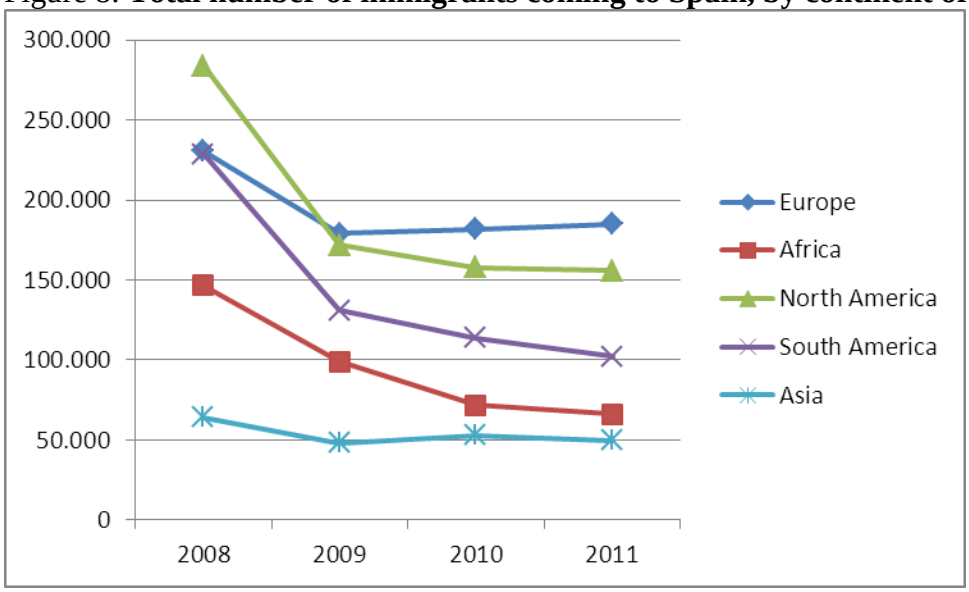
Figure 7: **Total number of immigrants, 3 large European countries**




Source: Eurostat, 2013b

When we look at the origin of Spanish immigrants, immigration from every continent has declined.

Figure 8: **Total number of immigrants coming to Spain, by continent of origin**




Source: Eurostat, 2013b

Even though immigration has decreased significantly, still hundreds of thousands of people enter Spain every year. Relative to their home countries, these immigrants find a higher level of social services in Spain, as well as better job prospects in the least hit sectors. However, as Domínguez-Mujica et al., (2012) point out, the number of irregular immigrants (immigration without legal permission to do so) has declined strongly after the recession hit. Even though irregular immigration is hard to measure, there are strong indications in the decline in numbers of foreigners rejected at major airports, as well as a decline in numbers of people deported at the borders with France and Portugal (decline of 49.3 and 19.9 percent, respectively), indicating that Spain is less attractive for irregular immigrants since the crisis. A possible explanation for this drop is, according to Domínguez-Mujica et al., (2012), that migration networks in the destination country are negatively affected by the crisis because of impoverishment of those already settled in Spain. Newcomers often depend heavily on these migration networks, and unable to get full support from this network, immigrants are deterred to migrate to Spain.

### 3.6 Conclusion

We can conclude that the Spanish economy was characterized by high growth levels from 2000 to 2007, fueled by a booming construction sector. This created demand for low-skilled labor from abroad. The economic growth was not accompanied by higher productivity levels, posing a threat to the long-term stability of the Spanish economy. When the crisis hit, many of these low-skilled workers were laid off. The construction sector was affected particularly hard. As a consequence, foreigners' emigration increased while at the same time immigration decreased. For Spaniards, unemployment rose as well, but the global effects on migration are not yet that clear. This will be explained further in the following chapters.

## 4. Migration in Spain: expectations and actual patterns

What would we expect to be possible results of an economic crisis on migration? As several migration theories suggest, economic reasons are just one part of the decision to migrate (Hagen-Zanker, 2008). Generally, prospects of a better job, as well as prospects of a better life are central in economic migration. Is there any truth to the reverse, in that economic crises are key 'push' factors, in order for the unemployed to find work somewhere else? People migrate in search of jobs all the time, but a sudden economic shock might reveal whether people tend to migrate sooner, or wait for the economy to recover. For instance, if migrants' home countries are equally affected by an economic crisis it might not be beneficial to move back. In the case of Spain, we know that there have been enormous increases in unemployment in the construction sector (INE, 2013a). We also know that many employees were immigrants who arrived the previous decade, reacting to increasing demand of this booming sector. Unemployment of this particular group may thus lead to return migration, unable to find work in other sectors in Spain. It is less likely for unemployed immigrants in the economic hubs (Cataluña, Madrid) to find work in other autonomous communities than Spanish nationals. Especially those in the construction sector often lack educational and language skills and a network which might land them a job in another region (Kureková, 2010). On top of that, many foreign migrants do not have employment protection and are more adversely affected by the crisis. Thus, for foreigners, we expect an increase in migration abroad (particularly in regions in which the construction and industry sectors have been hit the hardest), but not so much internal. For migrants with a Spanish nationality, migration towards other autonomous communities might increase because barriers to migrate are much lower compared to foreigners. However, we may see that emigration from core regions such as Madrid and Cataluña is declining, because these regions are probably the most diverse in terms of jobs and thus still attractive for the unemployed.

Immigration most likely declines in times of crises, because of a decrease in availability of jobs. Whereas migrants from abroad are drawn towards booming economies because of the job opportunities, it is logical to assume that during a recession and rising unemployment it is less attractive to migrate. Or, as suggested by the 'new economics of labor migration' theory; the risk of migrating during a recession is too high (Hagen-Zanker, 2008). While this is not necessarily true for all migrants, it will probably affect a large part of them. Again, it is important to look at the specific skills and education a particular migrant has. Human capital theory predicts that migrants with different skillsets generally work in different sectors of the economy (De Haas, 2008). If several sectors experience declining employment but others remain strong, migrants will still be inclined to take jobs in those sectors. Some autonomous communities may also have larger and stronger migrant networks, making it easier for newcomers to adapt and find jobs. However, a drop in immigration of foreigners for most autonomous communities is to be expected. Particularly immigration from abroad is likely to decline significantly. Immigration from other autonomous communities may show a pattern of migration towards core regions, in which the total number of jobs is large enough for the unemployed to still have a good chance of finding employment. Just as in non-crisis times, the regions of Andalucia, Madrid and Cataluña most likely will still be the largest

receivers of both foreign and Spanish migrants, because economic opportunities are most prolific in these areas.

### 4.1 Emigration of foreigners abroad and internal

For Spain's most dominant regions in terms of the economy (Cataluña and Madrid), we see an enormous increase in migration of foreigners leaving Spain. The number of foreigners from Madrid migrating abroad doubled between 2008 and 2012, from about 50.000 to about 100.000 (See Appendix, % of foreigners emigrating, per autonomous community). These are huge increases. In Cataluña, which has the largest outflows on an absolute level, emigration of foreigners has increased a lot as well. For both autonomous communities, there are also specific patterns when we look more closely at these years. In the years 2008-2009 and 2011-2012 the increases were the largest. For example, migration of foreigners abroad in Cataluña rose from 75.000 in 2008 to 100.000 in 2009. In 2010 and 2011, these outflows 'stabilized' at 107.000 emigrants annually. From 2011 to 2012 we see again a large increase to 120.000. Roughly the same pattern can be identified for Madrid, with the largest annual increase in the year 2011-2012. We would expect to see this happen as well in Andalucia, which has the largest population of all the autonomous communities. Although migration of foreigners abroad is increasing, from around 22.000 in 2008 to around 30.000 in 2012, it is not going nearly as fast as in Madrid or Cataluña. Interestingly, one of the largest relative increases is in Paìs Vasco, where in 2008 there were 'only' 7.460 foreigners migrating abroad and 22.308 in 2012, which represents a three-fold increase over four years.

For virtually every autonomous community, there seems to have been little change in the number of foreigners migrating internally, especially when compared to migration abroad. Although migration of foreigners abroad is always higher than migration of foreigners internally, external migration tends to fluctuate more. According to the theory, this is to be expected. Why would foreigners have higher prospects of a job in a relatively small region like Asturias as compared to Madrid, when the economy is doing badly? It is less likely that a migrant will find work in regions other than the Spanish economic hubs like Madrid and Cataluña. We see that for the years 2008-2012, there have been small decreases in number of foreigners migrating internally. However, the changes are quite small, with the largest decreases happening between 2008 and 2009. If there is any effect of the economic crisis on migration flows of foreigners, it most likely will not have a substantial impact on internal migration of this specific group. More precisely, the data does not show a clear correlation.

### 4.2 Emigration of Spaniards abroad and internal

Whereas the largest flows of international migration consist of foreigners, internal migration is primarily undertaken by Spanish nationals. There are some differences between autonomous communities but annually, about 2 or 3 times as many Spanish nationals migrate internally compared to foreigners. As well as foreigners, Spanish nationals do not seem to be increasingly migrating towards other autonomous communities. However, as hypothesized, there is a small decrease in emigration from Madrid and Cataluña.

The biggest difference in migration patterns for Spaniards is also to be found in international migration. Migration abroad is increasing in the regions. Although there are

fluctuations between regions, annual migration abroad is roughly doubling between 2008 and 2012. This would be a logical consequence of the fact that overall unemployment has risen so dramatically in Spain as a whole. Spaniards will increasingly have to look for jobs in other countries. The increase of Spaniards migrating abroad increased from about 8.000 to about 15.000 between 2008 and 2012 in Madrid. However, even though migration has nearly doubled, this is a very small fraction of Madrid's population (a total of ~6.500.000). Thus, we see that there are changes in the ways Spaniards migrate. However, the absolute flows are quite small, especially when we compare the 15.000 Spanish emigrants to the roughly 100.000 foreign emigrants.

### 4.3 Immigration of foreigners from abroad and internal

For immigration of foreigners from abroad, the pattern is very similar, though inverse, compared to emigration of foreigners. First of all, there has been a very large decrease in immigration from 2008 to 2009. For the years 2010 and 2011 immigration stabilized, after which there was another significant decline from 2011 to 2012. Of course on an absolute level, immigration in Madrid and Cataluña decreased the most, but for the selected seven autonomous communities the pattern is roughly the same. This seems very logical because migrating towards Spain in times of crisis is not very attractive in terms of job prospects. The immigration surplus of about 60.000 in 2008 changed into an emigration surplus of about 60.000 in 2012.

What is perhaps a little unexpected is the decline in internal immigration of foreigners for Cataluña. This is one of the few areas in which the large regions diverge. For Madrid as well as Andalucia, immigration of foreigners from other autonomous communities stays about the same. For example, in Madrid immigration fluctuates from roughly 20.000 in 2008 to roughly 19.000 in 2012. In Cataluña however, immigration of foreigners from other autonomous communities declines from around 20.000 to about 14.000 in the period 2008-2012. As a core region, Cataluña might be an attractive destination for unemployed foreigners in other Spanish regions. This does not seem to be the case; the amount of foreign immigrants is decreasing. For Communidad Valenciana the same pattern emerges. This leaves the question why these are so different. Are certain regions simply more attractive for foreigners immigrating from other autonomous communities, no matter their size or economic potential? Or is migration of foreigners towards other autonomous communities primarily fueled by economic incentives, thus emphasizing the role and economic health of certain sectors of the economy?

### 4.4 Immigration of Spaniards from abroad and internal

First of all, immigration of Spaniards from abroad is tiny compared to immigration of foreigners from abroad. This is no surprise; this is likely the case in every country. From the period 2008-2012, in most autonomous communities the number of Spanish immigrants has declined slightly, with exception of Madrid. Furthermore, according to what we would expect, the autonomous communities of Madrid, Cataluña and Andalucia are the most popular immigration destinations. Whereas there has been a large decrease in immigration of foreigners, immigration of Spaniards from abroad has not been changing much.

Immigration of Spaniards from other autonomous communities shows a more diverse pattern. The smaller autonomous communities such as Asturias or La Rioja

receive roughly the same or fewer Spanish immigrants, whereas the bigger regions such as Madrid or Cataluña receive more Spanish immigrants in the period 2008-2012. The fluctuations are not very large, but there is a difference nevertheless. Also worth noting is that Madrid receives the most Spanish immigrants by far, more than twice the amount of Spanish immigrants coming to Cataluña.

### 4.5 Employment per sector

Because a large part of Spain's immigration was absorbed by the construction sector (Andrés et al., 2009), and the post-crisis impacts on this sector were so large, it is useful to take a closer look at the relative size of the construction sector in several autonomous communities. Are there differences in the relative size of the construction sector between small and big autonomous communities? And if so, does this correlate with the relative size of migration flows?

Table 5: **Employed by economic sector, sex and Autonomous Community, percentage**

| | Agriculture | Industry | Construction | Services |
|---|---|---|---|---|
| Andalucía | | | | |
| 2008 | 7,1 | 10,1 | 13,5 | 69,4 |
| 2009 | 7,4 | 9,4 | 9,7 | 73,4 |
| 2010 | 8,1 | 9,1 | 8,6 | 74,2 |
| 2011 | 7,8 | 9,1 | 7,6 | 75,6 |
| 2012 | 7,8 | 9 | 5,9 | 77,3 |

| | Agriculture | Industry | Construction | Services |
|---|---|---|---|---|
| Cataluña | | | | |
| 2008 | 1,7 | 21,4 | 11,4 | 65,4 |
| 2009 | 1,8 | 19,6 | 10,2 | 68,4 |
| 2010 | 2,1 | 19,2 | 8,9 | 69,7 |
| 2011 | 1,9 | 18,4 | 7,7 | 72 |
| 2012 | 1,9 | 18,6 | 6,5 | 73 |

| | Agriculture | Industry | Construction | Services |
|---|---|---|---|---|
| Madrid, Comunidad de | | | | |
| 2008 | 0,6 | 10,4 | 10,1 | 78,9 |
| 2009 | 0,5 | 9,7 | 8,5 | 81,4 |
| 2010 | 0,2 | 9,3 | 7 | 83,5 |
| 2011 | 0,2 | 9,5 | 6,3 | 84,1 |
| 2012 | 0,3 | 9,6 | 5 | 85 |

Source: INE, 2013a

The autonomous communities of Andalucía, Cataluña and Madrid are the three largest communities in terms of population and share of the total Spanish economy (INE, 2013a). We do not see much difference in the relative size of the agricultural and industrial sectors. The biggest change, for all three autonomous communities, is in the construction sector. In five years the percentage of employment in this sector roughly halved. Consequently, the relative size of the services sector as employer increased.

So let's take a look at some smaller autonomous communities.

Table 6: **Employed by economic sector, sex and Autonomous Community, percentage**

| | Agriculture | Industry | Construction | Services |
|---|---|---|---|---|
| Asturias | | | | |
| 2008 | 4,3 | 15,7 | 11,8 | 68,2 |
| 2009 | 3,9 | 14,6 | 9,5 | 72 |
| 2010 | 4 | 14,6 | 9,3 | 72,1 |
| 2011 | 4,1 | 14,1 | 9,2 | 72,6 |
| 2012 | 4,4 | 14,8 | 8,1 | 72,7 |

| | Agriculture | Industry | Construction | Services |
|---|---|---|---|---|
| País Vasco | | | | |
| 2008 | 1,5 | 23,5 | 9 | 65,9 |
| 2009 | 1,4 | 22,9 | 8 | 67,6 |
| 2010 | 1,2 | 22,4 | 7,4 | 68,9 |
| 2011 | 1 | 22,1 | 6,8 | 70,1 |
| 2012 | 1,3 | 21 | 6,1 | 71,6 |

| | Agriculture | Industry | Construction | Services |
|---|---|---|---|---|
| Rioja, La | | | | |
| 2008 | 4,1 | 25,8 | 11,8 | 58,3 |
| 2009 | 4,3 | 25 | 10,6 | 60,1 |
| 2010 | 4,4 | 25,4 | 10,3 | 59,9 |
| 2011 | 4,6 | 24,5 | 10,1 | 60,8 |
| 2012 | 5,4 | 24,2 | 9 | 61,4 |

Source: INE, 2013a

Among some smaller autonomous communities, we see that even though the share of employment in the construction sector was as large as in the bigger autonomous communities (around 10-11%), the decline in this share was not. In fact, for La Rioja, hardly anything has changed in the five years post-crisis.

### 4.6 Conclusion

To summarize, there have been increases in international emigration, for both foreigners as well as Spaniards. The amount of emigrating foreigners is much larger than the amount of emigrating Spaniards. Emigration towards other autonomous communities has remained fairly stable, with the exception of some fluctuations in the core regions. The number of Spaniards migrating internally is higher than the number of foreigners migrating internally.

There have been large decreases in immigration of foreigners from abroad and small decreases in immigration of Spaniards from abroad (except Madrid). Immigration of foreigners from other autonomous communities shows a mixed pattern, and immigration of Spaniards from other autonomous communities has been fairly stable.
Furthermore, the construction sector has played a crucial role in generating employment opportunities for immigrant workers, in particular in the bigger autonomous

communities. When the crisis hit this sector, enormous drops in unemployment followed, and possibly spurred out-migration of immigrant workers.

We can also see that from looking at the data, regional differences matter. Even between the larger regions such as Madrid and Cataluña, there are sizeable differences in the number of foreigners immigrating from other autonomous communities. Cataluña has experienced a larger decrease in this migration subgroup than Madrid. This can possibly be explained by looking at Table 6: Madrid has a higher worker share in the services sector. The construction and industrial sectors are relatively bigger employers in Cataluña, and these sectors were hit much harder than the services sector. Consequently, the lack of job opportunities in Cataluña might deter migrants to move there.

# 5. Methodology

The aim of the following data analysis is to compare and test specific migration patterns and their relation with economic growth (or; the lack of growth in crisis years, often coupled with growing unemployment), expressed in economic indicators. For the examination of the data a regression analysis will be used.

When researching migration patterns and the expected influence of economic crises, it is useful to keep in mind the various factors at play. For instance, crises may have a greater impact on some sectors of the economy, resulting in different labor market outcomes than in other sectors. A variable of the largest sectors of the economy is a useful variable to include in the model. As we know, the rise in unemployment has been enormous in the construction sector (INE, 2013a). Therefore, unemployment variables for both Spaniards and foreigners will also be included in the model. Furthermore, as there are clear links between the housing market and construction sector, we need to include the variable housing prices as well. Also, it is noteworthy that there may be large differences in migratory movements between subgroups on the basis of gender, age, educational level etcetera. Although I cannot include every subgroup into the model, my aim is to be as clear and precise as possible in determining the effects of the economic crisis on migration patterns, with regards to these issues.

Before analyzing the more in-depth migration flows and testing them against economic variables, I will briefly describe the major trends and outline the expected direction and intensity of several migration flows, according to the literature.

I have used migration data from the Spanish institute of statistics, (INE, 2013a) so first of all it is useful to note what the INE views as migrants. In the "Migration Statistics Methodology", the INE defines immigration as an "*action by which a person establishes her/his regular residence in a territory for a period that is, or is expected to be, at least twelve months in duration, having previously been a regular resident of another territory"* (INE, 2013c). The definition of emigration is the same, except the migrant has ceased regular residence in a specific territory, expected to last 12 months or more (INE, 2013c).

## 5.1 Data

I have looked at migration data of both Spaniards and foreigners. I have not further categorized the two groups according to age or gender, although this would be very interesting for future research. Because this would increase the scope of this research tremendously, I have chosen to not include the subcategories age and gender. Within these two 'nationality' categories, the movements of migration flows are specified. These are;

1. Immigration of Spaniards from abroad
2. Out-Migration of Spaniards from other autonomous communities towards a specific autonomous community
3. In-Migration of Spaniards to a specific autonomous community from other autonomous communities
4. Emigration of Spaniards abroad
5. Immigration of foreigners from abroad
6. Out-Migration of foreigners from other autonomous communities towards a specific autonomous community

7. In-Migration of foreigners to a specific autonomous community from other autonomous communities
8. Emigration of foreigners abroad.

In the regressions, the movements of Out-Migration and In-Migration will be called Emigration and Immigration as well. So for example, foreigners moving from one autonomous community to another will be addressed as 'Emigration of foreigners to other autonomous communities'.

In terms of territories, I have selected 17 autonomous communities (located in mainland Spain, the Canary and Balearic Isles). Ceuta and Melilla, two autonomous cities on African soil are not included. Doing this, I have covered the migrational direction of both Spaniards and foreigners, on a national and regional level.

Figure 9: **Autonomous Communities in Spain**


Source: Spain Autonomous Communities Map, http://www.vmapas.com

Next to the migrational data, the INE provides data on population figures per autonomous community, as well as several economic indicators. The data I have looked at is from 2008-2012, a period of five pre- and post-crisis years.
The economic variables are;

1. GDP: Total and per capita
2. Unemployment rates, both for Spaniards and foreigners, as well as a ratio between the two
3. Housing prices of new dwellings and second-hand dwellings, as well as a ratio

between the two

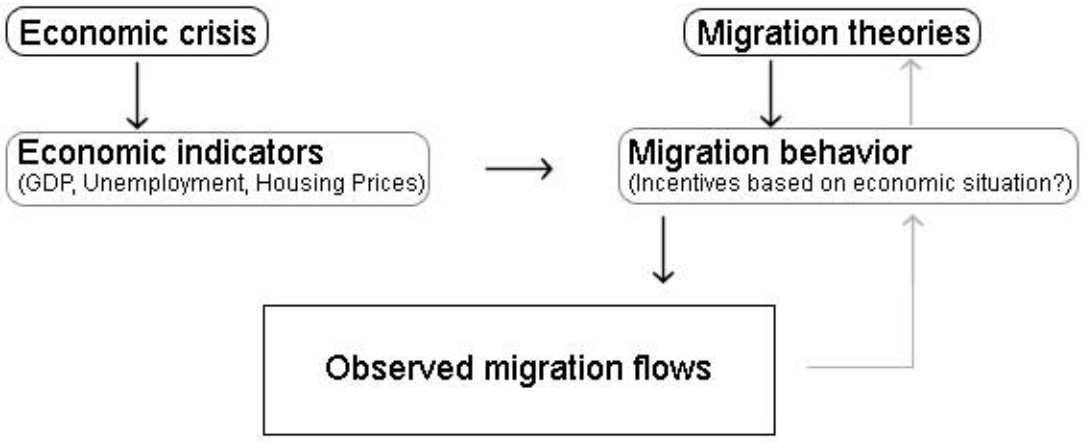
4. Sectoral employment as a percentage of the total economy, for the sectors Agriculture, Industry, Construction, and Services
5. Year dummies 2008, 2009, 2010, 2011, 2012

**5.2 Statistical analysis**

To test whether the economic indicators have any significant effect on the different migration patterns, we can establish that the migration variables are the dependent variables. As both the dependent variable (one of the eight possible migration movements) and the independent variable(s) are ratio-variables, it is possible to perform a linear regression (Ordinary Least Squares). The data file contains the 17 autonomous communities, over a period of 5 years in which data has been collected about the absolute number of people immigrating and emigrating, both internal and international. This adds up to a total of 85 cases on which data has been collected. The regressions will also be checked for collinearity of the variables, to ensure that the economic indicators do not explain each other.

**5.3 Conceptual model**

We can summarize the research questions and various theoretical approaches as follows in the conceptual model:




The economic crisis has its effects on economic indicators such as GDP, unemployment and housing prices. This in turn has an effect on migration behavior. We can assume that unemployment or wage differentials will impact migration flows. The mechanisms behind migration behavior are outlined in the theoretical framework. The observed migration flows are dependent on migration behavior, and possibly secondarily dependent on economic indicators. The observed migration flows might also affect migration behavior through cycles explained in the migration systems theory (De Haas, 2008). Consequently, this will change how we see migration systems and thus will influence theory.

# 6. Results

I've divided the results of the regression analyses by group (Spaniards and foreigners), and will discuss the four migration directions of each group. The regression analyses are shown in the appendix.

### 6.1 Immigration of Spaniards from abroad

I expected immigration of Spaniards from abroad to be low, as it may not be very appealing to return to an economy which is characterized by high unemployment. Looking at the regression analysis in the appendix, we indeed see that unemployment of Spaniards is negatively correlated with immigration. Also, the higher the share of employment in the construction and industry sectors relative to the services sector, the lower is immigration of Spaniards from abroad.

### 6.2 Immigration of Spaniards from other autonomous communities

We notice four significant variables; GDP in Euros, Housing Price ratio, Percentage employed in industrial sector and Percentage employed in construction sector. With regard to these two sectors, we can establish that the negative t-coefficients imply that the effect of the reference category is likely to be positive. Also, increases in employment in the industrial sector result in a decrease of immigration of Spaniards from other autonomous communities. Similar to immigration of Spaniards from abroad, Percentage employed in industrial sector is significant as well in immigration from other autonomous communities. The negative t-coefficient suggests that Spaniards who immigrate from other autonomous communities are less likely to work in the industry sector. However, there is not a significant result for the construction sector.

### 6.3 Emigration of Spaniards abroad

Similar to immigration of Spaniards from abroad, unemployment of Spaniards is negatively correlated with emigration of Spaniards abroad. This means that the higher are the unemployment rates for Spaniards, the lower is emigration abroad. It seems that even though there are fewer job opportunities in Spain, Spaniards still do not emigrate to find jobs abroad. The regression analysis further shows that higher shares of employment in the construction and industry sectors relative to the services sector, means lower emigration of Spaniards abroad. One of the reasons could be that the economic situation abroad is similar to Spain, meaning that emigrants are still not guaranteed better employment opportunities in other countries. Or, the costs of emigrating may prove too high. As discussed in several theories such as the new economics of labor migration, the household tries to maximize income and status, while minimizing risks as much as possible (Hagen-Zanker, 2008). Migrating in times of crisis is perhaps too big a risk.

### 6.4 Emigration of Spaniards to other autonomous communities

We see that there is a significant effect of unemployment rates of Spaniards on emigration. When unemployment rates for Spaniards decrease, emigration to other autonomous communities increases. This can be explained for instance by the fact that when there is low unemployment, there are more chances for Spaniards on the labor market. The autonomous communities 'compete' with each other for skilled workers,

possibly causing migration of these workers to other regions. Low unemployment further decreases risk on the labor market, making it (according to theory) easier for workers to migrate.

### 6.5 Immigration of foreigners from abroad

The first significant variable (beside GDP in Euros) is Unemployment rates of Spaniards. With a positive t-coefficient, this means that the higher unemployment is among Spaniards, the higher immigration of foreigners from abroad is. This can be explained following the logic that immigration of foreigners is often towards specific sectors, such as construction. Thus, unemployment of Spaniards does not automatically mean there are no jobs available, and even so, immigrants present often cheaper labor that might still have good prospects in finding a job. It may also be possible that the lower total demand of labor acts as a mechanism which prevents too many immigrants to enter the labor market. Secondly, regions with a high share of employment in agriculture are not as attractive for immigrating foreigners, in sharp contrast to the construction sector. A relatively high percentage of employment in construction presents opportunities for immigrants, and is precisely what could be expected according to the theory.

### 6.6 Immigration of foreigners from other autonomous communities

Similarly to foreigners immigrating from abroad, immigration from other autonomous communities increases when the construction sector is large. However, it is more likely that the receiving regions are the bigger regions such as Cataluña or Madrid, as demonstrated in chapter four. These regions have the biggest, most diversified economies, as well as bigger construction and industrial sectors. Employment opportunities in these sectors should thus be higher there as well.

### 6.7 Emigration of foreigners abroad

We've seen in the previous chapters that emigration abroad has risen for the group foreigners. But can this be (partially) explained by the economic variables? As this group was primarily attracted by the construction sector, it would be logical to assume that the decline of this sector is at least partially responsible for the emigration of foreigners. And we do see in the regression analysis that when the construction sector is relatively big in terms of employment, compared to the other sectors, emigration abroad increases. Regions which have a larger relative share of employment in construction are also regions which are hit hardest by the crisis, thus experiencing higher unemployment rates.

### 6.8 Emigration of foreigners to other autonomous communities

The higher the relative share of employment in the construction sector, compared to the services sector, the higher is emigration of foreigners to other autonomous communities. We know that the construction sector as whole has been one of the major reasons of the crisis in Spain. Therefore, regions with a big construction sector are regions in which emigration is higher, because overall unemployment is also higher. Even though the foreigners' unemployment variable is not significant itself, we can still assume that the insecurity of workers in this hard-hit sector could lead to migration. Thus, de data supports the aforementioned expectations. Regarding emigration of foreigners to other autonomous communities, again, we see the significant variable Percentage employed in

construction sector, indicating that regions with large construction sectors also have a high degree of emigration, both abroad and to other autonomous communities.

### 6.9 Model summaries and R square

For all the regression analyses, the model summaries show rather high R squares. R square shows the degree in which the variability of the data can be explained by the model. However, not all high R squares are necessarily good and not all low R squares are bad. For this specific research, migration flows are not exclusively explained by the economic variables in the model. It is perfectly possible that there are other external influences which determine migration behavior. Also, even though I have checked for collinearity (ensuring there is not too much correlation between two independent variables), it is possible that some variables are partially dependent on each other. Especially since migration flows do not operate in an isolated and controlled environment, making it harder to precisely determine the nature of the relationships between variables.

### 6.10 Conclusion

We can conclude that the results from the data analyses largely correspond with the expectations and preliminary data examinations of chapter four. For Spaniards, higher unemployment rates seem to lead to stationary behavior, as immigration and emigration decline. The risk of migrating proves too high, which is also perfectly explainable by theory. Spaniards are however more likely to migrate towards other autonomous communities when the economy is bad than foreigners.

Foreign immigration from abroad has declined dramatically (and was already low for immigration from other autonomous communities), which is something the data also reflects. Immigration of this specific group is to a degree dependent on the functioning of the construction sector. Emigration of foreigners towards both abroad and other autonomous communities is also negatively correlated with employment in the construction sector. The large outflows of foreigners are indeed caused to a degree by the construction sector.

# 7. Discussion

Pre-crisis Spain is characterized by enormous immigration flows, of which a large part was to fill job vacancies in the booming construction sector. In particular the larger regions (such as Andalucía, Cataluña and Madrid) were the most popular destinations, and presented immigrants with the best employment opportunities. When the crisis hit, the construction sector experienced a very large decline in employment. In other words, suddenly the economic landscape changed, investments decreased, and household debt increased because of an unsustainable growth in housing prices. All these factors lead to rising unemployment. Even though unemployment for Spaniards increased dramatically, for foreigners this was even worse. This led to big outflows of foreigners, both abroad and towards other autonomous communities.

Spaniards predominantly migrate abroad only when the domestic economy is doing well. In times of crisis, it probably is too costly to migrate abroad. We do see that Spaniards migrate towards other autonomous communities at a higher rate than foreigners. Also, the difference between the larger and smaller regions with regard to the change in percentage employed in the construction sector seems to hint at a connection between the size of a region, its competitiveness (or dynamism) and inflows and outflows of workers. Unemployed foreigners in Madrid have less to gain from moving towards smaller regions such as La Rioja, because there are more employment opportunities in big regions compared to small regions. Furthermore, many foreigners who arrived during the construction boom are low-skilled and do not speak Spanish, leaving them more vulnerable when the economy goes bad. In this respect, the data seems to support the theory. For example, network theory (Massey et al., 1993) also explains how bigger regions attract more migrants, not only because the employment opportunities are higher, but also because migrants have a network to fall back on in times of economic hardship. Furthermore, the difference between international and interregional migration as described by Biswas et al. (2008) does seem to be present. Higher wages in Spain's construction sector attracted large numbers of immigrants, but these immigrants would later on emigrate in large numbers. Fluctuations in interregional migration flows however, were much smaller. Migration decisions in post-crisis Spain do seem to be at least partially dependent on economic motives, especially regarding the situation in the construction sector. The rise and decline of this sector has been central in the change of several migration flows, particularly of foreigners. As the indicators are economic by nature, we can conclude that economic motives, as described in the theoretical framework, are present in migration decisions.

There has definitely been an effect of the crisis on migration flows; however it is not possible to link specific economic indicators to specific migration flows, due to the general nature of the data. Additional research is needed to dissect the several variables to come to more solid conclusions.

In terms of the process of writing this thesis, the nature of the data collection and analysis was largely exploratory. I gathered a big amount of data and put as much as I could into one file of panel data, and ran the tests. Of course this provides more general, rather than specific, answers. For more in-depth analysis it would be interesting to look at all regions separately, and to add variables such as age, gender and educational level. The two groups (Spaniards and foreigners) are internally very diverse. To single out various

new variables would help to make the results more specific, and would improve the ability to make definite conclusions about the relationship of those variables. This would definitely be a recommendation for future research.

## 8. Conclusion

Whereas pre-crisis Spain experienced high immigration and low emigration, the reverse is true for post-crisis Spain. Emigration abroad increased dramatically, but larger shares of foreigners migrate abroad. Interregional migration is primarily undertaken by Spaniards, although foreigners tend to migrate towards core regions as well. These regions are more diverse economically and give the unemployed more chances of finding a job.

The construction sector has played a crucial role in generating employment opportunities for immigrant workers, in particular in the bigger autonomous communities. For these regions, immigrant employment was vital to sustain the booming construction sector. When the crisis hit, unemployment went up and many foreigners migrated abroad. Although bigger regions and smaller regions show different migration flows, there are differences between the bigger regions as well. Cataluña has experienced a larger decrease in immigration from foreigners than Madrid. The construction and industrial sectors are relatively bigger employers in Cataluña, and these sectors were hit much harder than the services sector.

For Spaniards, higher unemployment rates seem to lead to more stationary behavior, as immigration and emigration decline. The risk of migrating is higher during a crisis, which is also perfectly explainable by theory. Spaniards are however more likely to migrate towards other autonomous communities when the economy is bad than foreigners.

Data analysis of the 17 autonomous communities shows that for Spaniards, the unemployment variable is a major determinant of migration flows in this group. When unemployment is low, Spaniards migrate towards other autonomous communities, as well as abroad. When unemployment is high, Spaniards tend to not migrate abroad, but choose for interregional migration. Foreigners' migration flows are largely dependent on the relative size of the construction sector in terms of employment. When this sector is large, foreigners see employment opportunities and migrate towards regions which have a high share of employment in construction. When this sector experiences high unemployment, foreigners migrate away from these regions.

It would be interesting to do additional research in terms of subgroups of Spaniards and foreigners to see whether educational level or age play a large role in migration decisions. Also, a closer look at the construction sector might help to explain the more specific migration patterns of foreigners.

## 9. References


Andrés, J., Bosca, J.E., Doménech, R., Ferri, J. (2009), "Job Creation in Spain: Productivity Growth, Labor Market Reforms or Both", Working Paper No. 1013, BBVA Bank, Economic Research Department

Arango, J. (2013), "Exceptional in Europe? Spain's Experience with Immigration and Integration", Migration Policy Institute, Washington, DC.

Bernal-Verdugo, L.E., Furceri, D. & Guillaume, D. (2012), "Crises, labor market policy, and unemployment", *IMF Working Paper Middle East and Central Asia Department*, International Monetary Fund.

Biswas, T., McHardy, J., Nolan, M.A. (2008), "Intra-Regional Migration: The UK Experience" *Sheffield Economic Research Papers*, SERP Number2008003

Carballo-Cruz, F. (2011), "Causes and Consequences of the Spanish Economic Crisis: Why the Recovery is Taken so Long?" *Panoeconomicus, 3, 309-328.*

Cuadrado-Roura, J.R., Iglesias-Fernandez, C., Llorente-Heras, R., (2006), "Does Immigration contribute to convergence among regional labour markets in Spain?", *ERSA Conference Paper no.444*, European Regional Science Association.

Crotty, J. (2009), "'Structural causes of the financial crisis: a critical assessment of the "new financial architecture'", *Cambridge Journal of Economics 33: 563-580*

De Haas, H. (2008), "Migration and Development: A theoretical perspective", IMI Working Paper 9, International Migration Institute, University of Oxford.

Domínguez-Mujica, J., Guerra-Talavera, R. & Parreño-Castellano J. M. (2012), "Migration at a Time of Global Economic Crisis: The Situation in Spain", *International Migration.*

"Economic crisis", In Business Dictionary online. Retrieved May 26th, 2013, from http:// www.businessdictionary.com

Elcano Royal Institute (2006), "20 Years of Spain in the European Union (1986-2006)", Elcano Royal Institute and European Parliament, Madrid, Spain.

Éltető, A. (2011), "Immigrants in Spain – Their role in the Economy and the Effects of the Crisis", *Romanian Journal of European Affairs, vol. 11, no. 2, June 2011.*

Etxezarreta, M., F. Navarro, R. Ribera, V. Soldevila (2011), "Boom and (deep) crisis in the Spanish economy: the role of the EU in its evolution", paper presented at the *17th Workshop on Alternative Economic Policy in Europe*, Vienna.

European Commission (2009), "Economic Crisis in Europe: Causes, Consequences and Responses." *European Economy 7*, Luxembourg: European Commission.
Eurostat (2013b), "Statistics database", via
http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

"Financial crisis", In Business Dictionary online. Retrieved May 26th, 2013, from http://www.businessdictionary.com

Green, T., & Winters, L.A. (2010), "Economic Crises and Migration: Learning from the Past and the Present." *World Economy 33: 1053–72.*

Hagen-Zanker, J. (2008), "Why Do People Migrate?; A Review of the Theoretical Literature", *Working Paper MGSoG/2008/WP002.* Maastricht Graduate School of Governance.

Harris, J.R. & M.P. Todaro (1970), "Migration, unemployment and development: A two-sector analysis," *American Economic Review, 60, 126-142.*

Harrington, C. (2011), "The Spanish financial crisis", The University of Iowa Center for International Finance and Development

Hatton, T. & Williamson, J. (2009) "Global economic slumps and migration*"*, Online, Available at: http://www.voxeu.org/index.php?q=node/3512, Accessed 07 May 2013.

International Monetary Fund, IMF (2013), "Regional economic outlook: Western Hemisphere, Time to rebuild policy space", International Monetary Fund, Washington D.C.

Instituto Nacional de Estadística, INE (2013a), via,
http://www.ine.es/

Instituto Nacional de Estadística, INE (2013b), "Spain in Figures"

Instituto Nacional de Estadística, INE (2013c), "Migration Statistics Methodology"

International Organization for Migration, IOM (2004), "Glossary on Migration", International Migration Law, IOM, Geneva.

Jansen, M. & E. Von Uexkull (2010), "Trade and Employment in the Global Crisis", International Labour Organisation and New Delhi: Academic Foundation, Geneva.

Junankar, P.N. (2011), "The Global Economic Crisis: Long-Term Unemployment in the OECD", *IZA DP NO. 6057, S. 9.*

Koser, K. (2009), "The Impact of Financial Crises on International Migration: Lessons Learned," *IOM Migration Research Series No. 37,* Geneva.

Kureková, L. (2010), “Theories of migration: critical review in the context of the EU East-West flows”. CARIM AS Best Participant Essays Series 2010/44, *Robert Schuman Centre for Advanced Studies,* San Domenico di Fiesole: EUI.

Lewis, W.A. (1954), “Economic Development with Unlimited Supplies of Labour”, *Manchester School of Economic and Social Sciences 22, no. 2: 139-91*.

Massey, D.S., J. Arango, G. Hugo, A. Kouaouc, A. Pellegrino, J.E. Taylor (1993), “Theories of international migration: A review and appraisal”, *Population and Development Review* 19:431-66.

Palma Martos, M.L. & Martín Navarro, J.L. (2010), "Globalization and Migration Flows. Some Effects of Immigration on the Spanish Labour Market in the Last Decade," *Analele Stiintifice ale Universitatii "Alexandru Ioan Cuza" din Iasi - Stiinte Economice*, Alexandru Ioan Cuza University, Faculty of Economics and Business Administration, vol. 2010, pages 273-290.

Papademetriou, D. G., M. Sumption, A. Terrazas, C. Burkert, S. Loyal, R. Ferrero-Turrion (2010), “Migration and Immigrants Two Years After the Financial Collapse: Where Do We Stand?”, *Migration Policy Institute*, Washington, DC.

Pérez Infante, J. I., (2009), “Crecimiento y características del empleo de los inmigrantes en España”, *Revista del Ministerio de Trabajo e Inmigración, no. 80, p. 237- 253.*

“Recession”, In Business Dictionary online. Retrieved May 26th, 2013, from http:// www.businessdictionary.com

Stadel, C. (2009), “Core areas and peripheral regions of Canada: landscapes of contrast and challenge”, *Estudio de casos sobre planificación regional, University of Barcelona, 13-30.*

Stark, O. (1991), “The Migration of Labour”, Oxford, Blackwell Publishers.

Wallerstein, I. (1974), “The Modern World System: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century”, New York: Academic Press.

# 10. Appendix

## Immigration of Spaniards from abroad

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .941[a] | .886 | .868 | 731.025 |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 13350.648 | 3464.787 | | 3.853 | .000 | | |
| | GDP in Euros | 2.648E-005 | .000 | .773 | 15.510 | .000 | .631 | 1.586 |
| | GDP per capita in Euros | -.044 | .054 | -.096 | -.817 | .417 | .113 | 8.830 |
| | Unemployment rates Spaniards | -67.559 | 36.956 | -.225 | -1.828 | .072 | .104 | 9.659 |
| | Housing price ratio new/sec | -5456.188 | 2573.556 | -.134 | -2.120 | .037 | .391 | 2.560 |
| | Percentage employed in agricultural sector | -58.364 | 40.312 | -.095 | -1.448 | .152 | .367 | 2.728 |
| | Percentage employed in industrial sector | -113.958 | 21.783 | -.324 | -5.232 | .000 | .408 | 2.454 |
| | Percentage employed in construction sector | -274.508 | 79.078 | -.308 | -3.471 | .001 | .199 | 5.015 |
| | year_2008 | 78.756 | 458.217 | .016 | .172 | .864 | .187 | 5.343 |
| | year_2009 | -165.016 | 302.915 | -.033 | -.545 | .588 | .428 | 2.335 |
| | year_2010 | -299.770 | 289.558 | -.060 | -1.035 | .304 | .469 | 2.134 |
| | year_2012 | -32.242 | 281.110 | -.006 | -.115 | .909 | .497 | 2.011 |

a. Dependent Variable: Immigration of Spaniards from abroad

## Immigration of Spaniards from other autonomous communities

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,888[a] | ,788 | ,760 | 6292,317 |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 10361,224 | 18772,804 | | ,552 | ,583 | | |
| | GDP in Euros | ,000 | ,000 | ,860 | 12,208 | ,000 | ,577 | 1,732 |
| | Unemployment rates Spaniards | -305,327 | 236,152 | -,160 | -1,293 | ,200 | ,188 | 5,324 |
| | Housing price index (base 2007=100), new dwellings | 22,977 | 196,199 | ,019 | ,117 | ,907 | ,109 | 9,168 |
| | Percentage employed in agricultural sector | 84,802 | 311,443 | ,022 | ,272 | ,786 | ,455 | 2,198 |
| | Percentage employed in industrial sector | -662,771 | 194,222 | -,296 | -3,412 | ,001 | ,380 | 2,633 |
| | Percentage employed in construction sector | 863,496 | 578,120 | ,152 | 1,494 | ,140 | ,276 | 3,618 |
| | year_2008 | -5611,401 | 4901,030 | -,176 | -1,145 | ,256 | ,121 | 8,251 |
| | year_2009 | -2754,677 | 3261,622 | -,086 | -,845 | ,401 | ,274 | 3,654 |
| | year_2010 | -1606,314 | 2563,013 | -,050 | -,627 | ,533 | ,443 | 2,256 |
| | year_2012 | 2740,039 | 3507,858 | ,086 | ,781 | ,437 | ,237 | 4,227 |

a. Dependent Variable: Immigration of Spaniards from other Autonomous Communities

## Emigration of Spaniards abroad

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .947[a] | .897 | .882 | 1062.743 |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 6602,112 | 3215,736 | | 2,053 | ,044 | | |
| | GDP in Euros | 4,371E-005 | ,000 | ,832 | 16,616 | ,000 | ,577 | 1,732 |
| | Unemployment rates Spaniards | -120,626 | 40,452 | -,262 | -2,982 | ,004 | ,188 | 5,324 |
| | Housing price index (base 2007=100), new dwellings | 2,542 | 33,608 | ,009 | ,076 | ,940 | ,109 | 9,168 |
| | Percentage employed in agricultural sector | 2,557 | 53,349 | ,003 | ,048 | ,962 | ,455 | 2,198 |
| | Percentage employed in industrial sector | -136,297 | 33,270 | -,253 | -4,097 | ,000 | ,380 | 2,633 |
| | Percentage employed in construction sector | -250,660 | 99,030 | -,183 | -2,531 | ,013 | ,276 | 3,618 |
| | year_2008 | -1181,923 | 839,534 | -,154 | -1,408 | ,163 | ,121 | 8,251 |
| | year_2009 | -942,985 | 558,708 | -,123 | -1,688 | ,096 | ,274 | 3,654 |
| | year_2010 | -751,273 | 439,038 | -,098 | -1,711 | ,091 | ,443 | 2,256 |
| | year_2012 | 498,162 | 600,888 | ,065 | ,829 | ,410 | ,237 | 4,227 |

a. Dependent Variable: Emigration of Spaniards abroad

## Emigration of Spaniards to other autonomous communities

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .920[a] | .846 | .823 | 5254.917 |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 5895.188 | 24906.348 | | .237 | .814 | | |
| | GDP in Euros | .000 | .000 | .876 | 15.154 | .000 | .631 | 1.586 |
| | GDP per capita in Euros | -.272 | .388 | -.096 | -.700 | .486 | .113 | 8.830 |
| | Unemployment rates Spaniards | -132.305 | 265.657 | -.071 | -.498 | .620 | .104 | 9.659 |
| | Housing price ratio new/sec | 11813.460 | 18499.807 | .047 | .639 | .525 | .391 | 2.560 |
| | Percentage employed in agricultural sector | -119.089 | 289.780 | -.031 | -.411 | .682 | .367 | 2.728 |
| | Percentage employed in industrial sector | -446.657 | 156.583 | -.205 | -2.853 | .006 | .408 | 2.454 |
| | Percentage employed in construction sector | 94.272 | 568.445 | .017 | .166 | .869 | .199 | 5.015 |
| | year_2008 | 112.216 | 3293.855 | .004 | .034 | .973 | .187 | 5.343 |
| | year_2009 | -261.182 | 2177.484 | -.008 | -.120 | .905 | .428 | 2.335 |
| | year_2010 | 229.044 | 2081.467 | .007 | .110 | .913 | .469 | 2.134 |
| | year_2012 | 798.621 | 2020.740 | .026 | .395 | .694 | .497 | 2.011 |

a. Dependent Variable: Emigration of Spaniards to other Autonomous Communities

## Immigration of foreigners from abroad

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,955[a] | ,912 | ,899 | 8324,137 |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -50894,683 | 35975,435 | | -1,415 | ,161 | | |
| | GDP in Euros | ,000 | ,000 | ,937 | 21,551 | ,000 | ,636 | 1,571 |
| | Unemployment rates Spaniards | 735,699 | 349,972 | ,188 | 2,102 | ,039 | ,150 | 6,681 |
| | Unemployment rates foreigners | -11,958 | 299,569 | -,004 | -,040 | ,968 | ,141 | 7,074 |
| | Housing pice ratio new/sec | 7058,722 | 28438,755 | ,013 | ,248 | ,805 | ,415 | 2,411 |
| | Percentage employed in agricultural sector | -944,838 | 357,684 | -,118 | -2,642 | ,010 | ,604 | 1,656 |
| | Percentage employed in industrial sector | 470,336 | 271,285 | ,103 | 1,734 | ,087 | ,341 | 2,935 |
| | Percentage employed in construction sector | 2529,646 | 865,148 | ,218 | 2,924 | ,005 | ,216 | 4,629 |
| | year_2008 | 8442,235 | 7082,989 | ,130 | 1,192 | ,237 | ,102 | 9,847 |
| | year_2009 | -769,225 | 3953,171 | -,012 | -,195 | ,846 | ,326 | 3,067 |
| | year_2010 | -1561,159 | 3495,036 | -,024 | -,447 | ,656 | ,417 | 2,398 |
| | year_2012 | -2910,456 | 3264,435 | -,045 | -,892 | ,376 | ,478 | 2,092 |

a. Dependent Variable: Immigration of foreigners from abroad

## Immigration of foreigners from other autonomous communities

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .932[a] | .868 | .849 | 2332.084 |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -5187.602 | 10340.256 | | -.502 | .617 | | |
| | GDP in Euros | .000 | .000 | .993 | 18.495 | .000 | .625 | 1.600 |
| | GDP per capita in Euros | -.135 | .125 | -.099 | -1.076 | .286 | .213 | 4.689 |
| | Unemployment rates foreigners | 22.568 | 73.537 | .030 | .307 | .760 | .184 | 5.431 |
| | Housing price ratio new/sec | 3205.908 | 8056.320 | .027 | .398 | .692 | .406 | 2.465 |
| | Percentage employed in agricultural sector | -26.881 | 126.476 | -.015 | -.213 | .832 | .379 | 2.639 |
| | Percentage employed in industrial sector | 48.154 | 64.106 | .046 | .751 | .455 | .479 | 2.088 |
| | Percentage employed in construction sector | 471.612 | 242.013 | .178 | 1.949 | .055 | .217 | 4.615 |
| | year_2008 | -579.201 | 1966.468 | -.039 | -.295 | .769 | .103 | 9.670 |
| | year_2009 | -440.863 | 1104.514 | -.030 | -.399 | .691 | .328 | 3.051 |
| | year_2010 | -64.050 | 974.579 | -.004 | -.066 | .948 | .421 | 2.375 |
| | year_2012 | -176.895 | 909.302 | -.012 | -.195 | .846 | .484 | 2.068 |

a. Dependent Variable: Immigration of foreigners from other Autonomous Communities

## Emigration of foreigners abroad

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,931[a] | ,867 | ,847 | 11135,610 |

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 30699,505 | 48126,119 | | ,638 | ,526 | | |
| | GDP in Euros | ,000 | ,000 | ,945 | 17,701 | ,000 | ,636 | 1,571 |
| | Unemployment rates Spaniards | -436,238 | 468,175 | -,103 | -,932 | ,355 | ,150 | 6,681 |
| | Unemployment rates foreigners | 454,050 | 400,748 | ,128 | 1,133 | ,261 | ,141 | 7,074 |
| | Housing pice ratio new/sec | -55192,829 | 38043,930 | -,096 | -1,451 | ,151 | ,415 | 2,411 |
| | Percentage employed in agricultural sector | -880,510 | 478,491 | -,101 | -1,840 | ,070 | ,604 | 1,656 |
| | Percentage employed in industrial sector | 369,937 | 362,912 | ,074 | 1,019 | ,311 | ,341 | 2,935 |
| | Percentage employed in construction sector | 2152,381 | 1157,351 | ,171 | 1,860 | ,067 | ,216 | 4,629 |
| | year_2008 | -17250,320 | 9475,265 | -,243 | -1,821 | ,073 | ,102 | 9,847 |
| | year_2009 | -5113,900 | 5288,353 | -,072 | -,967 | ,337 | ,326 | 3,067 |
| | year_2010 | -3447,438 | 4675,482 | -,049 | -,737 | ,463 | ,417 | 2,398 |
| | year_2012 | 7751,865 | 4366,996 | ,109 | 1,775 | ,080 | ,478 | 2,092 |

a. Dependent Variable: Emigration of foreigners abroad

## Emigration of foreigners to other autonomous communities

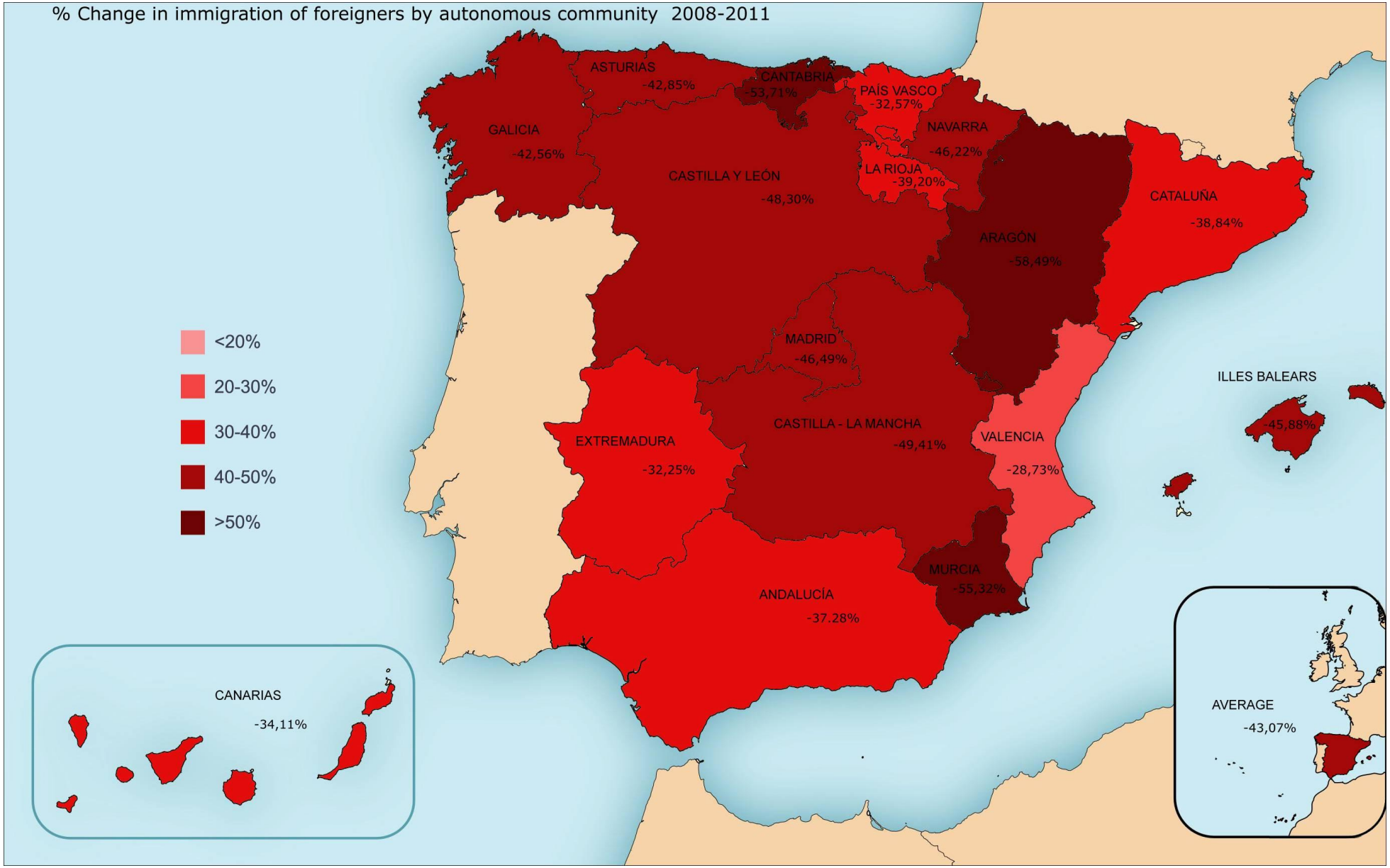
**Model Summary**

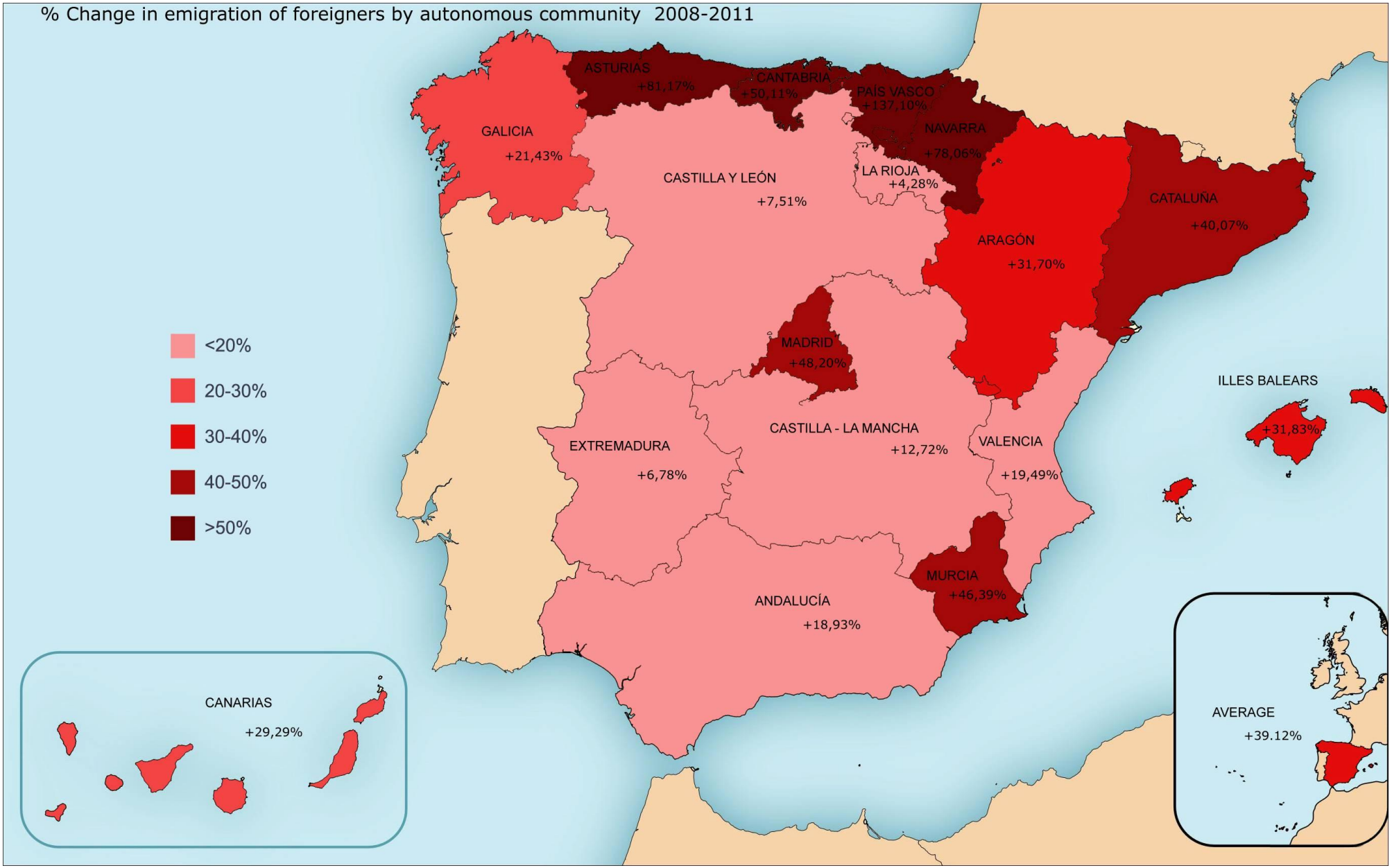
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .922[a] | .850 | .827 | 2711.093 |

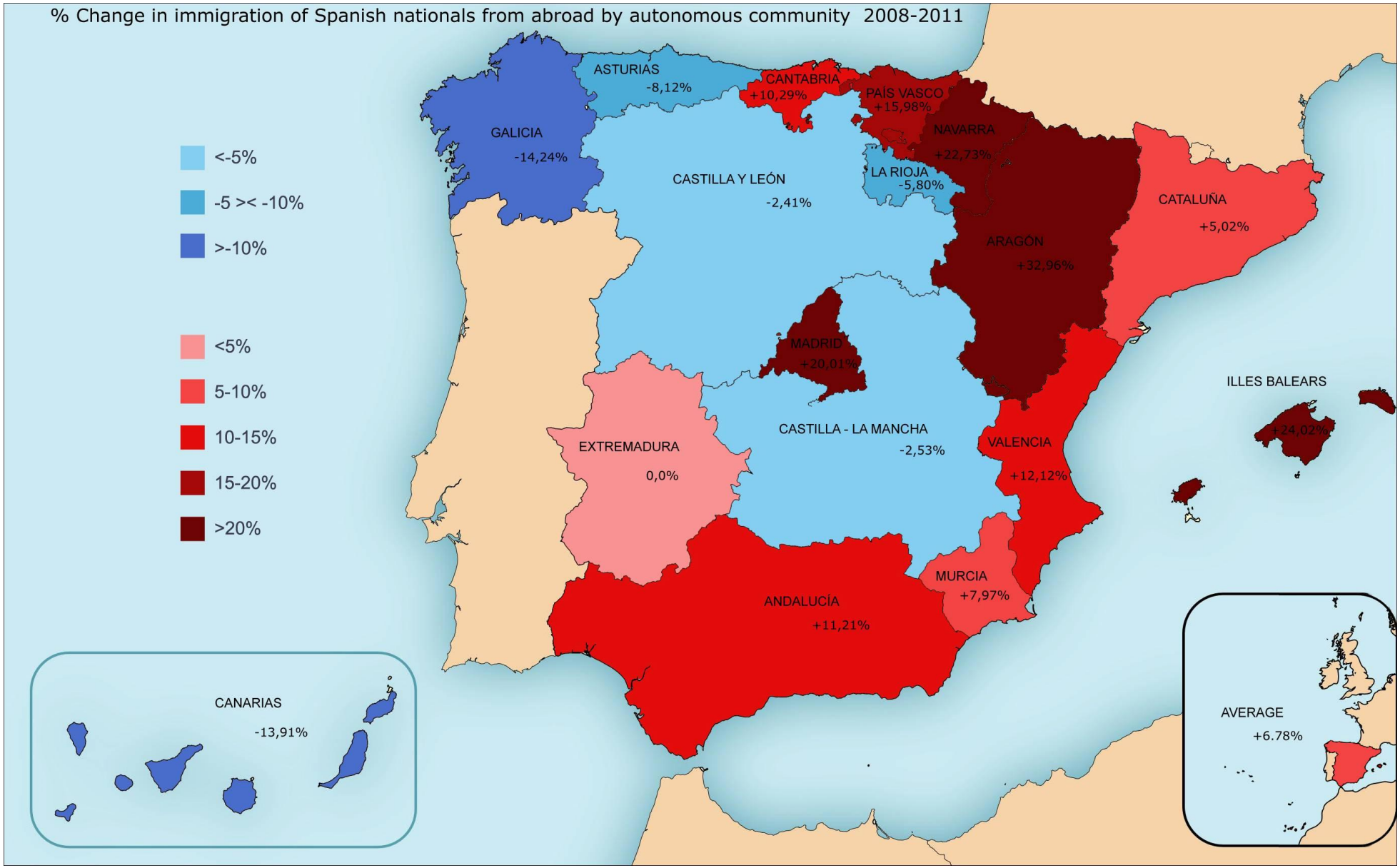
**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -2520.549 | 12020.749 | | -.210 | .834 | | |
| | GDP in Euros | .000 | .000 | .961 | 16.743 | .000 | .625 | 1.600 |
| | GDP per capita in Euros | -.057 | .146 | -.038 | -.389 | .698 | .213 | 4.689 |
| | Unemployment rates foreigners | 96.202 | 85.489 | .119 | 1.125 | .264 | .184 | 5.431 |
| | Housing price ratio new/sec | -2854.611 | 9365.629 | -.022 | -.305 | .761 | .406 | 2.465 |
| | Percentage employed in agricultural sector | -18.692 | 147.031 | -.009 | -.127 | .899 | .379 | 2.639 |
| | Percentage employed in industrial sector | -47.540 | 74.524 | -.042 | -.638 | .526 | .479 | 2.088 |
| | Percentage employed in construction sector | 636.712 | 281.344 | .221 | 2.263 | .027 | .217 | 4.615 |
| | year_2008 | -529.060 | 2286.058 | -.033 | -.231 | .818 | .103 | 9.670 |
| | year_2009 | -420.435 | 1284.019 | -.026 | -.327 | .744 | .328 | 3.051 |
| | year_2010 | -285.873 | 1132.968 | -.018 | -.252 | .802 | .421 | 2.375 |
| | year_2012 | -97.007 | 1057.082 | -.006 | -.092 | .927 | .484 | 2.068 |

a. Dependent Variable: Emigration of foreigners to other Autonomous Communities


% Change in immigration of foreigners by autonomous community 2008-2011
ASTURIAS
-42,85%
CANTABRIA
-53,71%
PAÍS VASCO
-32,57%
NAVARRA
-46,22%
GALICIA
-42,56%
LA RIOJA
-39,20%
CASTILLA Y LEÓN
-48,30%
CATALUÑA
-38,84%
ARAGÓN
-58,49%
MADRID
-46,49%
ILLES BALEARS
-45,88%
CASTILLA - LA MANCHA
-49,41%
EXTREMADURA
-32,25%
VALENCIA
-28,73%
MURCIA
-55,32%
ANDALUCÍA
-37.28%
<20%
20-30%
30-40%
40-50%
>50%
CANARIAS
-34,11%
AVERAGE
-43,07%


% Change in emigration of foreigners by autonomous community 2008-2011
ASTURIAS
+81,17%
CANTABRIA
+50,11%
PAÍS VASCO
+137,10%
NAVARRA
+78,06%
GALICIA
+21,43%
CASTILLA Y LEÓN
+7,51%
LA RIOJA
+4,28%
CATALUÑA
+40,07%
ARAGÓN
+31,70%
MADRID
+48,20%
ILLES BALEARS
+31,83%
CASTILLA - LA MANCHA
+12,72%
EXTREMADURA
+6,78%
VALENCIA
+19,49%
MURCIA
+46,39%
ANDALUCÍA
+18,93%
<20%
20-30%
30-40%
40-50%
>50%
CANARIAS
+29,29%
AVERAGE
+39.12%


% Change in immigration of Spanish nationals from abroad by autonomous community 2008-2011
<-5%
-5 >< -10%
>-10%
<5%
5-10%
10-15%
15-20%
>20%
ASTURIAS
-8,12%
CANTABRIA
+10,29%
PAÍS VASCO
+15,98%
NAVARRA
+22,73%
GALICIA
-14,24%
CASTILLA Y LEÓN
-2,41%
LA RIOJA
-5,80%
CATALUÑA
+5,02%
ARAGÓN
+32,96%
MADRID
+20,01%
ILLES BALEARS
+24,02%
CASTILLA - LA MANCHA
-2,53%
EXTREMADURA
0,0%
VALENCIA
+12,12%
MURCIA
+7,97%
ANDALUCÍA
+11,21%
CANARIAS
-13,91%
AVERAGE
+6.78%


% Change in emigration of Spanish nationals by autonomous community 2008-2011
ASTURIAS
+54,61%
CANTABRIA
+46,40%
PAÍS VASCO
+29,72%
GALICIA
+58,03%
NAVARRA
+61,16%
LA RIOJA
+51,85%
CASTILLA Y LEÓN
+57,44%
CATALUÑA
+55,10%
ARAGÓN
+47,88%
MADRID
+62,05%
ILLES BALEARS
+28,01%
CASTILLA - LA MANCHA
+89,98%
EXTREMADURA
+49,16%
VALENCIA
+64,98%
MURCIA
+129,89%
ANDALUCÍA
+60,68%
<40%
40-50%
50-60%
60-70%
>70%
CANARIAS
+51,35%
AVERAGE
+58.72%