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Catalonia (Spain)

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1. Introduction

The DEMIFER 'Case studies' have a twofold aim: they contribute to the improvement of knowledge on demographic and migratory flows focusing on the aspects of internal and international migration, and translate the output of the policy oriented activities into specific regional settings. The case studies bring together the various activities, connecting the implementation of the analyses, the development of the typology, the scenario building and the formulation of the policy implications and illustrate the results and impacts at a regional and sub-regional level. The selection of the NUTS 2 regions that serve as case studies are based on the results of the DEMIFER activities 2 'Typology of regions and cities'. From each type defined in the typology at least one region or city, preferably the closest to the cluster centre, is selected to serve as case study. A total of 12 NUTS 2 regions are selected, but obviously the case studies cannot cover the entire socio-economic diversity of the European regions.

The Spanish region of Catalonia belongs to the cluster 'Young Potentials', with another 14 ESPON regions. This cluster includes 10 Spanish regions (Catalonia, Comunidad Foral de Navarra, La Rioja, Comunidad de Madrid, Castilla-la Mancha, Comunidad Valenciana, Illes Balears, Andalucia, Región de Murcia, Canarias), the two Irish regions (Southern Eastern; Border, Midlands and Western), Cyprus, Flevoland in the Netherlands and Vienna in Austria. As regards the population size, it is the smallest cluster of Continental Europe, with 39.5 million inhabitants accounting for 7.7% of the total ESPON population. This cluster has the highest level of population increase, as a result of one of the highest natural population increases (average 3.6 per 1000) and of the highest net migration rate (avg. 17.1 per 1000). The structure of population is characterised by the highest percentage of population in the age group 20-39 (avg. 32,26 %) and the lowest level of aging in the clusters of Continental Europe (avg. 14.45% of population 65+).

The cluster comprises three subtypes. The first subtype (including Ireland, Flevoland and Cyprus) shows the lowest share of the population 65+ (avg. 10.9%) and the highest natural increase (avg. 7.14 per 1000). A second subtype contains only Spanish regions (Madrid, Balears, Canarias, Comunidad Valenciana, Región de Murcia) and features the highest percentage of population in the age group 20-39 (avg. 34.39%) and the highest net migration (avg. 22.24 per 1000) within the cluster. The third subtype includes Catalonia, the other Spanish regions of the cluster and Vienna. Its distinguishing factors from the other subtypes are the relatively high share of the 65+ population (avg. 17.09, just above the ESPON space average) and the relatively low natural population increase (avg. 1.15 per 1000).

1.1 Specification of the research questions and aims

The Young potentials cluster presents well defined characters, both as far as the demographic dynamic is concerned and for population structure. As regards demographic dynamic we must underline how regions that are part of this group characterize themselves by a high rate of migratory growth and by

a level of natural increase generally superior to the ESPON average. The net migration rates recorded between 2001 and 2005 in the fifteen regions of the cluster are amongst the highest of the continent, varying from a minimum of 9.96‰ in Andalucía and a maximum of 26.3‰ of the Balears Isles. The increments determined by natural dynamic are more moderate with only one negative value in Vienna (-0,15‰) and a maximum of 9.78‰ in the Dutch region of Flevoland. The overall result of these two dynamics is a very high total population change, from 12.17‰ in Vienna to 29.61‰ for the Balears Isles. This latter value is only overtaken by Guyane that, in the ranking of ESPON regions according to total growth rate, is followed by 12 regions belonging to the Young Potentials cluster whereas only five regions of other groups present values that are superior to Vienna's, it being the lowest in the group.

Such a high increase in the population size is accompanied by evident specificities also from a structural point of view. The examined group presents, in fact, a population quota between 20 and 39 years of age (avg. 32.26%) higher than the ESPON average (27.82%), whereas it has a lower percentage of elderly people (avg. 14.45) in respect to the total value of the ESPON area (avg. 16.63). In the first case, the Young Potentials cluster values moves from a minimum of 29.55 for the Border, Midlands and Western Ireland region, to a maximum of 35.86% for the Canaries; in the second case they move from 10.76 for South East Ireland to 19.03 for the Castilla – la Mancha..

Such differences compared to the ESPON average are more moderate than those registered in the levels of population increase, especially for the high migratory level. We are clearly in the presence of a demographic structure that suffered less from population aging processes that are characterising the European scene. This is a situation that concerns both the population of working age and the total population and shows clear positive effects from an economic point of view. On one hand, in fact, the economy can take advantage of a higher quota of working aged youth. On the other, those people who should have ceased their contribution to the workforce because to their age is less large.

In the end, we are in the presence of Europe's continental area with the strongest demographic dynamism, especially due to a migratory dynamic which is particularly intense and whose contribution to population change is, in all the cluster regions, higher than the one due to a natural movement. In some cases such a factor was helped by a high natural increasing rhythm because of a total fertility rate still fixed around 2 children per women such as in Ireland, and because of a low death rate for a structure young in age compared to the European average (Flevoland, Cyprus, Irish regions, Canaries).

Catalonia is the case study analysed in the Young Potentials cluster. As we have seen, the region belongs to a sub type of the group, characterised by a higher number of elderly people and a lower level of natural increase. Such values are, for Catalonia, respectively, 16.91% and 2.03‰. Such values reflect a demographic dynamic that, starting from the second half of the 70's, was characterised by 20 years of rapid and intense decline in fertility. The TFR for the region, in fact, decreased from 2.86 children per women in 1975 to a

minimum of 1.15 in 1996. After 1996 we registered a reprise in fertility, also due to strong immigration from abroad, that led to an indicator value of 1.58 children per woman in 2008. In any case that is way below the level of substitution.

In all evidence the main research question related to this studied case is the effect of a migratory dynamic, particularly intense, on the demographic situation of an area characterised by a low fertility for years. In such a situation, migrations on one hand contribute to rejuvenating the population's age structure through the arrival of young people and, on the other, generally tend to stimulate a revival in fertility and childbirth. The positive effects of such a demographic path are evident. However the prospective for the future, especially as time passes, is more uncertain. It is, in fact, evident that such external contribution, even if determined by demographic factors present in the area, is also tied to a demand for work coming from the local economy and it depends on the more general ability of the host society to absorb a relevant number of people that may have cultural backgrounds also very different from the local one. In the specific case of the Young Potential cluster we must underline how a large part of the regions of such a cluster are amongst those that are suffering the world economic crisis the most, and where the near future of migratory fluxes is the most uncertain.

1.2 Historical and economic background

The autonomous community of Catalonia is one of the richest and most industrialised regions in Spain. Its GDP per capita was 27, 500 euro in 2007, higher than the one of Spain (23, 500) and the EU27 (24,900). 2.3% of the workforce is employed in agriculture, 22.9% in industry, 9.6% in construction and the remaining 65.2% in the service sector. Catalonia's economy presents, therefore, a good degree of diversification. Agriculture itself, although it represents less than 3% of the total workforce, may count on quality products (wine, ham, fruit, etc). The industrial sectors' strong points are cars, chemicals, food, furniture, etc. Construction is strictly tied to tourist development. Such a sector is of great importance for the region's economy. In 2004, for instance, Catalonia welcomed 12.8 million foreign tourists (23.8% of the Spanish total) and 5.1 million Spanish tourists, making the region one of the most attractive destinations for world tourism¹. Another important service sector is that of trade that contributes, like tourism, to 11% of the regional GDP. As a whole the service sector represents 63.3% of the Catalan economy. The region had already gained an important role in commerce in ancient times. During the middle ages Catalan merchants competed for a long time with those from Genoa and Venice, whereas some centres of the textile industry started developing at the end of the 13th century. With the merging of the Aragona and Castiglia kingdoms (1479), for Catalonia began a long period of economical decline due to the centralised policy of the Spanish state and because of the discovery of America that moved the world's economic centre from the Mediterranean to the Atlantic. A long period of economic growth began in the 18th century when the first industrial centres of the country

¹ This data and the following drawn from the web site of Generalitat de Catalunya (April 2010).

started developing in the region and in the Basque regions. The origins of the industrial sector in Catalonia can be found in the structural transformations of the agricultural sector that began in the previous century, thanks to a growth in wine exports. The availability of capital favoured, in fact, around 1730, the beginning of the first calico–printing industries in Barcelona (Mora-Sitjà 2002). Such an activity grew in importance over the following decades so much so that, according to some estimates, in 1787, almost 10% of Barcelona's population was employed in such activity (ivi).

Such an important industrial role that Catalonia had within the country grew during the 1800s and the first part of the 1900s also thanks to the development of other industrial sectors (cork stoppers, metallurgy and electrical goods) that sided with the cotton industry (Harrison, 1978). For some evaluations, at the beginning of the 20th century, the people involved in the region's industries were 151,000 and Catalonia was, in 1920, alongside the Basque regions, the first Spanish region where industrial production value overtook the agricultural sector.

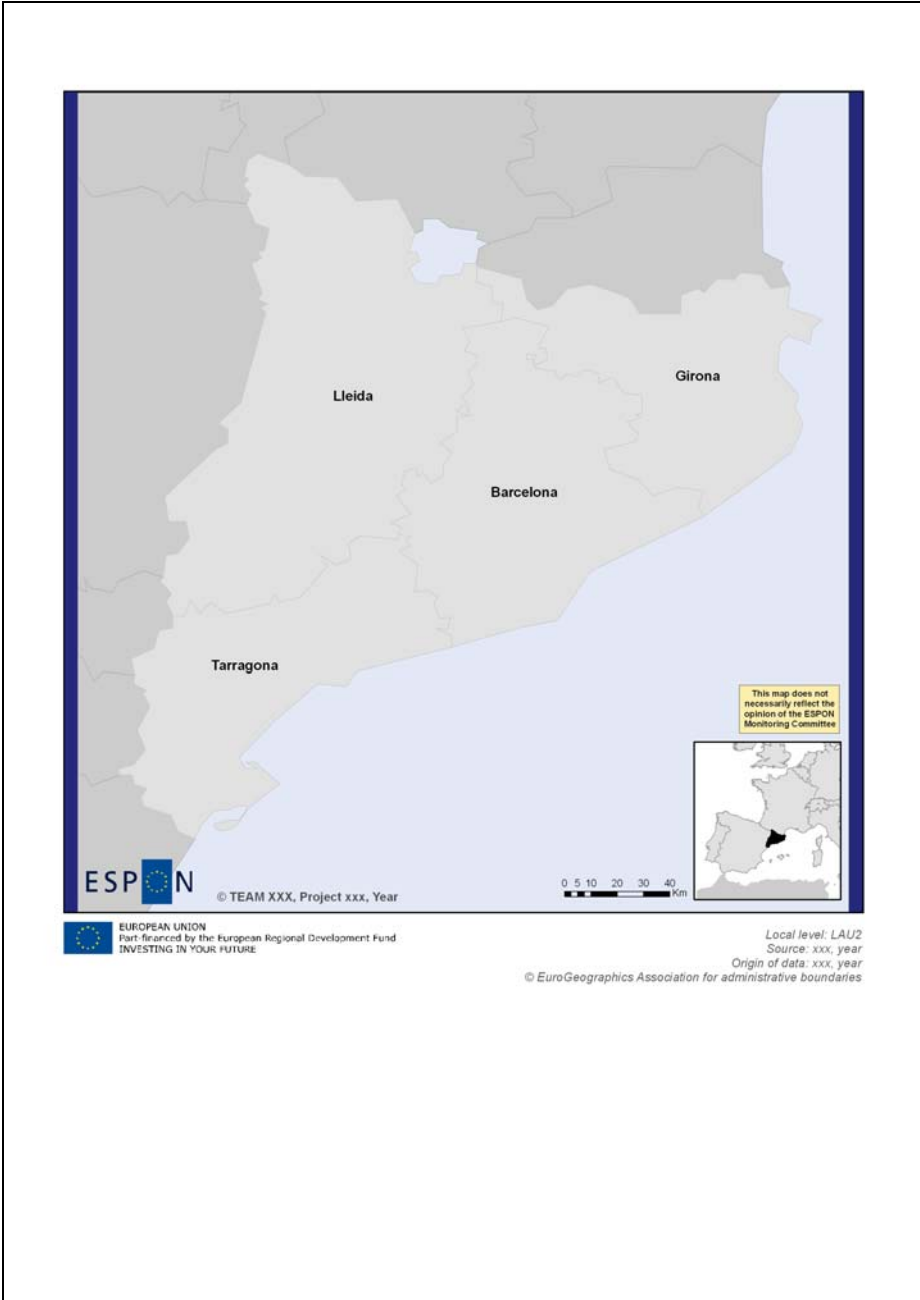
"In the early part of the Franco dictatorship, Catalonia suffered for its support of the defeated republic but, from the 50's, was the location for many of the regimes development initiatives, with the consequent influx of waves of immigrants from Southern Spain, bringing its population up from under 3 million in 1940 to just under 6 million in 1980" (Keating et al. 2003, p.43). The end of the Franco regime (1975) and the entrance of Spain into the EU (1986) have represented an important factor in the economic development of the Catalan region. In particular, the insertion in an area of the free market allowed the region to regain an important role in continental commerce. The processes of industrial restructuring during the 80's had important effects in Catalonia, though less intense than in other areas of traditional Spanish industrialisation (ibidem). Another important element is the presence of Barcelona, the second metropolis in the country and one of the most active ports in the Mediterranean. Furthermore, Barcelona was home to the 1992 Olympic games, an event that represented an important economic development and urban transformation factor (Brunet 1995).

1.3 Regional morphology, connections, and human settlement

Catalonia is located in the North East of Spain (Map 1). Its surface area is about 32 000 sq km. The Pyrenees separate it from France and the Mediterranean wets it in the East. It borders with France and Andorra in the North and with the autonomous community of Valencia in the South and with the autonomous community of Aragon in the West.

Catalonia's capital is Barcelona. The region includes four provinces (Girona, Barcelona, Tarragona and Lleida), 41 comarques (counties) and 946 municipalities. The provinces of Girona, Barcelona and Tarragona face the Mediterranean. The mountain range called Catalanides separates the coastal plain from the river Ebro. Such a border has historically represented the border between the industrial cities along the coast and the mainly agricultural inland. The population is mainly concentrated along the coast, also thanks to a strong development of the Barcelona area during the last century.

Map 1 The province of Catalonia



1.4 Outline of the case study report

2. Demographic and migratory flows in Catalonia: a short overview

Catalonia has been one of the first European regions to follow France in the process of demographic transition. The lowering of the fertility began, in fact, around the mid 1800s and concerns not only the urban Barcelona area but also the rural areas (Benavente 1989; Cabré 1989). Intense migratory flows counteracted a demographic dynamic that could imply a long period of decline or a stagnation of the population. Bare in mind that, despite the high emigration to the Americas, Catalonia presents, in the second half of the 1800s, a positive migratory balance thanks to immigration from Aragon, the Valencia region and the Baleari isles with the only exception being the decade between 1880 and 1890 (Cabré 1989).

As a whole the second half of the 1800s, in any case, sees a slowing down in demographic growth compared to the very high rhythms recorded in the first half of the century. The available estimates state that the average annual rate of population growth, in fact, decreases from 10.6 per thousand in the period 1797-1860 to 3.6 per thousand between 1860 and 1887 and to 5.4 per thousand between 1887 and 1910 (Reher and Rowland 1999). A slowing down that reflects, the rapid decrease in fertility, a still high mortality rate and a small migratory gain (Cabré and Pujadas 1989). The years that run between the end of the first world war and the economic crisis of 1929, instead, are of strong demographic growth. Those were years when fertility approached the level of substitution, decreasing from 2.6 children per woman in 1922 to 2.2 in 1930² (Cabré and Pujadas 1987). The mortality rate decreased and, most of all, the internal migration intensified with an enlargement in the attraction area to the Murcia and Almeria regions (Cabré and Pujadas 1989). The following years show a demographic stagnation. The economic crisis, the civil war and the first years of Franco's dictatorship strongly affected Catalonia. Between 1936 and 1940 even a slight decrease in the population occurs.

The situation radically changes between 1950 and 1975. The number of the region's inhabitants moves, in fact, from 3240000 to 5663000, a growth of almost 75% in just 25 years, equal to an annual average rate of 22.6 per thousand. Such a intense increase is due to the migratory movement and the natural one. Internal migrations acquire an extraordinary dimension during such a period of time. The net internal migration is of about 1.4 million units as a whole, with flows coming mainly from Andalucía and Extremadura but also from other regions (Cabré and Pujadas 1989). The natural increase is also intense, with an increase of about 1 million units during the period as an effect of a fertility revival and a decrease in mortality. Fertility, after having decreased already to below the substitution level in 1935 and having reached 1.7 children per woman in 1950, during the following years records an increase, leading the total fertility rate up to 2.7 children per woman in 1975 (Cabré and Pujadas 1987). The variations of the mortality levels are just as intense. The life span for both sexes increases, in fact, by almost nine years between 1950 and 1975, moving from 65.4 to 74.2 years of age, whereas the infant mortality rate precipitates in the same period moving, for men, from

² In the same years, the total fertility rate for Spain was equal to 4,1 and 3,6 children per woman (Cabré and Pujadas 1987).

53.2 deaths per thousand children born to 18 and for women from 41.5 to 14 (Cabré and Pujadas 1989).

The years of demographic boom are followed by years of stagnation. Catalonia's population, having reached nearly 6 million inhabitants by 1981, in 2000 had just 6,262,000 units. The net internal migration becomes negative in the 1980s (González and Puebla 1996), while in the two following decades it is positive or negative but always of a small size. Fertility decreases again below substitution level and hence a radical change in the demographic framework of the region for at least 20 years occurs. Catalonia has a strong increase period during this decade. Such a growth is due to the large foreign immigration and due to a slight revival in fertility (Cabré and Domingo 2007). As a result, the population increases by about a million in just 9 years, reaching 7363.000 in 2009 with an average yearly growth of 18 per thousand.

3. The main demographics of the Catalonia region

During the current decade Catalonia has attracted massive migratory fluxes from abroad. Such fluxes have increased the population by more than a million units after almost 20 years of stagnation. Migrations have also contributed to the rejuvenation of the whole demographic structure, in particular, the workforce. This has been due to the high share of young adults amongst the migrants. About half of the active population's expansion that took place in recent years is due to that (Oecd, 2009). The arrival of several women coming from high level fecundity countries, brought about the recent increase in the regional birth rate, which was rather poor during the 90's. Such elements have contributed to the demographic rejuvenation of Catalonia and have allowed the region to be placed amongst the "young potential" DEMIFER typology.

Catalonia is the second Spanish autonomous community per number of inhabitants after Andalucía. The region counts almost 7.5 million residents, almost 16% of the country's population and its territory is divided into 4 provinces (Map 1): Barcelona, Girona, Lleida and Tarragona. The province of Barcelona is strongly urbanised and is inhabited by 5.5 million residents, almost three quarters of Catalonia's population. In the urban heart of the area, the municipality of Barcelona, 1.6 million residents live. This is almost one third of the province's inhabitants. The other 3 provinces have a much smaller population, going from the 436,000 residents from Lleida to 803,000 in Tarragona (Table 1). The inner and rural province of Lleida and, especially, the city of Barcelona, have the highest percentage of over 65's. In Barcelona they represent more than a fifth of the population. In the rest of Barcelona's province - that from here on we will call the *hinterland* - we find the percentage of elderly people is lower (14.7%) because of a higher presence of families that have recently formed with children.

The strong international migratory fluxes that recently reached Catalonia represent the most relevant component of the demographic growth experienced in all the regional areas. Between 2002 and 2009 the population of Catalonia had an average annual growth rate of 17.2‰. The natural dynamics contributed with 2.8‰ and the migratory comparison with other Spanish regions was slightly negative. The major part was made up of the international migratory numbers. It produced almost 90% of the total growth (15.1‰). The highest total growth (superior to the 30‰ annual average) occurred in the coastal provinces of Girona and Tarragona and it increased, apart from external fluxes, also via internal migratory dynamics. The growth of the Lleida province was instead almost exclusively tied to international migration. In the province of Barcelona, the hinterland centres (14.5‰) grew more than the urban core (8.5‰). The latter owes its increment only to external fluxes that counterbalance a slight deficit in the natural dynamics and a strong deficit in the internal migrations, especially in the interchange with the periurban centres. The intensity of the external entrances brought about the result that, in 2009, foreign citizens represent a more and more important quota of the regional population, higher than the national average, 15.9% as opposed to 12.1%. The foreign presence is particularly high in the province of

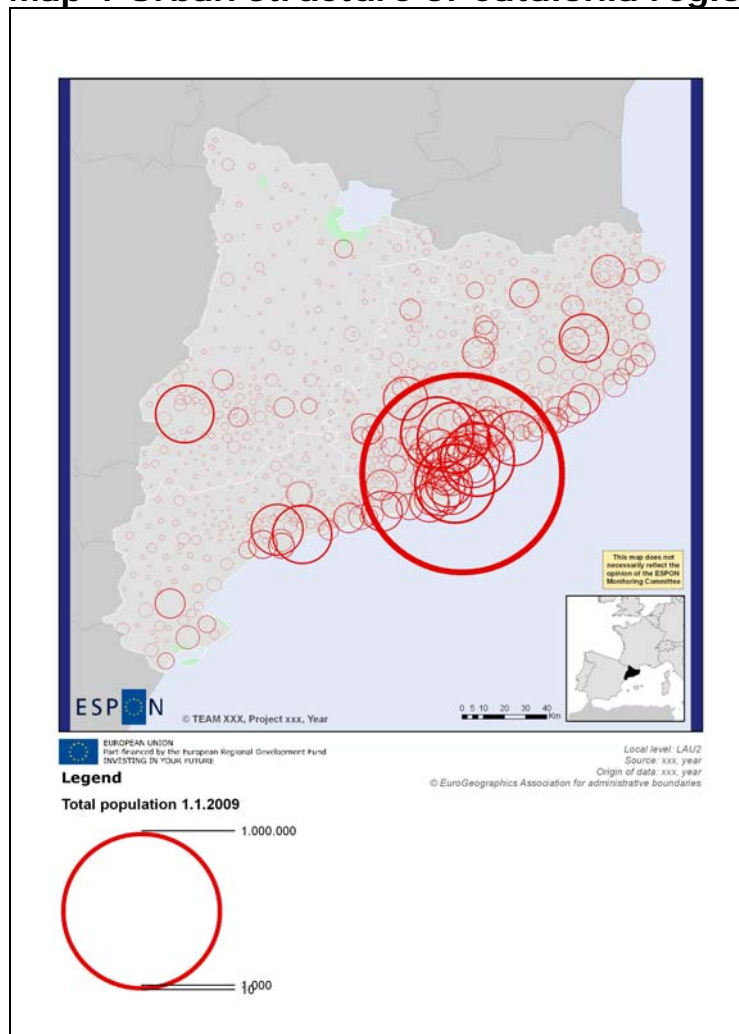
Girona (21.4%), whereas in Barcelona's hinterland it is less intense than the municipality

Table 1 Recent main demographics in the provinces of Catalonia

Reference areas, Region, Provinces	1/1/2009 resident population			2002-2008 av. an. rate of change (‰)			
	Total (x1000)	65+ (%)	Foreigners (%)	Total	Natural	Internal migration	International migration
Spain	46.745,8	16,6	12,1	15,7	2,0	0,0	13,7
Catalonia	7.475,4	16,3	15,9	17,2	2,8	-0,7	15,1
Barcelona Province	5.487,9	16,4	14,6	12,6	2,9	-3,3	13,0
Girona	747,8	15,5	21,4	33,5	3,6	6,2	23,7
Lleida	436,4	17,8	17,8	23,7	0,1	0,5	23,0
Tarragona	803,3	15,6	18,6	35,2	2,8	10,4	22,0
<i>Barcelona Municipality</i>	<i>1.621,5</i>	<i>20,4</i>	<i>17,5</i>	<i>8,5</i>	<i>-0,9</i>	<i>-14,5</i>	<i>23,9</i>
<i>Barcelona Hinterland</i>	<i>3.866,4</i>	<i>14,7</i>	<i>13,4</i>	<i>14,5</i>	<i>4,6</i>	<i>1,7</i>	<i>8,2</i>

Source: Ine, *Padròn continuo*.

Map 1 Urban structure of Catalonia region



3.1 Age structure of the population

During the current decade the structure per age of the Spanish population has slightly matured (Iv: 114,2) and in 2009 the quota for the over 65 age group was higher than the quota for the under 15's by 2 percentage points (Table 2). In Catalonia the Ageing Index (AI) clearly decreased (from 125 to 108.7) approaching a level of equilibrium between young and old. The population's rejuvenation occurred in all the Catalanian provinces. In the province of Barcelona the AI decreased both in the urban core, that being the municipality, whose structure per age remains clearly older than the regional average (AI: 172.3), and in the hinterland where the resident population is younger (AI: 91.1). In the provinces of Girona and Tarragona, the AI level is around 100 whereas the inner province of Lleida is the oldest in Catalonia.

Between 1999 and 2009 the working age population does not record relevant changes in the whole region: the resident population between 15 and 64 represents 68.7% of the population in 2009. An equal quota is found in three provinces out of four with the exception of Lleida where it is slightly less (67.7%). During the decade taken into account the Catalan provinces show two different tendencies: the Barcelona area sees a decrease in its middle-aged population whereas the other three provinces show an increase higher than a percentage point.

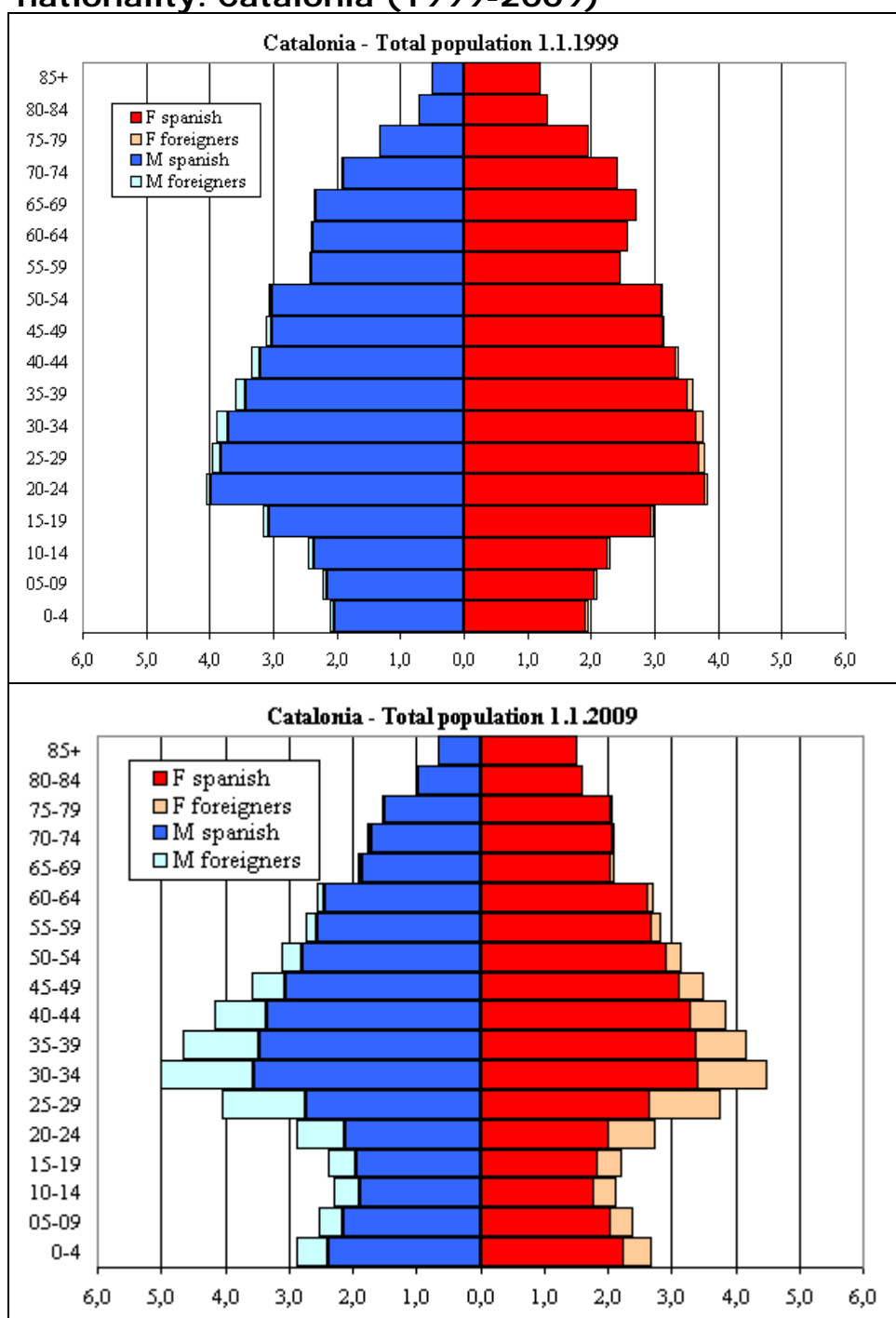
Table 2 Structure of the resident population by age groups in the provinces (1999-2009)

Reference areas, Region, Provinces	0-14 yrs		15-64 yrs		65+ yrs		AI	
	1999	2009	1999	2009	1999	2009	1999	2009
Spain	14,8	14,6	68,4	68,8	16,8	16,6	113,4	114,2
Catalonia	13,8	15,0	69,0	68,7	17,2	16,3	125,0	108,7
Barcelona Province	13,6	14,9	69,5	68,8	16,8	16,4	123,5	110,2
Girona	14,8	15,6	67,5	68,9	17,7	15,5	120,1	99,4
Lleida	13,3	14,4	65,6	67,7	21,1	17,8	159,1	123,5
Tarragona	14,5	15,6	67,8	68,9	17,7	15,6	122,1	100,1
<i>Barcelona Municipality</i>	<i>11,6</i>	<i>11,9</i>	<i>66,4</i>	<i>67,7</i>	<i>22,0</i>	<i>20,4</i>	<i>190,3</i>	<i>172,3</i>
<i>Barcelona Hinterland</i>	<i>14,6</i>	<i>16,1</i>	<i>71,0</i>	<i>69,2</i>	<i>14,4</i>	<i>14,7</i>	<i>98,7</i>	<i>91,1</i>

Note: The Ageing Index (AI) is calculated as the number of persons 60 years old or over per hundred persons under age 15.

Source: Ine, *Padròn continuu*.

Figure 1 Structure of the resident population by sex, age groups and nationality. Catalonia (1999-2009)

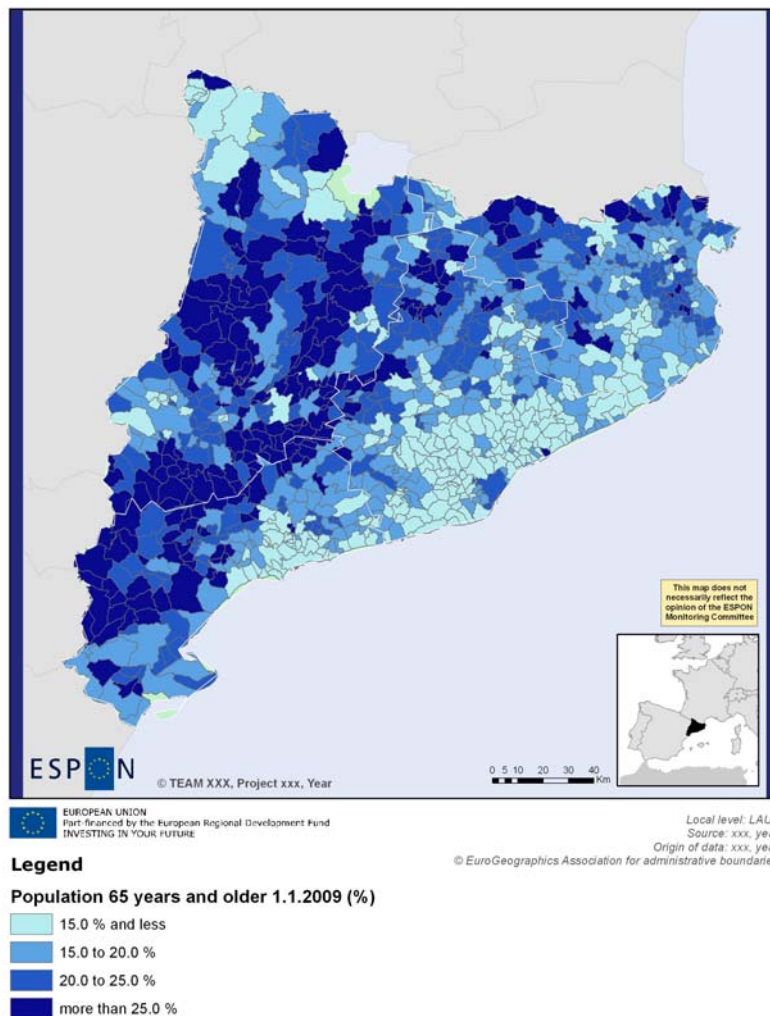


Source: Ine, *Padròn continuu*.

The rejuvenation of the Catalan population appears evident through the observation of the pyramid of age in Figure 1 that describes the quinquennial structure per age, sex and citizenship of the residents in 1999 and 2009. The base of the pyramid that in 1999 was heading towards contraction, after ten years, shows a clear tendency to widening due to the more important growth of the younger age groups (0-4 and 5-9) for the whole of the population. The increase in the very young is not only tied to an exogenous component, that being the contribution by the international migrations in terms of birth

from foreign mothers and entrances of children following their families coming from abroad. An endogenous component in the rejuvenation is also present. In fact, the pyramid's base for the indigenous population is also growing thanks to a renewal in the birth rate amongst Spanish women due to the entrance of a generation of women of reproductive age (30-34) higher than the one that proceeded it, producing a number of births higher than in the past. From a short term perspective, when considering a scarce number of generations of women that in 2009 are between 10 and 29 years, a contraction in indigenous births seems highly probable. If such a thing should occur, the rejuvenation of the age structure that took place in the current decade may not last for long.

Map 2 Population 65 years and older (%), Catalonia municipalities, 1.1.2009.

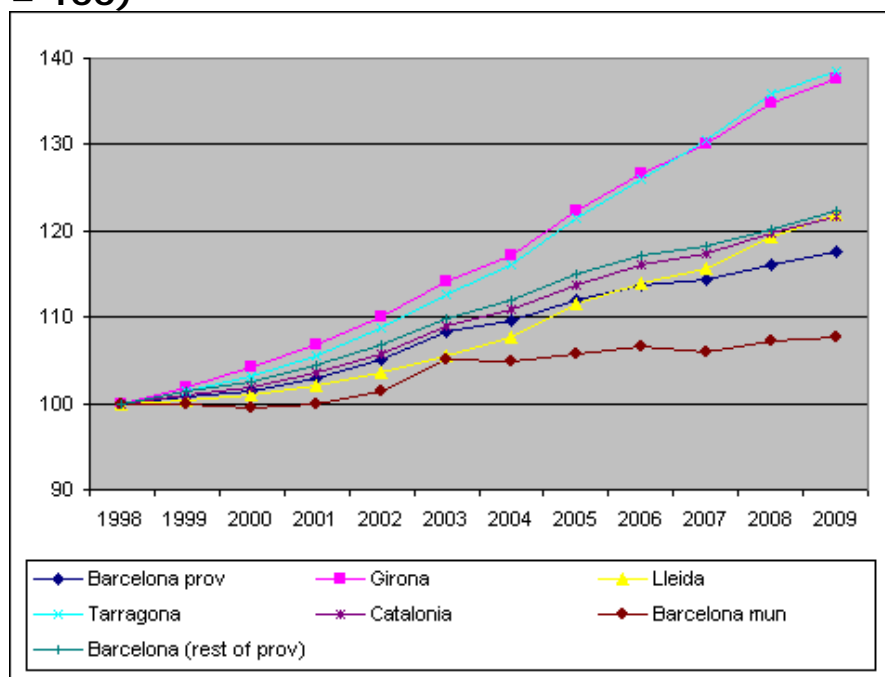


3.2 Population change and its components

After 15 years of stagnation, in a little bit more than ten years, Catalonia's population grew by 1.3 million people, 22% more than 1998, reaching 7.5 million residents in 2009 (Figure 2). In the province of Barcelona the increase was 18%, far less in the municipality (8%) than in the hinterland (22%). Even if the demographic growth of the municipality was less intense than in the other areas, we must say that international immigrations have stopped the demographic decrease that was ongoing for at least 20 years. The higher relative increase took place in the provinces of Girona and Tarragona (+ 38%), where a very strong growth in the foreign population summed up the increase in the Spanish residents. The increasing population in the province of Lleida was in line with the regional average.

Between 1998 and 2009, Catalonia witnessed an increase in the Spanish population (+260,000), due to a favourable natural dynamic and especially a growth in foreign citizens that reached one million units (Table 3). Hence, 80% of the significant demographic growth of the region is due to the rapid increase in the foreign population. Over half of the absolute growth that took place in Catalonia is concentrated in the province of Barcelona (+ 821,000), in particular in its hinterland (+ 705,000), where a third is tied to the Spanish population's growth. The municipality of Barcelona, involved in a phenomenon of periurbanisation that mainly concerns Spanish nationals, lost many indigenous residents (-136,000) and owes its growth exclusively to the increase in foreigners (+ 252,000). The provinces of Girona and Tarragona show a more intense growth than the regional average, each gaining more than 200,000 inhabitants, with two thirds being made up of foreigners. The inner province of Lleida is the least dynamic of the four, gaining 78,000 residents and only a small number of them is Spanish (7.3%).

Figure 2 Total population trend in the provinces (Index numbers, 1998 = 100)



Source: Ine, *Padròn continuu*.

Table 3 Absolute variations of the local and foreign population and their contributions to the demographic growth (1998-2009)

Reference areas, Region, Provinces	Absolute values			%		
	Spanish	Foreigners	Total	Spanish	Foreigners	Total
Catalonia	259.893	1.067.917	1.327.810	19,6	80,4	100,0
Barcelona Province	103.424	718.240	821.664	12,6	87,4	100,0
Girona	66.365	138.226	204.591	32,4	67,6	100,0
Lleida	5.762	72.737	78.499	7,3	92,7	100,0
Tarragona	84.342	138.714	223.056	37,8	62,2	100,0
Barcelona Municipality	-136.212	252.168	115.956	0,0	100,0	100,0
Barcelona Hinterland	239.636	466.072	705.708	34,0	66,0	100,0

Source: Ine, *Padròn continuu*.

3.3 Natural change: fertility and mortality

The natural dynamic of Catalonia over the current decade has had a decisive revival. At the beginning of the 90's the regional natural balance was less positive compared to the national data: 0.7‰ versus 1.8‰. Mortality rates were at equal levels. What made a difference was the lower mortality in Catalonia (Table 4). In 2008 the two mortality rates were equal, not far from 8.5‰ but the Catalan birth rate grew by almost 3 percentage points obtaining 12.3‰ in 2008. Over the last 20 years the natural growth rate on a regional level moved from 1.6‰ in 2002 to 4.1‰ in 2008 showing a constant growth in all the Catalan provinces. In general, the gross mortality rate diminishes, in particular in the areas of Girona and Tarragona, whereas the gross birth rate increases. Over the last two decades the rates of the province of Lleida

recorded an opposite tendency, that led to a change from negative to positive in the natural balance. The gross mortality rate between 1990 and 2000 grew everywhere because the number of deaths, with the increasing of the elderly population, grew at a higher rhythm compared to the resident population that was overall stable. On the contrary, between 2000 and 2008, the gross mortality rate decreased, because of the immigrants coming from abroad that led to a rapid growth in the resident population.

Compared to the first years of the 90's, Catalonia witnessed a clear improvement in life expectancy at birth (Table 5): over 15 years, men prolonged their life expectancy by almost 4.5 years and women by about 3.5 years. In 2007 the population of Catalonia lived slightly longer than the Spanish average. This is valid both for men (78.2) and for women (84.5). Girona is the Catalan province where men live longest (78.5) whereas women born in 2007 in the province of Barcelona can expect to live up to 84.6 years.

Table 4 Gross mortality rate, gross birth rate and natural increase per 1000 inhabitants. National total and provinces (1990-2008)

Reference areas, Region, Provinces	Gross mortality rate			Gross birth rate			Natural increase		
	1990	2000	2008	1990	2000	2008	1990	2000	2008
Spain	8,6	9,0	8,5	10,3	9,9	11,4	1,8	0,9	2,9
Catalonia	8,7	9,0	8,3	9,4	10,2	12,3	0,7	1,3	4,0
Barcelona	8,4	8,7	8,3	9,2	10,2	12,1	0,8	1,5	3,8
Girona	9,0	9,2	8,1	10,5	10,6	13,0	1,5	1,5	4,9
Lleida	10,0	10,8	9,8	8,8	9,2	12,2	-1,2	-1,5	2,4
Tarragona	9,3	9,4	8,2	9,9	10,4	12,7	0,6	1,0	4,5

Note: the gross mortality rate is the relationship between the number of deaths in a particular year and the average population of that year. The Gross birth rate is the relationship between the number of births in a particular year and the average population of that year

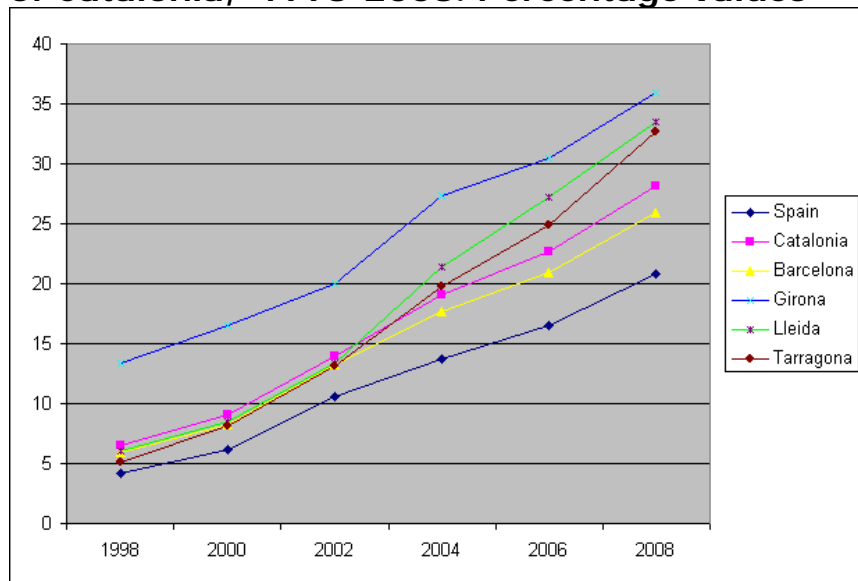
Source: Ine

Table 5 Life expectancy at birth by gender in the provinces (1991-2007)

Reference areas, Region, Provinces	Sex	1991	2000	2007
Spain	Males	73,5	75,9	77,8
	Females	80,7	82,7	84,1
Catalonia	Males	73,7	76,2	78,2
	Females	80,9	83,1	84,5
Barcelona	Males	73,5	76,1	78,3
	Females	80,9	83,2	84,6
Girona	Males	74,3	76,4	78,5
	Females	81,0	83,3	84,4
Lleida	Males	74,2	76,6	78,0
	Females	80,6	83,0	84,1
Tarragona	Males	74,7	76,3	77,8
	Females	80,5	82,3	84,1

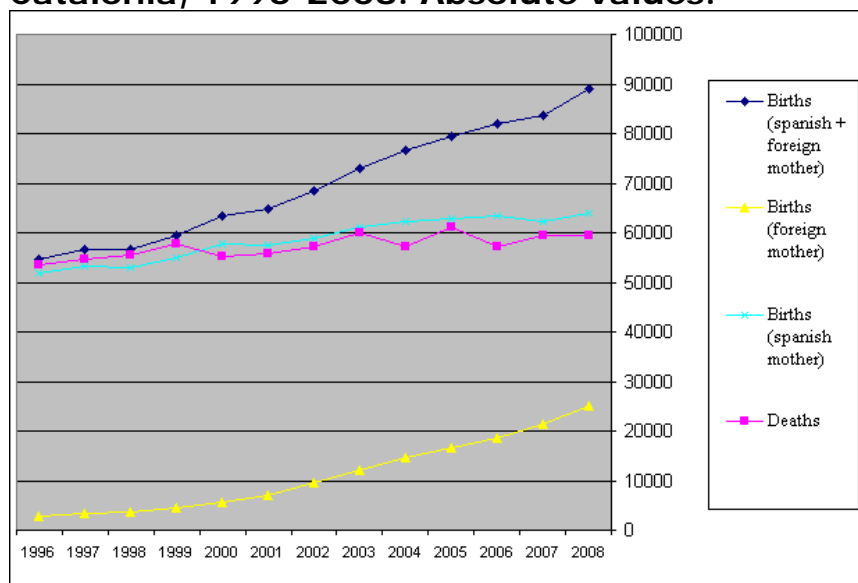
Source: Ine

Figure 3 Births from foreign mothers over total births in the province of Catalonia, 1998-2008. Percentage values



Source: Ine

Figure 4 Births by nationality (spanish and foreign) and deaths. Catalonia, 1996-2008. Absolute values.



Source: Ine

The increase in foreign migrations deeply influenced the trend of birth rates over the current decade. Such migrations contributed to the change in a situation of scarce reproductive vivacity. By the end of the 90's, the incidence of births from foreign mothers was about 5% in Spain and in Catalonia, where the province of Girona was an exception with 13.4% (Fig 3). In just one decade, this occurrence on a national level overtook 20% and reached 28.2% in Catalonia, with particularly high percentages in the three provinces of Girona, Lleida and Tarragona, where over a third of the mothers have foreign

citizenship. The increment was very rapid and ran equally with the decisive growth of the foreign residents in the area³.

The contribution by foreign citizens to the Catalan birth rate is even more evident when we compare the trend of deaths with the trend of births per nationality from the mid 90's till today (Figure 4). As a whole, the number of births moved from 55,000 to 89,000. The number of deaths moved from 53,000 to 59,000. Therefore, the natural balance is increased from +2,000 to +40,000. When considering just the births from Spanish mothers, the balance is negative from 1996 to 1999 and slightly positive during the year 2000, recording a +4,000 in 2008. In other words, without the contribution of births from foreign mothers, moving from little less than 3,000 in 1996 to 25,000 in 2008, the natural dynamic of Catalonia would have been totally lacking in vigour.

In truth, a part of such a revival in child birth also had an endogenous origin: between 1996 and 2005 the number of births from Spanish mothers grew by 12,000 units, remaining stable up until 2008. Such a rise depended on the increase in the fertility of the Spanish and on the entry in an age group highly fertile, between 30 and 34 years of age, of generations of women far more consistent than their predecessors⁴.

The start of international migrations represented a real *shock* in a demographic framework that was characterised, up until then, by stagnation. It also led to a change in the intensity and in the calendar of Catalan and Spanish fertility as a whole. During the mid 90's, the decrease of fertility reached its lowest point, both in Spain and Catalonia, with a Total fertility rate (Tfr) in both the areas at about a 1.15 quota (Fig 5). During the following years in Catalonia, the average number of children per woman rapidly grew at a higher level when compared to the rest of the country, reaching 1.58 in 2008. In the provinces of Girona, Lleida and Tarragona, it reached even higher levels, between 1.60 and 1.67⁵.

The average age at maternity in Catalonia, after becoming higher from 29 to 30.9 years of age during the 90's, in the last decade stabilized a little bit below the 31 years of age. In 2008 in the provinces of Girona, Lleida and Tarragona, the average age of pregnancy is around 30, slightly higher in the area of Barcelona (31). The halt in growth of the average age at maternity during the beginning of the 21st century, is also due to the relevant weight of the births from foreign mothers whose procreation age is younger when compared to the natives.

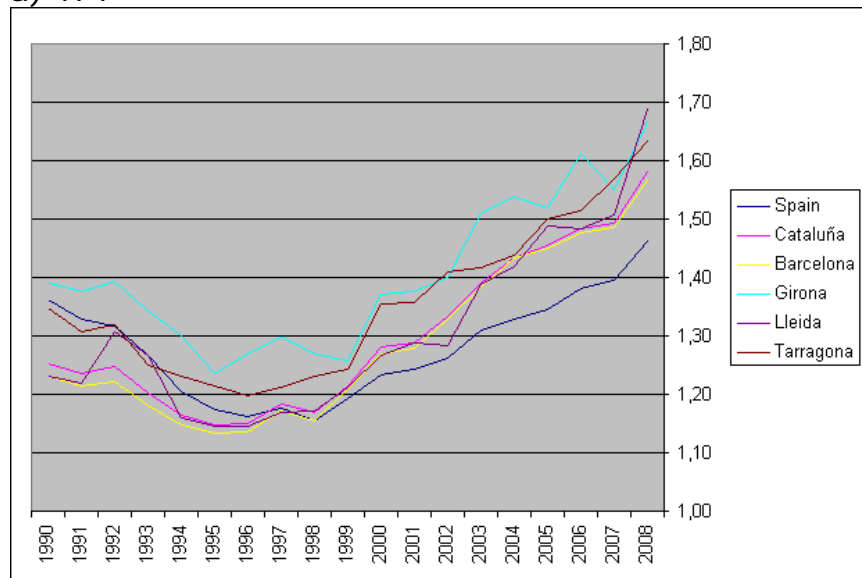
³ The impact of international migrations on the birth rate is even stronger if we consider the childbirths with at least one foreign parent (foreign mother or father) over the total number of births. In 2008 this incidence increased to 24.1% in Spain and 32.2% in Catalonia, with a maximum of 39.8% in the province of Girona.

⁴ Between 1974 and 1989, the number of baby girls born in Catalonia halved going from 54, 000 to 27, 000.

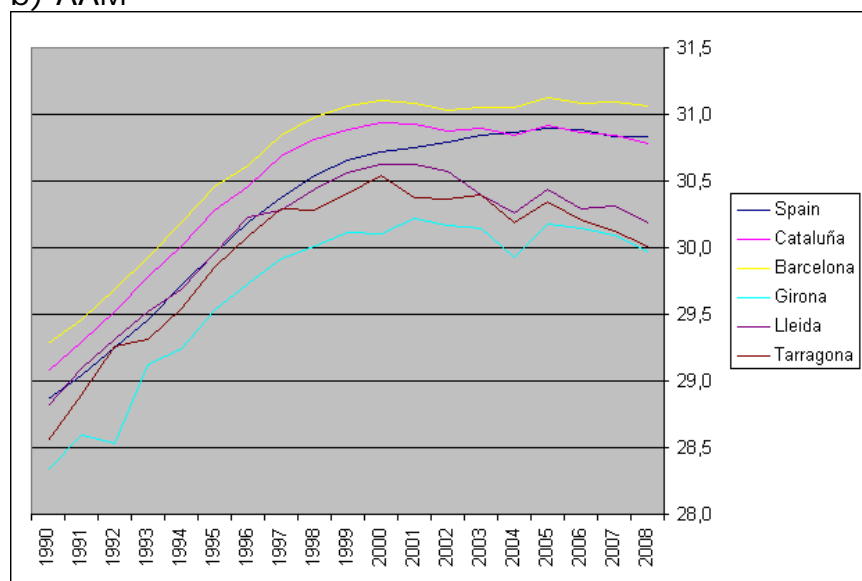
⁵ The Tft of Spanish women, following certain estimates, should have increased from 1.14 to 1.25 between 1996 and 2004 (Devolder, Trevino 2007). It is not simple to calculate the average number of children per foreign mother because of the strong differences in quantifying the foreign resident population that, depending on the utilised source - census rather than pardon continuative - tend to over estimate or under estimate the phenomenon.

Figure 5 Total fertility rate (Tfr) and average age at maternity in the provinces of Catalonia, 1990- 2008.

a) TFT



b) AAM



Source: Ine

3.4 Net migration and migration flows

The changes of residency from within Catalonia are distinguished by a dynamic of suburbanisation, where the municipality of Barcelona loses population (-13,8‰) in favour of the hinterland centres and coastal provinces (Table 6). On average the city of Barcelona loses around 20,000 every year who move to the other areas of the region. Tarragona is the province that gains the most from the interchange within the region (9,3‰), much weaker is the earning of residents of the province of Lleida.

In the period 2002–2008 Catalonia had a positive migratory rate as a whole (14,4‰), thanks to the very favourable incoming fluxes that widely compensated for the slightly negative national total (-0,7‰). In the 60's Catalonia attracted strong migrations from other Spanish regions. Such internal fluxes rapidly slowed down in the second half of the 70's and the effect of the return migrations at the beginning of the 80's led to a passivity in the net migration. After a long phase, highly characterised by an interchange substantially balanced with the rest of the country, during the latter years the Catalan internal total is constantly negative. Over the last ten years Catalonia witnessed around 300,000 inner residency changes per year going out with as many coming in. Almost a third of such movements concerned foreign citizens. A higher proportion compared to its incidence on the residence population, confirming the territorial super-mobility of foreign immigrants compared to the natives. Such a phenomenon was also witnessed in other countries.

The internal migratory dynamic of foreigners partially compensates the negative net migration that characterises the local population. Over the last year, we must underline that while the internal net migration of the Spanish population is negative (-6,000 per year), the foreigners show a slightly positive value (1,000 per year). The region that Catalonia has the most consistent interchange with is Andalucía, which, alone, absorbs two thirds of the internal Catalan negative migratory total. From a Nuts3 territorial level, the province of Barcelona is the area that loses the most population compared to other regions (-1,1‰), Girona and Lleida are not far from a balanced situation. Only Tarragona shows a positive indicator (Table 6).

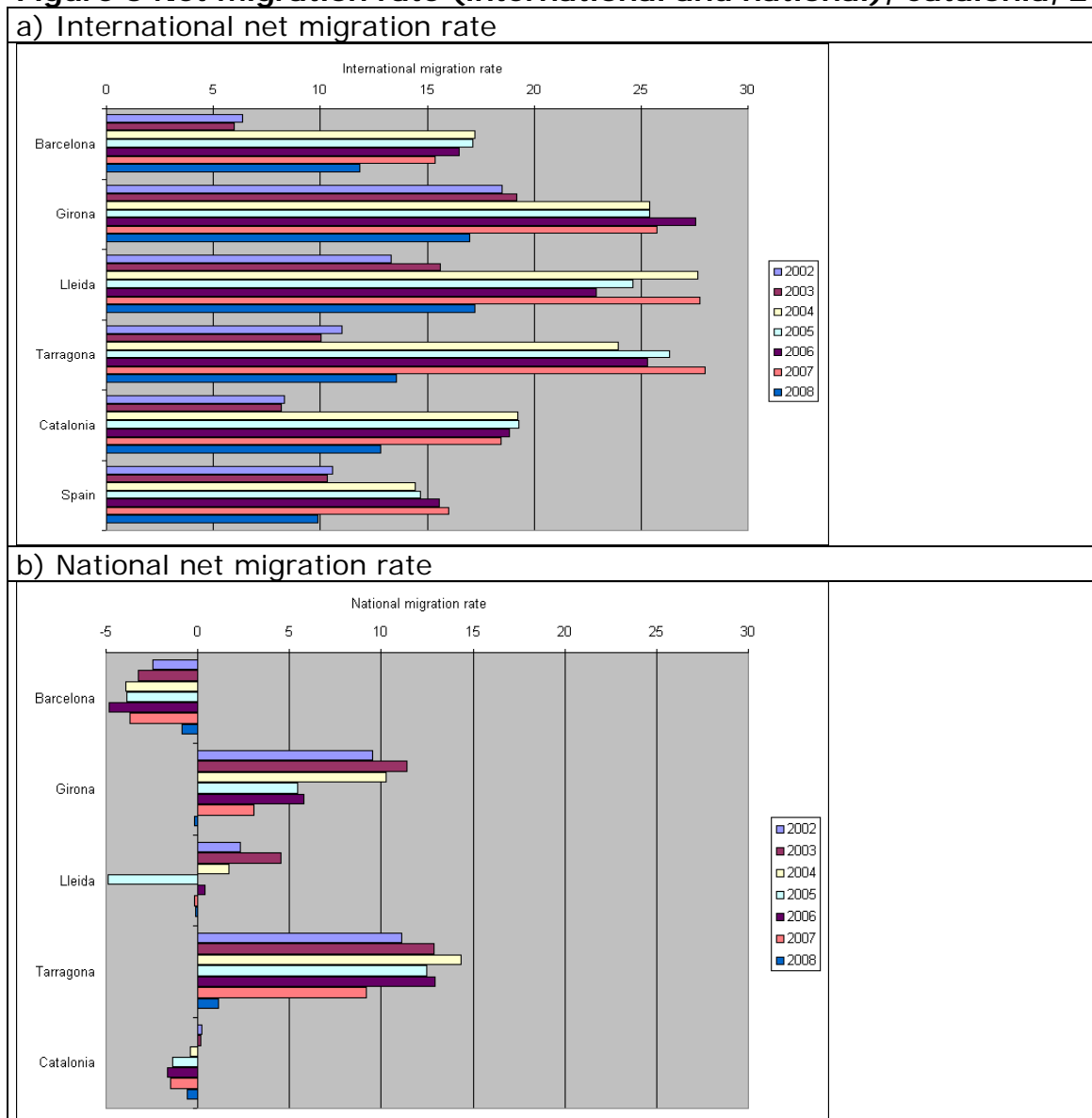
Table 6 Average yearly migratory totals per thousand residents, 2002-08

Reference areas, Region, Provinces	Intra- Catalo nia (1)	Extra- Catalonia (2)	National balance (3=1+2)	International (4)	Total balance (5=3+4)
Catalonia	0,0	-0,7	-0,7	15,1	14,4
Barcelona Province	-2,1	-1,1	-3,3	13,0	9,7
Girona	6,2	0,1	6,2	22,7	29,0
Lleida	0,7	-0,2	0,5	21,4	21,9
Tarragona	9,3	1,1	10,4	20,0	30,3
<i>Barcelona Municipality</i>	<i>-13,8</i>	<i>-0,7</i>	<i>-14,5</i>	<i>23,9</i>	<i>9,4</i>
<i>Barcelona Hinterland</i>	<i>3,0</i>	<i>-1,3</i>	<i>1,7</i>	<i>8,2</i>	<i>9,9</i>

Note: the International migratory total of the Barcelona municipality has been calculated on the difference between total and national balance.

Source: Ine, *Padròn continuu*.

Figure 6 Net migration rate (international and national), Catalonia, 2002-08.



Source: Ine, *Padròn continuu*.

The international net migration rate is, therefore, the element that contributes the most to the revitalisation of the Catalan migratory dynamic. As is shown in Figure 6, the weight of the foreign migratory rate on the growth of the Catalan population between 2002 and 2008 was dominant compared to the national net migration rate which, we remind you, considers both the internal transfers within the region (inter-provincials), and those of the other Spanish regions (interregional). From 2004 on, the international net migration rate of all the Catalan provinces is higher than the national average. The same evolution of the rate, showing an increase from 2004 till 2007 and a sudden decrease in 2008, is evident in all the areas. During the last year of 2008 the values of the national net migration rate of all the areas approached to zero. In the case of Tarragona the decrease is particularly evident, but the rate remains positive, the only case amongst the Catalan provinces. As far as the Barcelona municipality, which loses population with the other Catalan provinces and with the rest of Spain, the international migration balance is the only positive value.

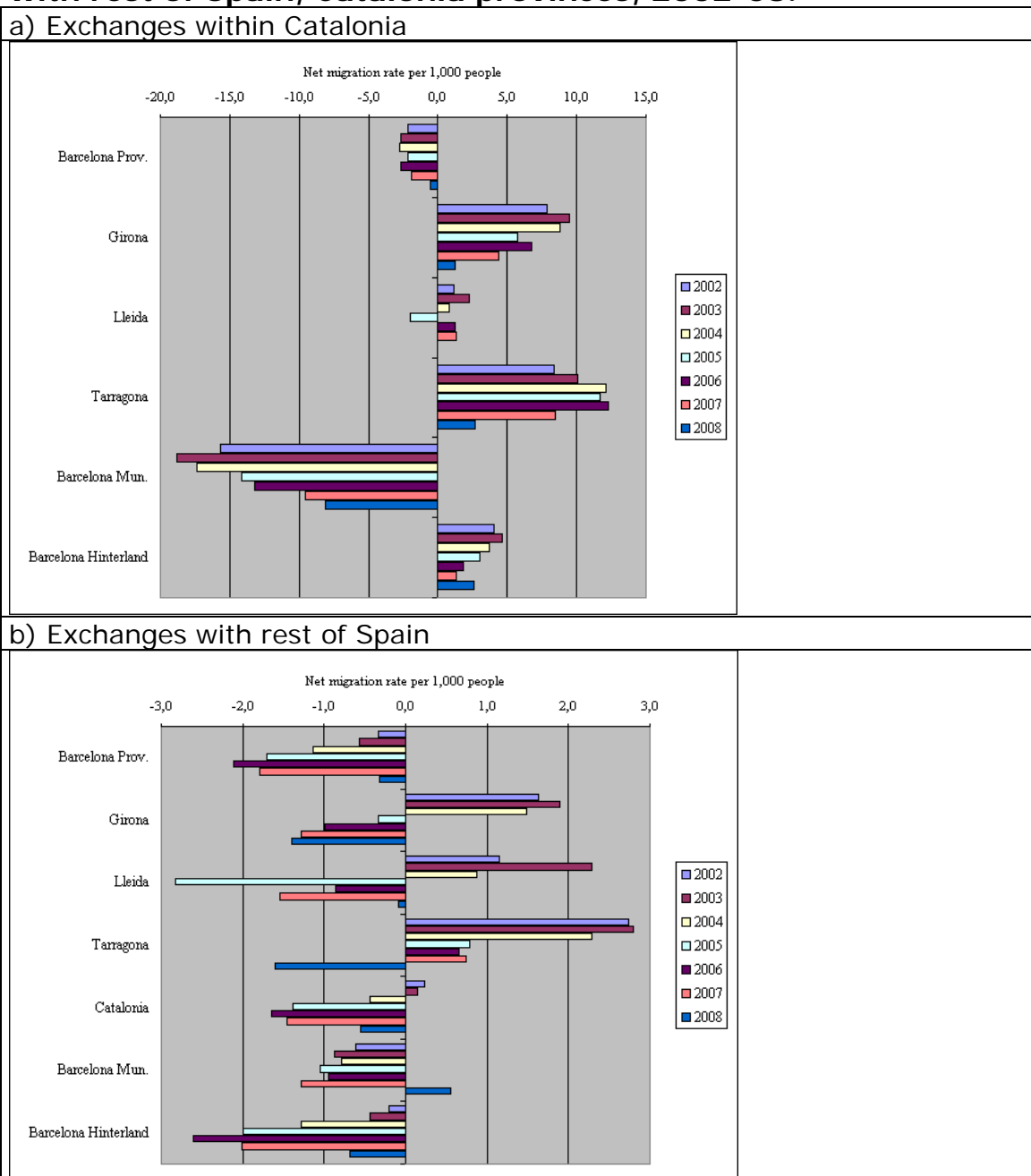
3.4.1. National migration

The level of net migration exchange *within Catalonia* is much higher when compared to the net migration exchange *between Catalonia and the other regions of Spain* (Figure 7). The values of the first rate are within -18,8‰ in Barcelona's municipality and +12,3‰ for the Tarragona province; the second indicator varies from -2,8‰ for Lleida and 2,8‰ for Tarragona. In the period 2002–2008 the city of Barcelona systematically loses population in favour of all the other regional territories. During the latter years, the passive values tends to diminish and the negative rate of 2008 more than halved when compared to 2003.

The trend of the net migration exchange with the other Spanish regions shows a reversal of tendency in all the areas except for Barcelona's hinterland where it is still negative during the whole period. In the provinces of Girona, Lleida and Tarragona, the rate moves from being positive to negative, whereas in the city of Barcelona, it turns into a positive in 2008. Catalonia as a whole finds itself having a deficit from 2004 onwards.

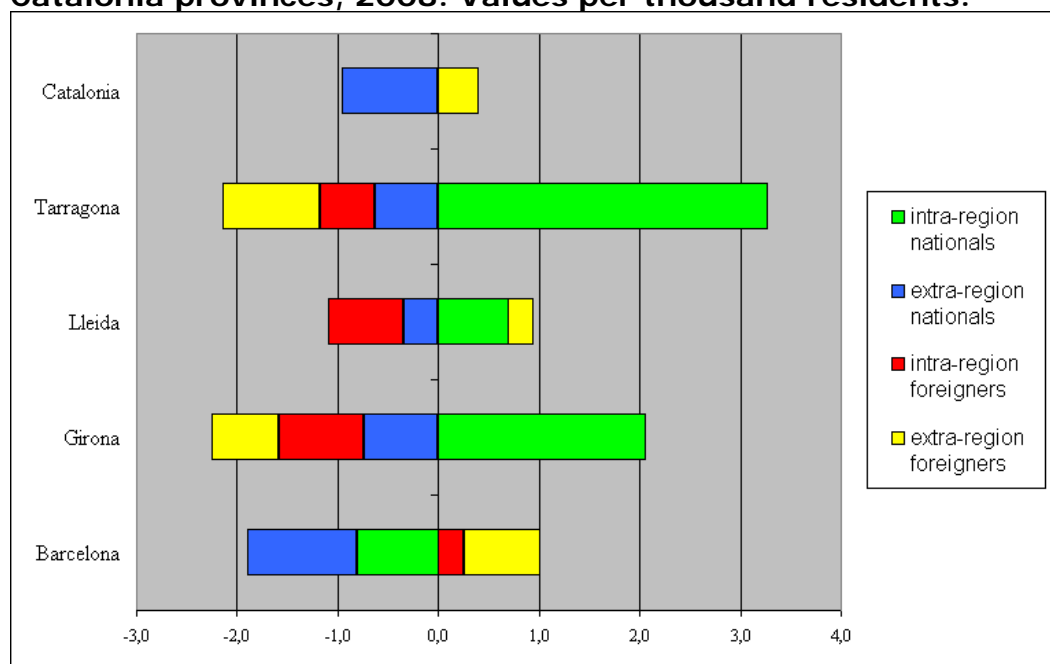
In 2008 the net migration exchange within the region differs on the basis of citizenship (Fig 8). Considering just the Spanish residents, the traditional centrifuge dynamic from the urban core towards peripheral provinces is confirmed: the migratory rate is negative in the province of Barcelona (-0,8‰) in favour of the other provinces, Tarragona in particular (3,3‰). If we focus our attention on foreign citizens, the direction of fluxes revolves: the province of Barcelona gains residents and the other three provinces lose population. The interchange with the other regions of Spain is negative for all areas when it concerns the changes in residency of the Spanish population, whereas Barcelona, Lleida and Catalonia as a whole attract transfers of foreign citizens.

Figure 7 National net migration rate. Exchanges within Catalonia and with rest of Spain, Catalonia provinces, 2002-08.



Source: Ine, *Padròn continuu*.

Figure 8 – National net migration rate. Exchanges within Catalonia (intra-region) and with rest of Spain (extra-region). Spaniards and foreigners. Catalonia provinces, 2008. Values per thousand residents.

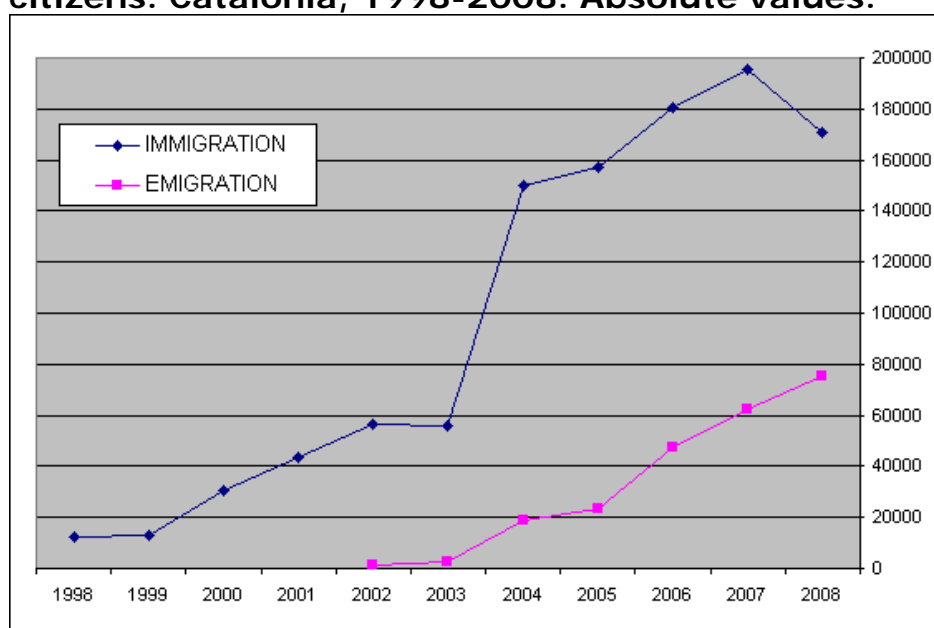


Source: Ine, *Padròn continuu*.

3.4.2. International migration

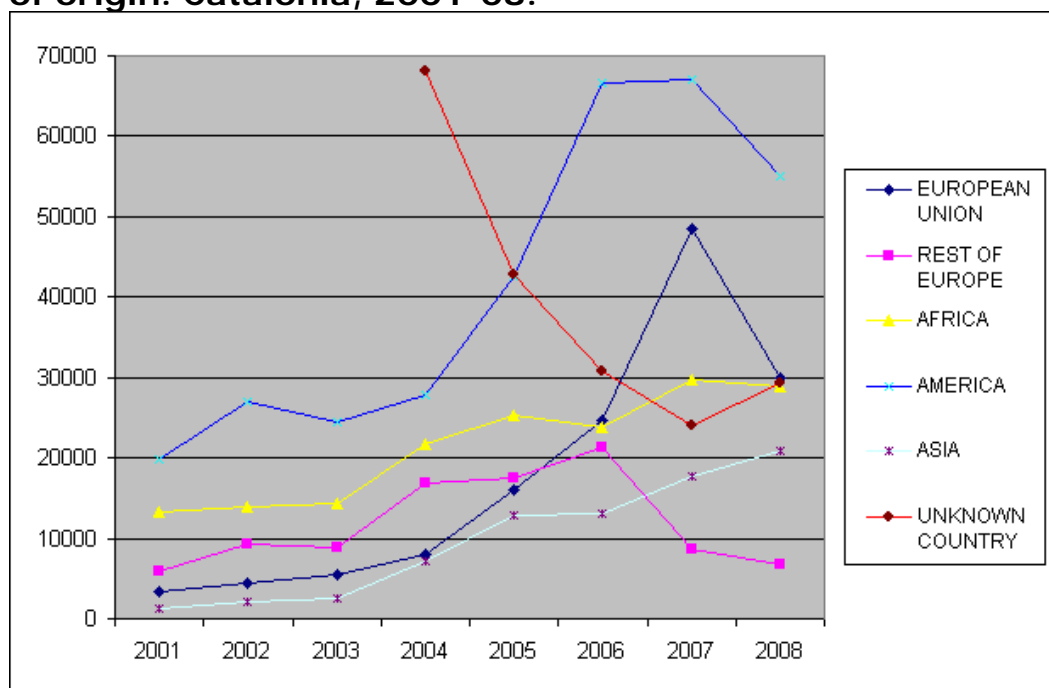
The beginning of international immigrations has transformed the Catalan demographic framework in a rapid and remarkable way. The recent evolution of immigrations and emigrations of foreign citizens is eloquent. At the end of the 90's the yearly arrivals did not reach 15,000, in 2000 they more than doubled and in 2002 they reached 55,000 units (Figure 9). The big jump in registrations, also tied to administrative motivations, occurred in 2004 with 150,000 entrances, almost triple the number of fluxes of the year before. Up until 2007 the growth in immigrations is constant and almost reaches 200,000 units. In 2008, also due to the international economic crisis after a decade of growth, more or less continuous, the first contraction of 25,000 entrances occurred. Alongside the immigrations, also the number of emigrations of foreign citizens grew. In 2002 the values was very small, just above 1,000 and rapidly grows up to 75,000 cancellations in 2008, also due to an improvement in the counts of the outgoing fluxes. It's possible that such counts of the "returning migrations" represent an under estimate of the real dimensions of the phenomenon, as migrants normally have little interest in giving information on their departure to the host country's authorities.

Figure 9 International immigrations and emigrations of foreign citizens. Catalonia, 1998-2008. Absolute values.



Source: Ine, *Padròn continuo*.

Figure 10 Immigrations of foreigners coming from abroad by country of origin. Catalonia, 2001-08.



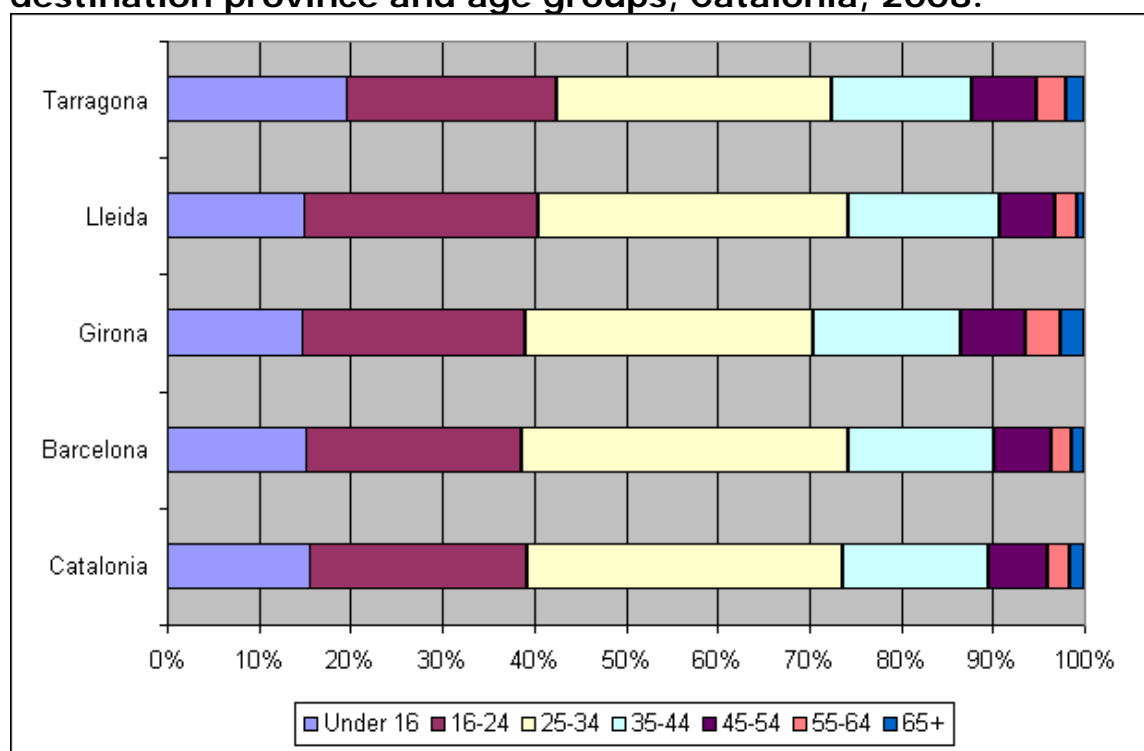
Source: Ine, *Padròn continuu*.

The intent to reconstruct the evolution of immigrations in Catalonia from abroad per area of origin is complicated by the presence of a great number of records indicating the country of origin that are missing. The amount of the unknown countries tends to diminish, from 68,000 in 2004 to 29,000 in 2008. In any case they are very consistent amounts (Figure 10).

The majority of foreign immigrants that entered Catalonia in 2001 is from South America, also because of the cultural and linguistic affinity with the host country. Several immigrants also come from Africa, in particular from nearby Morocco. The extension to EU member countries from Central Eastern Europe, has led to an increase in the quota of fluxes from the EU, especially in 2005 and 2007. The fluxes coming from non EU countries in 2008 have therefore reached very small numbers, like those in 2001. The entrances from Asia are in constant growth, moving from 1,000 in 2001 to 20,000 in 2008.

In 2008 the structure per age of foreigners registering from abroad in a Catalan municipality is mainly characterised by a strong presence of young adults between 25 and 34 years of age, representing over two thirds of new immigrants. The quota of entrances of working age population (15 – 64 years) overtakes the 80%. As a whole it is a young population, mainly concentrated in central age groups with a quota of under 16 prevailing over the over 45's that are just 10% of the total. We note that some territorial differences occur: in the province of Barcelona the incidence of working age immigrants is higher whereas on the coastal provinces, especially Girona, where the entrances of an older age represent a higher quota due to the transfer of pensioners coming from developed countries.

Figure 11 Immigrations of foreigners coming from abroad by destination province and age groups, Catalonia, 2008.



Source: Ine, *Padròn continuu*.

3.5 The presence of foreign migrants: provenance and characteristics

At the beginning of 2009 the foreigners living in Catalonia are little less than 1.2 million, the 21% of the total in the country (Table 7), 800,000 of those in the province of Barcelona alone. The quota of foreign citizens on the total population of Catalonia is higher compared to the national average, 15.9% versus 12.1%. The province of Girona shows the highest incidence with over one fifth of the residents, whereas the province of Barcelona shows a foreign presence higher in the municipality rather than in the hinterland. The influence of international immigrations on the rejuvenation of the age structure in the region is confirmed by the under 15 quota and the births from foreign mothers that are well over the incidence of foreigners as a whole of the residents. Such a quota is particularly higher in the provinces of Girona, Lleida and Tarragona where the very young foreigners are more than a quarter of the total and the children of foreign mothers are one third of the total 2008 childbirths. In the area of Barcelona the values are lower but, in any case, consistent. The structure by sex sees a prevalence of men over women. The latter, over the past few years, tends to diminish. That being a signal of re-equilibrium that, along side others, indicates the intensifying of the process of insertion of foreign families into Catalan society. The relationship between the sexes is conditioned also by the prevailing sector of entrance into the local workforce. In the province of Lleida the percentage of men is much higher than the Catalan average (M\F: 136.1), because the immigrants residing there are often working in the agricultural sector. In the city of Barcelona the large demand for

labour is in the tertiary sector and in services to families. Such factors favour a higher equilibrium between the sexes (M\F: 111.9).

The intense international migratory fluxes shown in the previous paragraph have led to an increase, in one decade, in the incidence of foreigners residing in Catalonia from 2% to 15.9% (Figure 12). In 1998 in all the Catalan provinces the foreign presence was very little, around 2%, with the exception being the Girona province that then, like today, maintained a slightly superior percentage than the Catalan average. The growth in foreign incidence is constant in all the areas during the entire period and, from 2002, has risen.

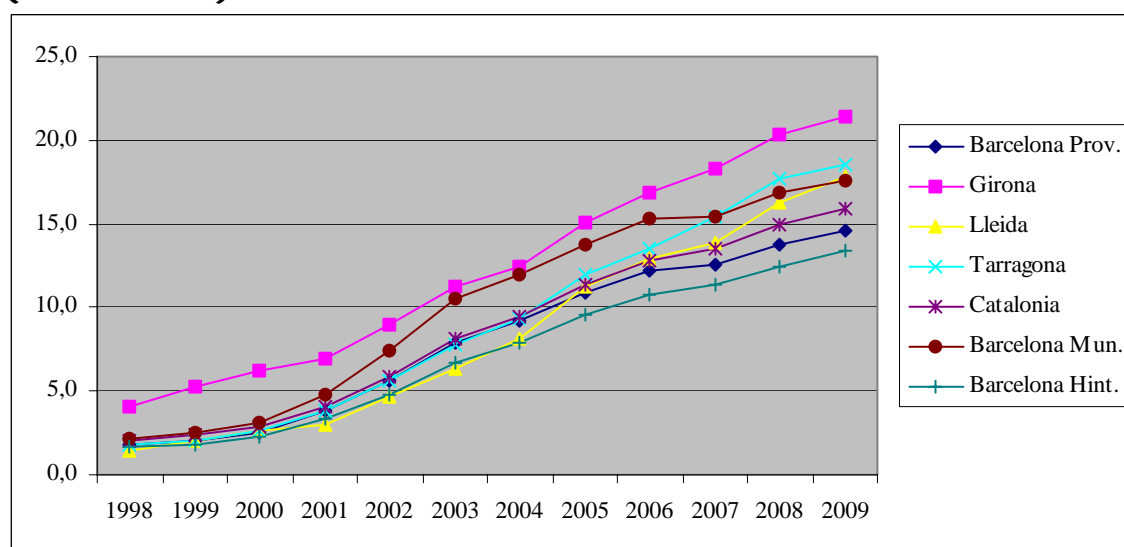
Table 7 Some features of the presence of foreign resident population in the provinces

Reference areas, Region, Provinces	n. foreigners 1.1.2009	% foreigners in			M/F
		total population	0-14 population	new borns 2008	
Spain	5648,7	12,1	13,4	20,8	112,7
Catalonia	1189,3	15,9	20,3	27,8	119,5
Barcelona Province	802,0	14,6	17,6	25,9	116,6
Girona	160,3	21,4	31,0	31,8	122,4
Lleida	77,8	17,8	27,8	33,5	136,1
Tarragona	149,2	18,6	26,3	32,6	124,4
Barcelona Municipality	284,4	17,5	NA	NA	111,9
Barcelona Hinterland	517,6	13,4	NA	NA	119,3

Note: NA= not available

Source: Ine, *Padròn continuu*.

Figure 12 Share of the resident foreign population in the provinces (1998-2009)



Source: Ine, *Padròn continuu*.

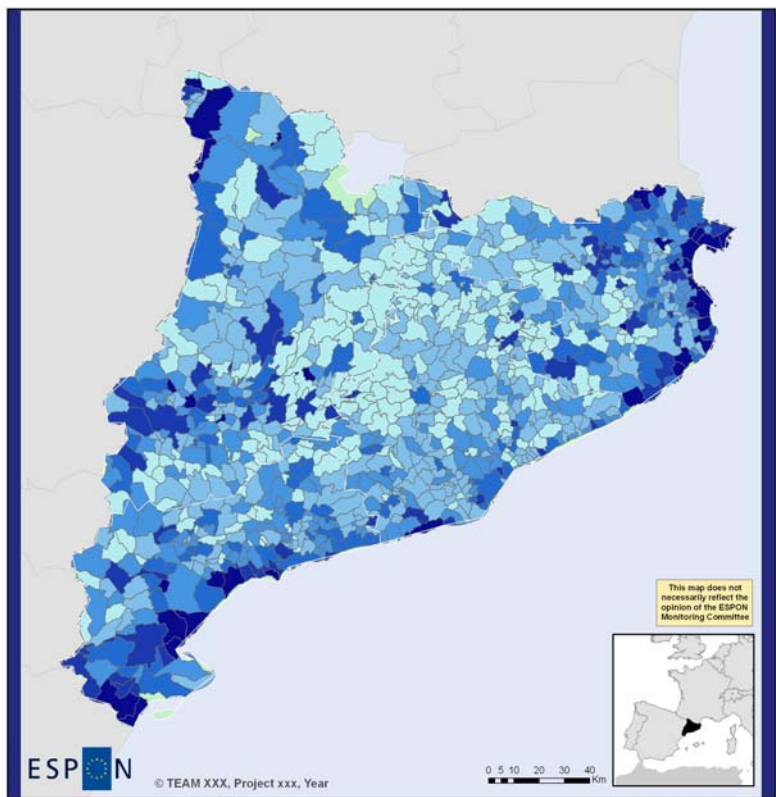
The shape of the pyramid by age of the foreign population living in Catalonia (Figure 13), suffers from a disequilibrium in numbers amongst the sexes and it is typical of a population of recent immigration, with a strong prevalence of young adults, especially between 25 and 39 years of age, and a quota of very young immigrants that is rising, testified by the widening of the base of the pyramid. Men have a structure by age older than women and the age class of

the male population (30–34) is higher than the female one (25–29). Men are more numerous by about 100,000 units but the major part of the numerical difference between the sexes is concentrated in the working age group between 25 and 44 years. The presence of the elderly population amongst immigrants is, for the time being, still very moderate.

The structure by age of the Catalan provinces does not show strong differences, except for a higher quota of elderly in the coastal province of Girona that attracts fluxes of pensioners from many countries from North Western Europe, in particular Germany, Switzerland, Great Britain and nearby France.

Over one third of the foreigners that reside in Catalonia in 2009 come from America, especially South America (Table 8). African citizens and EU citizens are also numerous and the immigrants coming from Asia are growing. As far as the country of origin is concerned, the immigrants coming from Morocco are the large majority and represent almost one fifth of all the foreigners. Romanians, Ecuadorians and Chinese are also very present. The distribution per citizenship in the provinces shows few elements of differentiation. In the province of Barcelona the percentage of residents coming from America is particularly strong (40.4%), especially in the municipality of Barcelona where the Moroccans are, instead, little present. In the other provinces it is African and EU citizens, often with over one third, that are the majority of foreign residents.

Map 3 Foreign resident population (% on total population), Catalonia municipalities, 1.1.2009.



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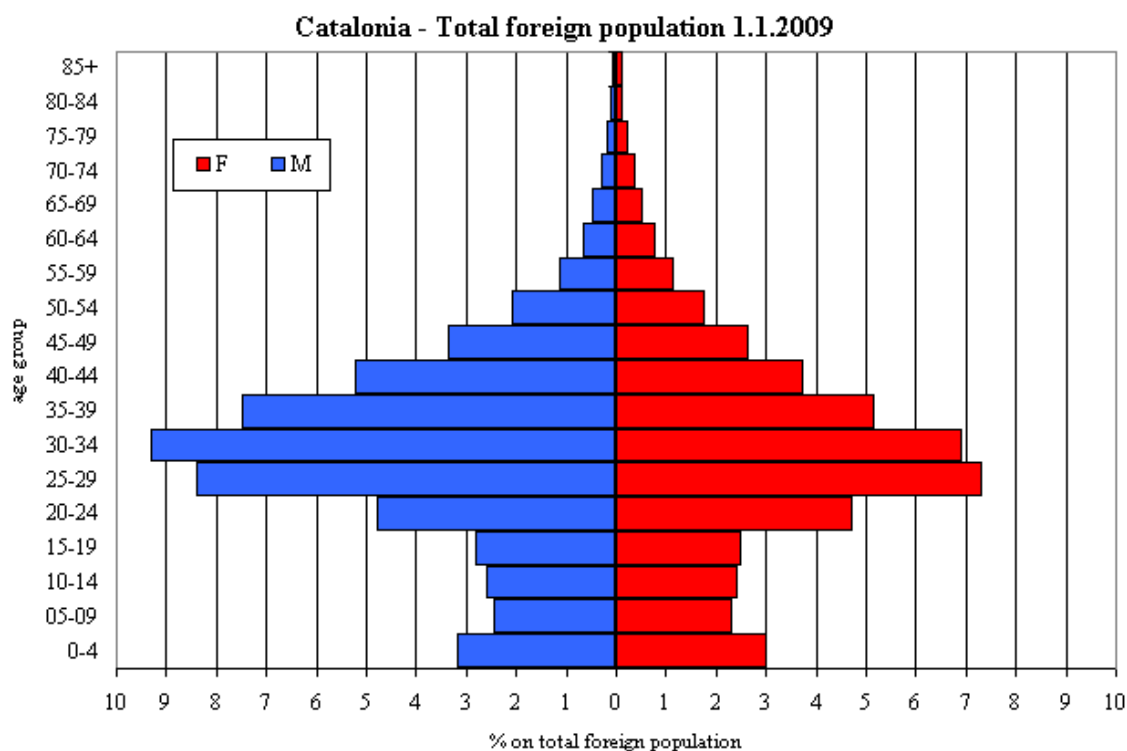
Legend

Foreign resident population 1.1.2009 (%)

- 5.0 % and less
- 5.0 to 10.0 %
- 10.0 to 15.0 %
- 15.0 to 20.0 %
- 20.0 to 25.0 %
- more than 25.0 %

Local level: LAU2
Source: xxx, year
Origin of data: xxx, year
© EuroGeographics Association for administrative boundaries

Figure 13 Structure of the foreign resident population by sex and age groups. Catalonia 2009. (% on total foreign population)



Source: Ine, *Padròn continuu*.

Table 8 Foreign residents by continent and country of nationality. Catalonia provinces, 2009. (%)

Continent and country of nationality	Catalonia	Barcelona Province	Girona	Lleida	Tarragona	Barcelona Municip.	Barcelona Hinterland
EUROPE	30,3	25,3	36,8	44,2	43,0	31,5	21,9
European Union	25,8	21,4	30,9	38,3	37,7	26,6	18,5
<i>Romania</i>	8,1	4,3	8,5	26,4	18,5	2,3	5,4
Non EU Europe	4,5	3,9	5,9	5,9	5,4	4,9	3,4
AFRICA	25,6	22,1	34,3	35,0	30,3	7,3	30,3
<i>Marocco</i>	19,1	16,9	24,0	18,7	25,5	4,9	23,6
AMERICA	34,2	40,4	23,1	17,8	21,7	43,3	38,8
<i>Ecuador</i>	6,9	9,1	2,1	2,1	3,0	7,6	10,0
ASIA	9,8	12,1	5,8	3,0	5,0	17,8	9,0
<i>China</i>	3,8	4,5	2,2	2,0	2,3	4,8	4,4
OCEANIA	0,0	0,1	0,0	0,0	0,0	0,1	0,0
TOTAL	100,0	100,0	100,0	100,0	100,0	100,0	100,0

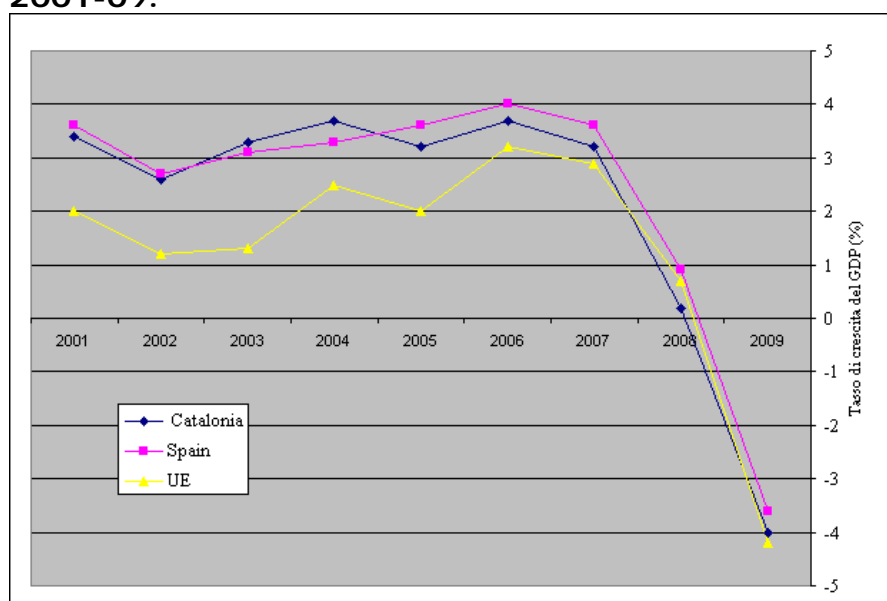
Source: Ine, *Padròn continuu*.

4. Economic change and population

4.1. Occupational structure and recent economic trends

Catalonia is one of the most developed Spanish regions from the point of view of the economy. In 2009 its GDP per capita overtook the average of the 27 EU countries by 26.4% and it was higher than the Spanish average by 22.5%. A balance with the national average GDP had been occurring for a few years, it being lower than 29.8% in the year 2000. After a phase of slight increment during the 90's, Catalonia's economy witnessed a period of great expansion between 2001 and 2007. Such an expansion led the GDP to a growth by a 3-4 yearly percentage almost the entire time, on slightly inferior levels when compared to the whole of Spain but superior to the EU countries average, even by a percentage point (Figure 14). In 2008 the effects of the international economic crisis began to be felt. Such a crisis almost brought the Catalan growth rate to zero and, the following year, the GDP was reduced by 4%, a decline equal to the Spanish and EU decreases.

Figure 14 Variation rate of GDP (GDP). Catalonia, Spain, European Union, 2001-09.

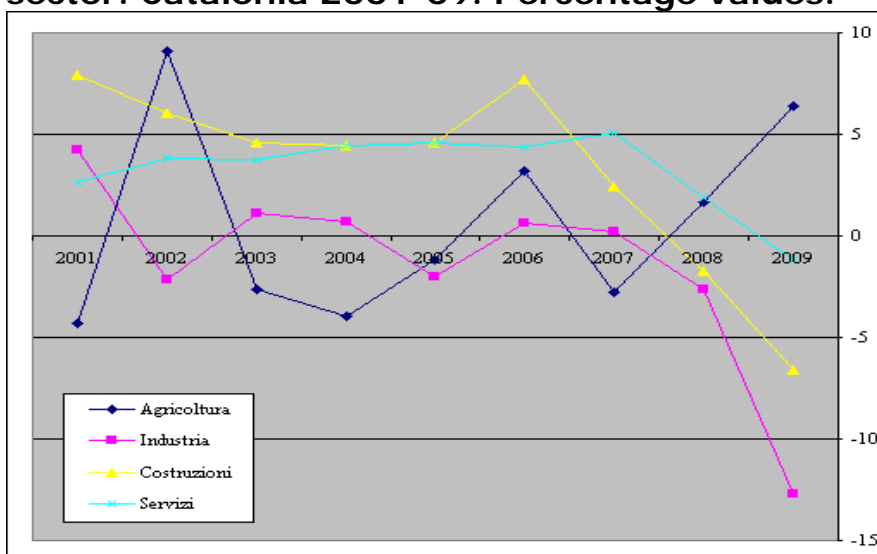


Source: Idescat e Eurostat.

The economic crisis did not concern all the productive sectors with the same intensity (Figure 15). The GDP of the agricultural sector, that occupies just 3% of the Catalan workforce, in the year 2000 had an alternating tendency and during the two years that witnessed the explosion of the recession, even had a decisive increase from -2.4% to +6.8%. The productive sector most hit was the industrial one, with a decrease of 12.7% in 2009. In all truth, even during the previous years the industrial sector's performance had not been particularly good. The industrial sector, that in 2009 had a more pronounced decrease in production, was metallurgy (almost -29.7%) and the manufacturing industry (-16.2%) whereas petrochemicals were less severely hit (-5.8%) while the pharmaceutical industry actually grew (+8.1%). The

construction and tertiary sector led the strong economic expansion of Catalonia until 2007, though in the two years to follow they decreased. The value of the production of the large-scale services sector, as a whole, did not show much consistent loss. In the 2001-2007 period it grew by 4-5% yearly and in 2009 lost 1.1%. Although some areas of the sector suffered more, such as trade (-14.8%), building services (-9.7%) and tourism (-7.4%). Constructions had a long period of expansion with its highest peak in 2006 with a growth close to 8% per year. In three years the "building-bubble" burst and in 2009 the decrease was about 6.6%. The crisis in such a sector is mainly due to a strong deceleration in the residential building trade. In 2009 the number of houses in the process of being built is in fact diminished by 42.3%.

Figure 15 Variation of Gross Domestic Product (GDP) per productive sector. Catalonia 2001-09. Percentage values.



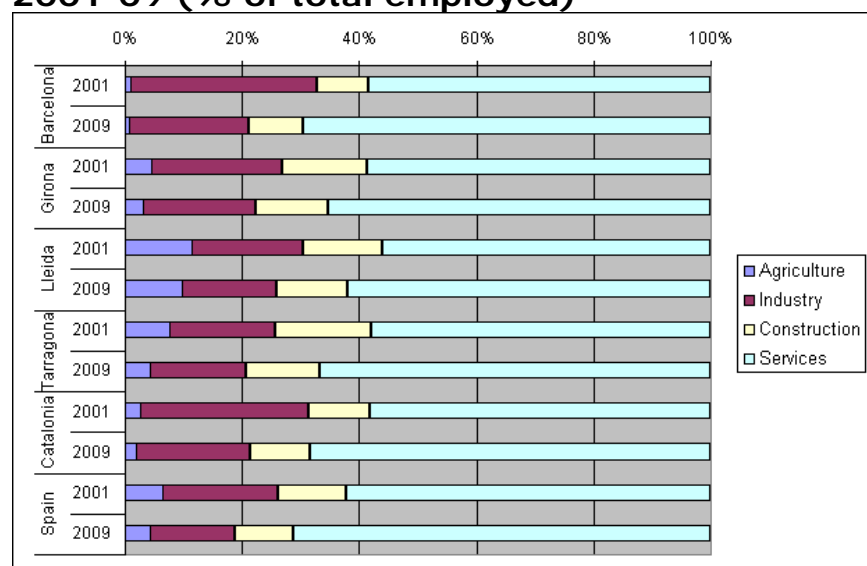
Source: Ine e Idescat

Catalonia is a region traditionally with a strong industrial development. Although between 2001 and 2009 the number of workers employed in the sector decreased by 9%, it is still higher when compared to the national average, 19.6% against 14.7% (Figure 16). The province of Barcelona has the highest percentage of people employed in industry, one fifth of the total, about 10 percentage points less when compared to 2001. Such a percentage moved to increase the number of people employed in the service sector, which in 2009 consisted of 70% of the employees. The region shows a percentage of people employed in the agricultural sector inferior when compared to Spain as a whole. This is also due to a high urbanisation level of the Barcelona metropolitan area. Within the other Catalan provinces, the agricultural sector holds a heavier weight, in particular in the Lleida province where 10% are employed in such a sector. Another Catalan sector of production that employs a wider portion of workforce is constructions with a total similar to the national average (10.2%).

In absolute terms, during the year 2000, the number of employees in Catalonia grew by more than 350,000 units (+12.8%), two thirds of which are concentrated in the province of Barcelona alone. The positive number mainly

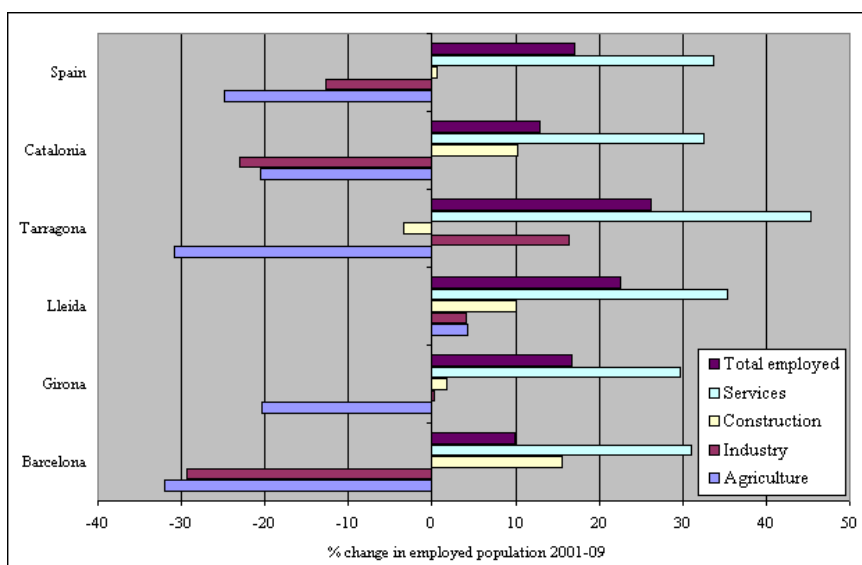
derives from a growth in the workers employed in the services sector, which overtook half a million units (+32.5%) and by a minor increase in the building sector, whereas agriculture and industry lost over one fifth of its employees (Figure 17). The absolute decrease in the industrial sector is relevant. Such a decrease is slightly less than 200,000 units and mainly concentrated in the province of Barcelona alone. The province of Tarragona, with a counter-tendency to the rest of the region, saw a growth in workers employed in industry by 16.4% and a slight contraction in constructions, it being in expansion in the other provinces. The province of Lleida, as we have seen, has a strong agricultural vocation and it is the only one increasing its workforce employed in the sector, also thanks to the use of many seasonal foreign workers. The recession has had immediate effects on the unemployment rate which decreased during the year 2000 up to a historical minimum of 6.5% in 2007 and grew by 16.2% just two years later (Figure 18). The rural province of Lleida was less hit by the crisis that struck more heavily in the rest of the region, mainly in the province of Girona which in 2007 counts 1 person unemployed for every 5 workers. An increase in the unemployment rate occurred in all the production sectors. Some witnessed a particularly consistent loss. It is the case for the constructions sector which, after having aided the expansion phase of the Catalan economy, witnessed a growth in unemployment of about 20 points in the last two years (23.6% in 2009).

Figure 16 Employed population by province and economic sectors, 2001-09 (% of total employed)



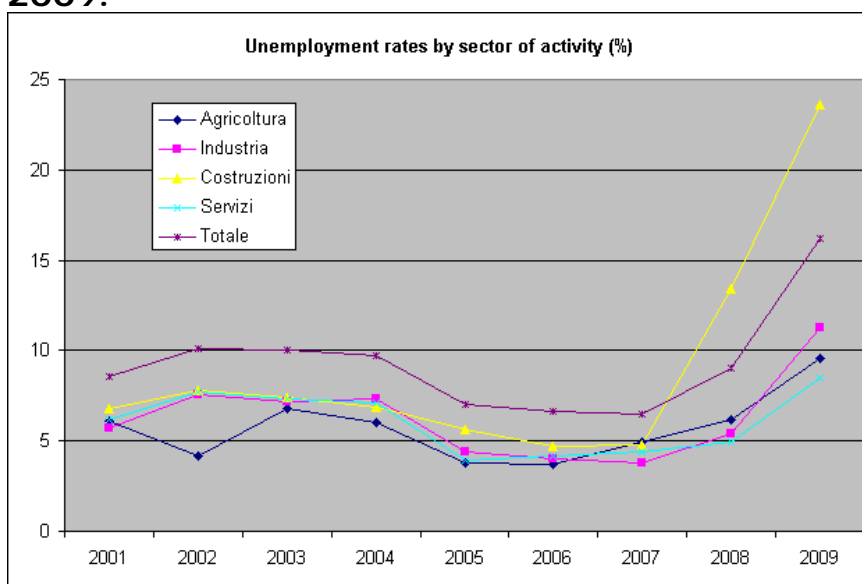
Source: Economically Active Population Survey (EAPS), INE.

Figure 17 Change in the employed population by sector of activity, Catalonia 2001-09. (%)



Source: Economically Active Population Survey (EAPS), INE.

Figure 18 Unemployment rates by sector of activity. Catalonia. 2001-2009.



Note: those who never worked or left their previous occupation for more than a year are not classified in any sector of activity.

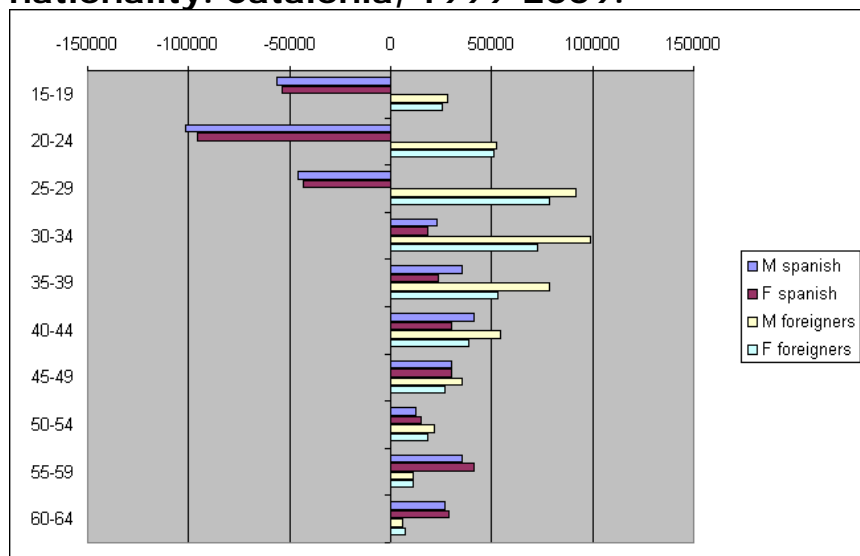
Source: Economically Active Population Survey (EAPS), INE.

4.2 Demographic characteristics and changes of the working age population

Between 1999 and 2009 the working age population in Catalonia increased by more than 850,000 units (+20%), solely due to foreign immigration (Figure 19). The native working age is mainly unvaried in number (-5,000 units), because of a strong diminution between 15 and 29 years and an increase between the 30 and 64 years, which made the age of the working population older. The decrease in the number of youth is due to the entrance of the generations from the 80s and 90s into the working age group. Such generations were born at the end of the “baby boom” and are much less numerous than those who proceeded them. In ten years the Spaniards of twenty-year-olds living in Catalonia diminished by about 300,000 units (-28.8%), almost entirely compensated by new foreign residents. The foreign population naturally grows in all the age groups, especially in its male component and between 25 and 39 (+475,000 units). The number of the thirty-year-olds who reside in the region, both native and foreign, is noticeably increased (+14.8%). The province of Barcelona, with half a million units more, has absorbed the 58.6% of the regional growth of the working age population.

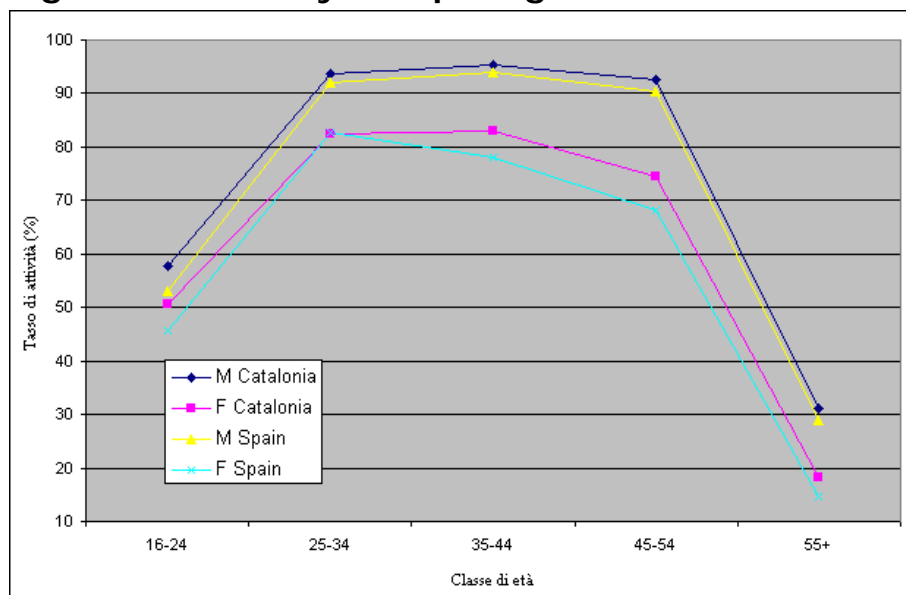
In absolute terms, the growth of the workforce in the period 1999-2009 was the same as the population of active age (+863,000), also due to a growth in the activity rate by more than 6 points, from 56.3% to 62.7%. In 2009 the activity rate in Catalonia was superior by almost 3 points compared to the Spanish rate. Until 24 years of age, in Catalonia and Spain, the gender differences in labour market participation is largely inferior by 10% points and the activity rate is between 45% for Spanish women and 58% for Catalan men (Figure 20). Between 25 and 34 the gap increases. The male rates overtake at 90% and the female rates are just above 80%. The male participation remains superior to 90% for the two age groups that follow, whereas the female activity on a national level decreases until 68% in the 45-54 age group. In general, in 2009, the activity rate in Catalonia is higher than the national average for all ages, slightly for men and the younger age groups (up to 34 years of age) and considerably for women between 35 and 54 years of age. During the current decade female participation in the labour market in Spain witnessed a strong increase for all ages. The activity rate for women increases by more than 10 points going from 40% in 1999 to 51.9% in 2009. The female activity rate is higher in Catalonia than in the rest of Spain but the observed tendency during the current decade seems to underline a certain convergence in the participation level.

Figure 19 Variation of the working age population per age and nationality. Catalonia, 1999-2009.



Source: Ine, Padròn continuu.

Figure 20 Activity rate per age and sex. 2009. Catalonia e Spain



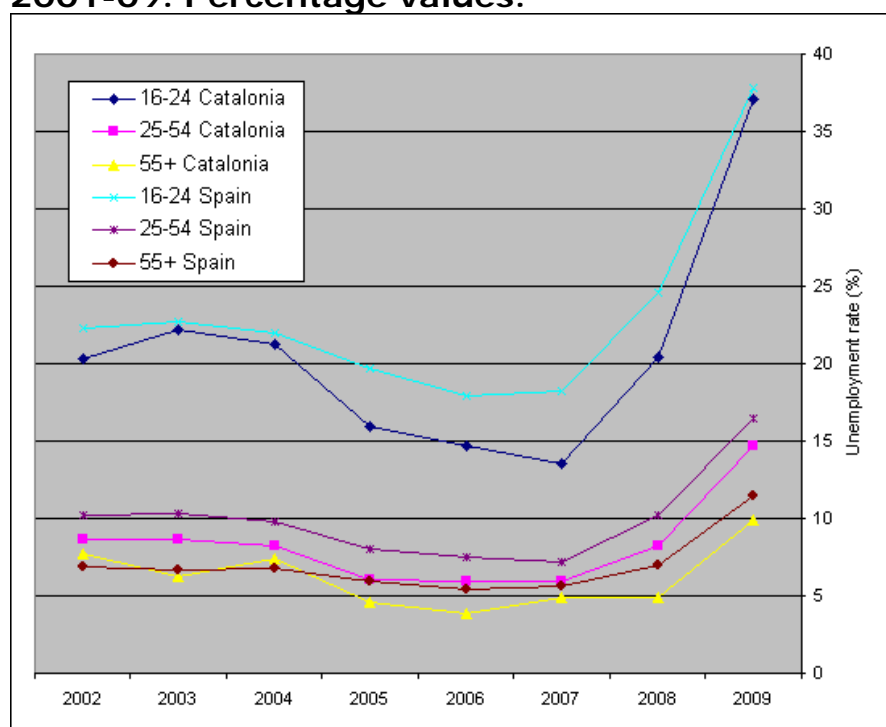
Source: Economically Active Population Survey (EAPS), INE.

During the current decade the Catalan workforce has increased its amount and improved its educational level. In 2008, 57% of the active population had at least finished the second stage of secondary education, versus 50% in 2001. Women continue to have a higher average level of education than men. More than one third of women have a higher education level. The improvement of Catalan workers' education level therefore proceeded fast. The number of workers of both sexes with a higher education rose by 328,000 units in seven years, mainly amongst women (+46%).

The employment growth that has occurred in recent years has also been due to a higher flexibility and uncertainty in the nature of work contracts. In 2007, 23.3% of Catalan dependent workers had an atypical work contract, with a higher number being amongst the under 25s, half of which were employed

within a determined time work contract (Idescat, 2007, Enquesta Demografica). The sharp rise of Catalan unemployment rate amongst the 16 to 24 year age group, occurred between 2008 and 2009, was also due to a greater weakness in their work contracts. Such an unemployment rate increased by about 24 percentage points: from 13.5% to 37.1% (Figure 21). During the same period of time the older age groups, between 25 and 54 years, have more than doubled their level of unemployment, obtaining 14.7%. During the analysed short period, the movement of the unemployment rates by age in Catalonia and Spain show strong analogies. Such analogies are summed up in two phases: a decrease in 2005 and a strong decrease in 2008-2009. It's remarkable that in all age groups Catalan unemployment is almost always lower when compared to the national average.

Figure 21 Unemployment rate per age group. Catalonia and Spain, 2001-09. Percentage values.



Source: Economically Active Population Survey (EAPS), INE.

4.3 The role of migration

Before the recent migratory wave from abroad, Catalonia in the 60s and 70s, had already been the land for very strong migratory fluxes. These came from the least developed regions of Spain, mainly Andalucía and Extremadura, attracted by the industrial expansion of the region. Still today one fourth of the Spanish workforce in Catalonia is made up of individuals who were not born in the region (Dinz Serrano, 2010), despite the important reverse migrations of the 80s. Such situation produced a negative net migration for almost a decade. During the current decades the native Catalan structure of working-age population is growing old, because of a slight generational exchange in the younger age groups. The beginning of foreign immigrations is tied not only to the simple compensation for a lack in demographic terms. The presence of a

dual labour market is very important too. Such a market is characterised by “good” and “bad” work positions. The latter are less appreciated by the local workforce which has improved in its level of education and today desires higher level positions than before.

The less qualified workers coming from non-European countries are those who mainly fill up the low level segments of labour market and assume a complimentary function compared to the native workforce. We should not forget that Catalan women's work insertion has grown and their difficulty in facing the double task of supplying for the market and the family has led to an increase in the domestic labour demand and home care for children and the elderly, often satisfied by South American immigrant women. Apart from the services to people; tourism, constructions and intensive agriculture are sectors where foreign immigrants prevail. Such sectors are characterised by low salaries and they are highly seasonable (Gil, Domingo, 2007).

The foreign citizens that are residents in Spain present a higher insertion in the labour market compared to the locals. In Catalonia the activity rates are respectively 77.2% and 63.2% (Table 9). The immigrants coming from non-EU countries are more active than those coming from the EU even if, compared to the rest of Spain, the gap is less consistent. A large gap between the sexes in the level of labour participation is also valid for foreigners. This is more consistent in Catalonia than in the rest of the country, probably because of the strong incidence of Moroccan women, normally dedicated to family work, rather than that of the labour market.

The distribution of foreign workers by activity sector in Catalonia shows a strong presence of men in two sectors most hit by the recession: constructions (33.7%) and industry (23.7%). Instead, foreign women are more concentrated in the macro-sector of services (85.2%). The foreign citizens are more often employed as dependents compared to the Spanish (88.2% and 73.1%) and often work with determined time contracts (44% versus 14.2% of locals). Such contracts, in a phase of economic instability, give less guarantees of maintaining the work position. The immigrants employed in weaker labour market segments are also more exposed to its fluctuations. The trend of the activity rates between 2005 and 2008 confirms a higher fragility within the Catalan labour market of non-EU workers (Figure 22). In 2005, when the Spanish economy was still at the peak of its expansion, the unemployment rate of non-EU citizens was already at its highest level when compared to EU foreigners (11.5% versus 5.4%). Such levels showed, instead, an equal rate to the local population. In 2007 grew the percentage of unemployed in the EU workers, probably also due to the strong flux of neo EU citizens coming from Central Eastern Europe, mainly Romanians often inserted into the weak productive sectors in the region. Finally, in 2008, the recession hit hard the non-EU immigrants. Such immigrants had to face an increase in unemployment that reached 19.2%.

The first generations of Catalan born during the baby boom between 1955-75 will enter pension age in the near future. Such a factor may increase the importance of the foreign immigration substitutive function, in order to face a local workforce going through a contraction and ageing phase.

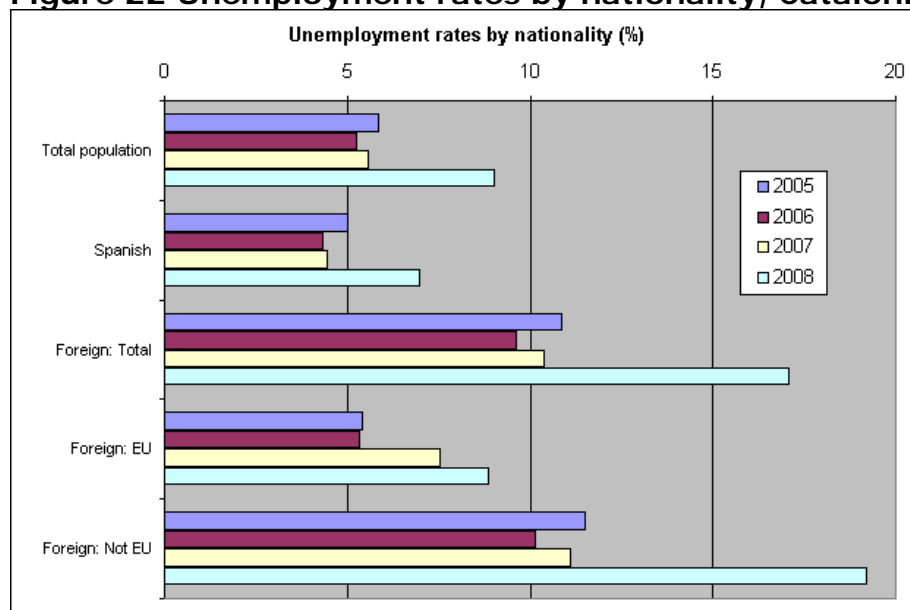
Because of the economic crisis and the growth in unemployment rates amongst the foreign population, in November 2008 Spain enacted a law on the voluntary return of unemployed immigrants to their country of origin (Real Decreto, Ley 4/2008). The law solely concerns the citizens from 20 non-EU countries which have signed with Spain a bilateral agreement on the issue of social security. Those immigrants who agree will receive a one-way ticket to their country, a contribution of 50 Euros to reach their hometown and, especially, a repatriation bonus equal to 40% of the unemployment benefits matured by the worker. The remaining 60% is paid once the workers return to their home countries. Those immigrants will not be allowed to come back for the next three years. On the basis of a first evaluation of the programme in November 2009, around 9,000 immigrant workers participated in the program. That being, 10% of the target that the Spanish government had in mind. Almost the entire adhesion was South American, mainly from Ecuador. Catalonia was the fourth region per number of adhesions after Madrid, Comunidad Valenciana and Andalucia (Government of Spain, 2009).

Tabella 9 Activity rates by nationality and sex. Catalonia, 2008.

	Spain			Catalonia		
	Both sexes	Males	Females	Both sexes	Males	Females
Total population	59,8	69,5	50,5	63,2	72,3	54,4
Spanish	57,5	67,3	48,1	60,6	69,2	52,4
Foreign: Total	76,8	85,3	68,2	77,2	87,4	66,0
Foreign: European Union	71,2	79,8	62,6	75,8	85,4	64,8
Foreign: Not belonging to the European Union	79,3	87,8	70,8	77,6	87,9	66,3

Source: *Economically Active Population Survey (EAPS)*, INE.

Figure 22 Unemployment rates by nationality, Catalonia, 2005-08 (%)



Source: *Economically Active Population Survey (EAPS)*, INE.

5. The future evolution of the population: policy scenarios DEMIFER

Within the DEMIFER project there are four policy scenarios of demographic development. The “Expanding Market Europe” and “Growing Social Europe” scenarios foresee an improvement in economic and social conditions in European regions and, as a consequence, an expansive demographic dynamic. On the contrary, the “Challenged Market Europe” and “Limited Social Europe” scenarios predict a socio economic future less positive, which may have some negative repercussions on the population’s evolution.

The two expansion scenarios forecast a remarkable growth in the Catalan population in the following years. Such an increase may lead to 9 million inhabitants by 2050, with a growth of more than 2 million residents. That being, almost one third more than the population in 2005. Both the less optimistic scenarios foresee a weaker demographic growth in the region so that the population in 2050 will grow by about 0.5 million residents, to a total lower than 7.5 million inhabitants (Figure 23).

If we concentrate our attention on the structure of the labour force by sex and age in 2050 following the two “extreme” scenarios (Expanding Market Europe and Limited Social Europe), the differences are very evident (Figure 24). Although both scenarios agree in the ageing of the active population, in the case that Catalonia is involved in a continental economic expansion, an increase in the workforce by about 260,000 units should occur, but with a loss of almost 150,000 workers between 25 and 39 years. The limited social Europe scenario, instead, foresees a robust concentration of active population (-760,000 units), with a diminution concentrated for the two thirds amongst the young adults (20-34) and an ageing of the age structure most prominent. Hence, in the long term, all scenarios agree in foreseeing a diminution more or less strong, in the number of young adults within the workforce. The age group between 25 and 34 years is now the most consistent amongst the active population and a strong contraction on its behalf may cause the arrival of new international migration fluxes as a compensative function.

Figure 23 DEMIFER policy scenarios. Total population of Catalonia, 2005-50.

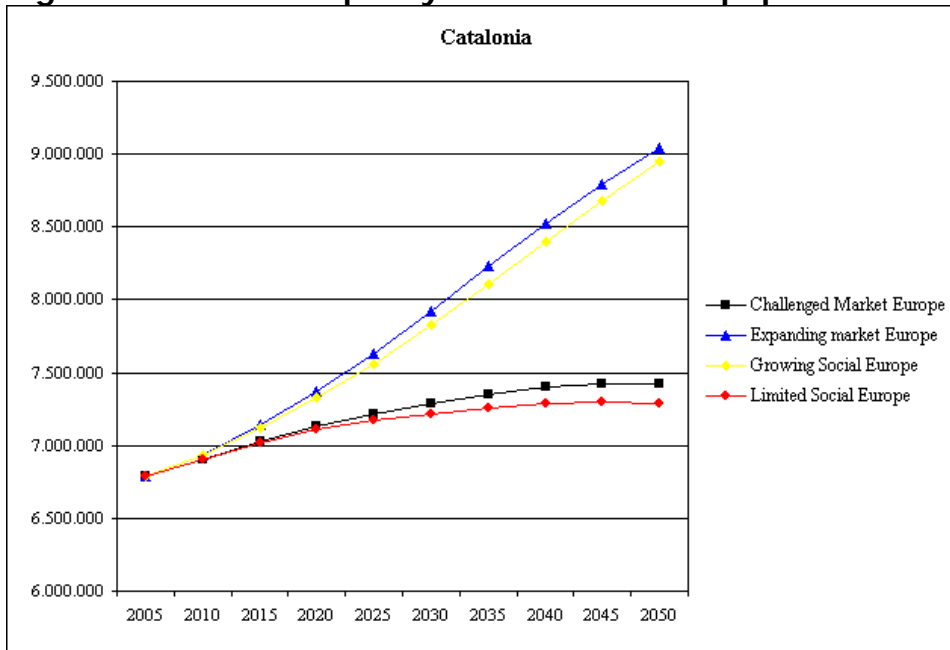
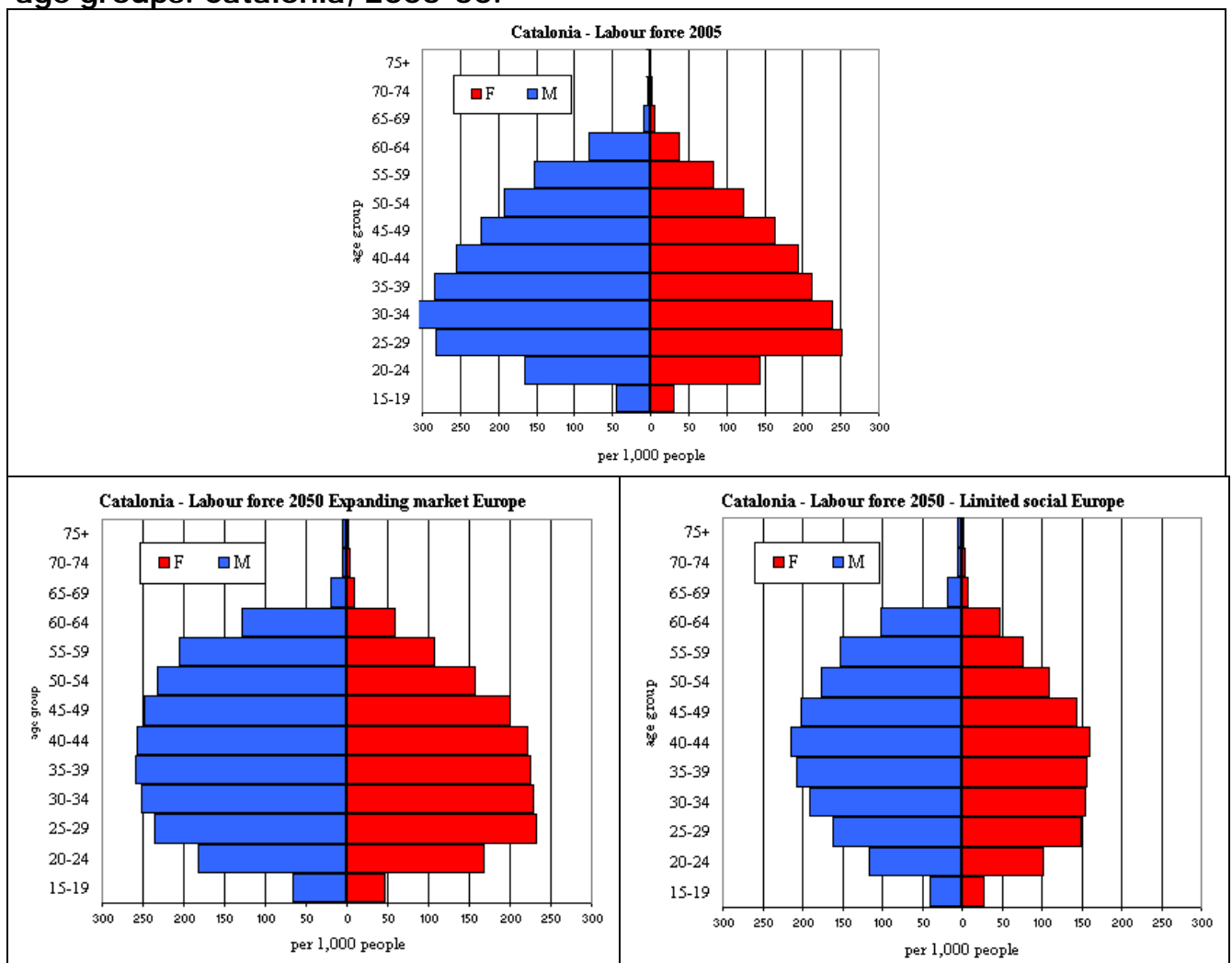


Figure 24 DEMIFER policy scenarios. Age structure of population by sex and age groups. Catalonia, 2005-50.



6. Conclusions and the demographic challenges in the region

Catalonia, a region historically with a high economic development and a place of settlement for strong inner migratory fluxes, lived a period of substantial economic and demographic stagnation from the end of the 70s till the beginning of the 90s, as a new phase of rapid growth began. Such a growth was due to the settlement of big international economic circuits, which stimulated then influx of investments and foreign workforce. Compared to what happened in the past, when the elements of growth stimulation were due to inner dynamics within the country, in this case the regional development is due to exogenous factors. The decline in favourable conditions in the international financial markets has immediately affected the area's economic status, highlighting a Spanish and Catalan economic limit: dependency on international finance.

Foreign immigrants living in the area mainly work in low skilled economic sectors such as constructions, agriculture, manufacturing, services to firms and to families. Their presence in the lowest labour market segments of Catalonia seem to be complimentary to the gaining of a higher level of qualification by the youth and, especially, for the native women whose activity rate has strongly grown over the past few years. Each foreign group present in the region has a peculiar model of work placement, that conditions the territorial settlement model, more or less concentrated in the urban core of the Catalan Metropolis.

The recent international economic crisis hit several sectors hard in which foreign immigrant labour plays a central role. The effects of the recession on the Catalan labour market have been undoubtedly considerable and have rapidly increased the unemployment rates to levels that only a few years ago were unimaginable. The crisis hit the youth and the immigrants the hardest, those being the most fragile subjects, often employed with atypical and very flexible work contracts. A strong informal labour market is present in some productive fields characterised by a higher seasonality. Those sectors are still able to absorb big portions of foreign labour.

It is obviously very difficult to foresee the length of the recession, or the duration and the strength of an eventual revival. In the short term, it is easy to think of a diminution in foreign migratory fluxes as the recent data shows and an increase in the "return migrations", also stimulated by "ad hoc" governmental programs. It is more difficult to imagine scenarios of a social character. It is certain that an economic crisis such as the one that Spain is going through can only challenge the social cohesion and the cohabitation between locals and foreigners.

The rejuvenation of the Catalan population, that has allowed the placing of the region in the "young potential" DEMIFER typology, has partially endogenous origins, the growth in the birth and fertility rate of the locals, but mainly exogenous, is hence tied to the quick and robust increase in immigration by international immigrations. In perspective, the entrance into reproductive age by the local post baby boom female generations, much less numerous when compared to the previous ones, could have as a consequence a contraction in the number of births. Such a contraction would be difficult to compensate even

in the presence of a further growth in the average number of children per woman. It is not easy to foresee what the contribution of migrants may have in the near future on the local demographic dynamics. The effect of the rejuvenation that took place during the last decade may fade away if the number of the foreign entrances is not maintained at high levels, even more so if we consider that even the immigrants who are now adults are, sooner or later, going to age. Certainly, the eventual persistence of consistent international immigrations will have to be handled with great care in order to guarantee social sustainability and avoid the risk of a negative impact that might generate unfavourable reactions by the local population.

References

- Benavente J. (1989), "Social change and early fertility decline in Catalonia", *European Journal of Population*, Vol. 5, n. 3.
- F. Brunet (1995), *An economic analysis of the Barcelona '92 Olympic Games: resources, financing and impacts*, Barcelona, Centre d'Estudis Olímpics UAB, online article, available February 2010.
- Cabré A, (1989), *Les migracions a Catalunya 1900-2000*, Papers de Demografia Centre d'Estudis Demogràfics Universitat Autònoma de Barcelona, Barcelona, n. 38.
- Cabré A and A. Domingo (2007), *Demografia i immigració, 1991-2005*, Papers de Demografia Centre d'Estudis Demogràfics, n. 324.
- Cabré A and I. Pujades (1987), *La fecundidad en Cataluña desde 1922: analisis y perspectivas*, Papers de Demografia Centre d'Estudis Demogràfics Universitat Autònoma de Barcelona, Barcelona, n. 20.
- Cabré A and I. Pujades (1989), *Crecimiento y estancamiento. La población de Cataluña en el siglo XX*, Papers de Demografia Centre d'Estudis Demogràfics Universitat Autònoma de Barcelona, Barcelona, n. 37.
- González, J.R. and J.M.A. Puebla (1996), "Spain: return to the South, metropolitan deconcentration and new migration flows", in P. Rees, J. Stilwell, A. Convey and M. Kupiszewski (eds), *Population migration in the European Union*, Chichester, John Wiley & Sons.
- J. Harrison (1978), *An economic history of modern Spain*, Manchester, Manchester University Press.
- M. Keating, J. Loughlin and K. Deschouwer (2003), *Culture, institutions and economic development. A study of eight European regions*, Cheltenham, Edward Elgar.
- N. Mora Sitjà (2002), *Labour and wages in pre-industrial Catalonia*, University of Oxford, Discussion Papers in Economic and Social History, N. 45, May.
- Reher D. and R. Rowland (1999), "Le monde ibérique", in *Histoire des populations de l'Europe. Vol. II La révolution démographique 1750-1914*, Ligugé, Fayard.

Annex – Sources of data used in the report

The data of the structure by age, sex and citizenship of the population comes from the *Municipal Register (Padròn Municipal)*, which is the administrative register where municipality inhabitants are recorded. The respective town councils are responsible for its formation, maintenance, revision and custody and its update is obtained from the revision of the municipal register referring to 1 January of each year, which is approved by the Government at the National Statistical Institute's (*Instituto Nacional de Estadística*, INE) request, after a favourable report by the Registration Board (INE, 2010). In 1996 a modification of register regulations was carried out. A new continuous and computerised management system for municipal registers was established, based on the coordination of all of them by the INE. Based on the aforementioned regulations, the last register renewal was carried out, referred to 1 May, in 1996. This was the starting point for the new register system. The revision to 1 January 1998 was the first update to be carried out in agreement with the new system (INE, 2010). As of this moment official population figures are obtained annually, unlike that which occurred previously where population figures were only published every five years for the population censuses - carried out every ten years - or the registry renewals that were carried out every five (INE, 2010). As far as the foreign population is concerned, we must specify that the data from the Municipal Register include all those who usually reside in the municipality, including those immigrants without a valid permit to stay.

The statistical use of the register from January 1st each year is taken from a file from the INE registry base from which the proposal of official figures is obtained. The basic variables contained in the register, which are likely to be used statistically, are filtered. Cross checks are done according to: place of residence, sex, age, nationality and place of birth and broken down to municipal level and by sex, nationality and age are broken down to census level (INE, 2010).

Municipal Register: Official Population Figures since 1996

<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft20/e260&file=inebase&L=1>

Statistical use of the Municipal Register

<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=/t20/e245/&file=inebase>

The *Economically Active Population Survey (EAPS)* is a continuous quarterly survey performed by INE, that targets households, and its main objective is to obtain data on the labour force, and on the people outside the labour market. The theoretical sample varies from 65,000 households per quarter, to approx. 60,000 actually interviewed households, which implies approximately 180,000 people. The methodology of the survey was modified in 2005 for various reasons: the need for it to adapt to the new demographic and labour reality of our country, due mainly to the increase in the number of foreign residents; the incorporation of new European regulations in accordance with the norms of the European Union Statistical Office (EUROSTAT), and the introduction of improvements in the collection method (INE, 2010).

http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft22%2Fe308_mnu&file=inebase&L=1

The 2007 *Demographic survey (ED07)* constitutes the first edition of a new set of statistics produced by the Statistical office of Catalonia (*Institut d'Estadística de Catalunya*, IDESCAT). The ED07 is a set of sampled statistics aimed at Catalan homes and the people that live in them. The aim of the survey is to obtain results for the main demographic variables in the 41 counties, the capitals of the provinces, and municipalities with more than 100,000 inhabitants. The most detailed results can only be obtained for Catalonia and, to a lesser extent, the municipality of Barcelona and the 7 areas of the territorial plan. The survey aims to update the information on the main structural demographic variables in reference to the population, households and families, and housing. On the other hand it aims to look in more detail at the causes and consequences of the demographic changes taking place in the society (IDESCAT, 2010). <http://www.idescat.cat/en/poblacio/ed/ed.html>