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Internal Migration and Regional Population Dynamics in Europe: Spain case study

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Abstract

Internal migration has been a key component in Spain's sub-national population dynamics over the last century, particularly during the 1960s and 1970s, when the rural exodus was at its peak. Since then, as fertility levels have declined and the economy has been restructured, internal migration has continued to play an important, albeit different, role in shaping the distribution of the population across the country. This report, which is one of a series of studies of population dynamics and internal migration in different European countries, considers some of the more recent changes in the distribution of the population and in internal migration during each of the two calendar years, 1988 and 1994, at two spatial scales, provinces and municipalities.

Whilst both the natural change and residual net migration components of population change are mapped at both geographical scales, the demographic dynamism of the 'coastal' provinces is evident when contrasted, in aggregate terms, with changes taking place in the 'industrial', 'urban' and 'rural' provinces. A Webb classification demonstrates the extent to which the number of municipalities with net migration gains increased between 1988 and 1994, and a size classification suggests a shift of population expansion down the urban hierarchy.

Registration data for the two annual periods are used to examine the changes in the volume, geographical distribution and demographic structure of internal migration. Whilst it is clear that the volume of migration between municipalities in the same province has increased between 1988 and 1994 more rapidly than the migration taking place between municipalities in different provinces, the efficiency with which the latter redistributes population has declined. Spatial patterns of aggregate inter-provincial net migration, net migration rates, migration efficiencies and major flows are outlined but no evidence is found of a relationship between net migration and unemployment or density at the municipality scale.

Age variations in migration propensities and net migration balances give some indications of the variety of determinants that influence directional migration flows at different stages in the life course. The report presents the profiles of national migration rate schedules in 1988 and 1994 and examines the spatial patterns of net migration for five-year age groups. Provinces are classified according to their migration efficiencies in the two annual periods and age-specific efficiencies are examined for selected provinces to demonstrate major changes in more detail. Migration of those of working age accounts for the large majority of inter-provincial

movements and migration efficiencies of those in three broad working age groups (young, middle and older) provide a useful summary of the main patterns.

Finally, the report makes use of the information available from the registration data on place of birth as well as on place of residence before and after the move. New insights are given on the proportion of inter-provincial migration that involves return to the province of birth, the age variations in return proportions and the major flows of return migrants between provinces.

Acknowledgements

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Population Dynamics and Internal Migration in Spain

1 Introduction

This report aims to provide some new insights into recent population change and internal migration trends in Spain. It is one of a number of national case studies undertaken as part of an ESRC-funded project to develop a clearer understanding of population dynamics and internal migration in different nations of Europe. The research uses registration data for two time periods, the calendar years 1988 and 1994, to examine various aspects of population and migration change. The aims of the report are:

- to identify trends in population change that have taken place during the time periods selected;
- to demonstrate the role of net migration *vis à vis* natural change in population change at both the provincial and municipality scales;
- to examine whether there is evidence of continuing urban population concentration or whether deconcentration has begun to take place;
- to identify the patterns of longer distance (inter-provincial) internal migration and how these have changed;
- to establish what sex and age-specific variations are characteristic of inter-provincial migration;
- to investigate whether internal net migration rates show any functional relationship with unemployment rates or with population density; and
- to document the volume and pattern of return migration.

The report begins with a short review of previous work on internal migration in Spain (Chapter 2) and an introduction to the data and zone systems used in the study (Chapter 3). The remainder of the report is divided into five chapters. Changes in population and its component parts are outlined in Chapter 4 where the geographical variations are mapped and analysed. The levels, patterns and trends in aggregate or total internal migration are examined in Chapter 5 before the demographic composition of internal migration is considered in Chapter 6. An investigation of return migration is presented in Chapter 7 and some conclusions are offered finally in Chapter 8.

2 Internal Migration: The Context

According to the last population census in Spain in 1991, 46.8% of the population did not live in the municipality in which they were born and 22.9% lived in a different province from the one in which they were living ten years previously (García Coll and Puyol, 1997). Whilst population redistribution through internal migration has always been a major component of demographic change in Spain, it has altered significantly over the last thirty years in terms of its volume, geographical pattern and socio-demographic composition. Very large flows of migrants from the countryside to the large cities (especially Madrid and Barcelona) took place between the end of the Spanish Civil War and the mid-1970s, primarily involving young adults in search of jobs (García Barbancho, 1975; Puyol; 1979). Both income and employment opportunities were shown by Santillana (1981) to be important economic explanatory variables in regression models of inter-provincial migration for different years during the 1960s, along with the stock of previous migrants and the physical distance between origins and destinations. Similar determinant variables were also identified as important in explaining inter-regional migration after 1973 (Ródenas, 1994).

New patterns of internal migration emerged as the rural exodus that fuelled the growth of the major cities declined (Santillana, 1984; Cabré *et al*., 1985). A reduction in longer distance, inter-provincial migration occurred at the same time that an increase in shorter distance, intra-provincial movement took place. Industrial provinces with traditionally large net in-migration balances subsequently became areas of net loss (e.g. Barcelona and Vizcaya) or of only marginal net gain (e.g. Madrid and Valencia) in the 1980s, and some of the traditional rural provinces experienced positive net migration, due in part to the return of former out-migrants. The total numbers of those moving aged over 10 years within Spain in each of the decades between the censuses of 1960 and 1991 remained above 4 million but the migration between provinces that was predominant in 1960-70 (57% of total movement) accounted for only 39% of total movement in the 1981-91 period (Stillwell and García Coll, 2000). The overall relationship between rates of population change and net migration changed very significantly between 1960-70 and 1981-91 with a transition from a situation where the majority of provinces had negative net migration rates and where there were only a few cases of relatively high positive rates (in Barcelona, Madrid, Valencia and Vizcaya), to a situation in which the provinces were increasingly similar in terms of their net migration and population change characteristics. Bentolila and Dolado (1991) have argued that the fall in inter-regional

migration during the late 1970s and early 1980s occurred at a time when wage differentials were in decline but, more significantly, regional unemployment differences were increasing. Bentolila and Blanchard (1990) suggest that the increase in overall unemployment was a key factor in reducing the level of labour migration.

In 1975, Spanish industry was still concentrated geographically. Barcelona had 21.7% of industrial employment, Madrid had 12%, Valencia, 6.5% and Vizcaya, 5.4% (Méndez and Caravaca, 1997). These provinces with concentrations of industry recorded high positive net migration balances. Barcelona and Madrid were clearly the main centres of attraction whilst other provinces with positive net migration aligned around two axes: the Mediterranean axis (along the east coast from the French border to Alicante and including the Balearic archipelago) and the Ebro axis (running diagonally between Catalunya and the País Vasco, following the Ebro river valley). During 1970-81, the pattern of net inter-provincial flows of migration was dominated by 'primary' flows of over 15,000 migrants from provinces in central and southern Spain to Barcelona and Madrid (García Coll and Stillwell, 1998).

The focus of aggregate net migration gain at the provincial scale that was concentrated on the major cities in the 1970s transferred to the Mediterranean coast in the 1980s (García Coll and Stillwell, 1999), in parallel with a progressive displacement of the economic centre of gravity in the same direction as labour markets were transformed by a series of economic, technological, socio-demographic and institutional factors. By 1981-91, the pattern of provincial net migration had become more uniform, with the disappearance of the more extreme balances. According to the 1991 Census, twenty-seven out of fifty provinces recorded positive net migration between 1981 and 1991, consolidating growth along the Mediterranean and the Ebro axes (García Coll and Stillwell, 1999). At the regional scale, the traditionally poor regions with high unemployment (Andalucía and Extremadura) became regions of net migration gain, whereas the regions of Madrid and Catalunya recorded net migration losses. Transition from an industrial economy to a post-industrial, service-based economy with tourism important as a key growth sector, was accompanied by transition to a more liberal, open and international economy as a result of entry into the European Community in 1985. The processes of tertiarisation led to inter-sectoral and inter-occupational transfers of jobs that created new spatial divisions of labour (Méndez and Caravaca, 1997). Economic crisis in the early 1980s was followed by rapid growth in the late 1980s when the economy was very dynamic, growing at 4 to 5% per year between 1987 and 1990, driven by increases in domestic demand due to real increases in incomes, greater employment and increased consumer credit.

The expansion of the service sector continued in the late 1980s so that by 1990, it was responsible for almost 50% of jobs (43% in 1985) whilst agriculture had 11.8% (16.5% in 1985), industry 21.8% (23% in 1985) and construction 9.3% (8.9% in 1985). Prosperity was followed by recession in the early 1990s, with unemployment rising from a low in 1990 of 2.5 million or 16.7% of the labour force. The early 1990s were difficult years, causing the Socialist Government under Felipe Gonzalez to undertake successive devaluations of the currency, but after 1994, GDP per capita grew by 4% per year for four years, employment increased and unemployment fell from almost 25% in 1994 as employers and unions recognised the need for modernisation (Hugh-Jones, 2000).

Clearly, industrial restructuring, as documented by Méndez and Caravaca (1997), has impacted on migration propensities and patterns across the country, but it is important to acknowledge that the expansion of the welfare state and the creation of new autonomous regional governments have also influenced migration (Bernabé and Albertos, 1986). Furthermore, the emergence of return migration to the south (Romero and Albertos, 1996) has contributed to the reversal of fortunes in certain rural areas and the migration flows of the elderly present a further dimension to the complex picture of internal migration in Spain in the early 1990s.

It is against this background that we examine the trends in population change and internal migration. However, before we embark on this analysis, it is necessary to indicate the sources and characteristics of the data sets that have been used, to explain the reasons for the choice of time periods and to outline the geographical areas at different spatial scales to which the analysis refers.

3 Time Periods, Data Sources and Spatial Frameworks

3.1 Time Periods and Data Sources

We have chosen 1988 and 1994 calendar years as the two time periods in which to analyse the dynamics of population and internal migration in Spain. The reasons for this are associated with the reliability and consistency of population and migration data sets that are available from the *Instituto Nacional de Estadística* (INE), as will be explained in this section of the report. Although Spain maintains a population registration system, it also conducts population censuses at the beginning of each decade and a *Padrón Municipal de Habitantes* (PMH) is undertaken every five years (most recently in 1996). Until 1986, the *padrón* included questions similar to those asked in the census and thus provided data on migration flows over five year periods. However, since 1991, the *padrón* questionnaire has been slimmed down to include questions on only the most basic topics and the migration questions have been eliminated altogether.

Annual sub-national population counts are published each year by the INE but these estimates do not always refer to the same date. The INE produces 1 January estimates of population by sex except for those years in which there was a census or *padrón*, when the population updating refers to a date later in the year, e.g. 1 March in 1991 and 1 May in 1996. One of the main reasons for our selection of 1988 and 1994 as the two years for analysis is because the population counts all relate to equivalent beginning and end of period dates, i.e. 1 January in 1988 and 1989, and in 1994 and 1995 (INE, 1989; 1990; 1995; 1996a), allowing a consistent comparison between population change in calendar year 1988 with that in 1994. Although migration data for calendar year 1995 were available, they were not used because the initial population estimates for 1996 referred to 1 May and not 1 January.

One limitation associated with the population data is the absence of population counts disaggregated by age that would allow the computation of age-specific migration rates although it is possible to estimate these rates using age data from the 1991 Census and from the 1996 *Padrón*. The problem of the lack of age-specific population data is an important reason why previous researchers have used migration data aggregated over five year periods. Pujadas *et al.* (1995), for example, compute migration rates for the five-year period, 1986-90, using the average of age-specific populations in 1986 and 1991. In order to compute age-specific rates, we have used the INE yearly interpolated population estimates between the 1981 and 1991 Censuses (INE, 1994c). Using the 1991 Census, INE has forecast population by five-year age

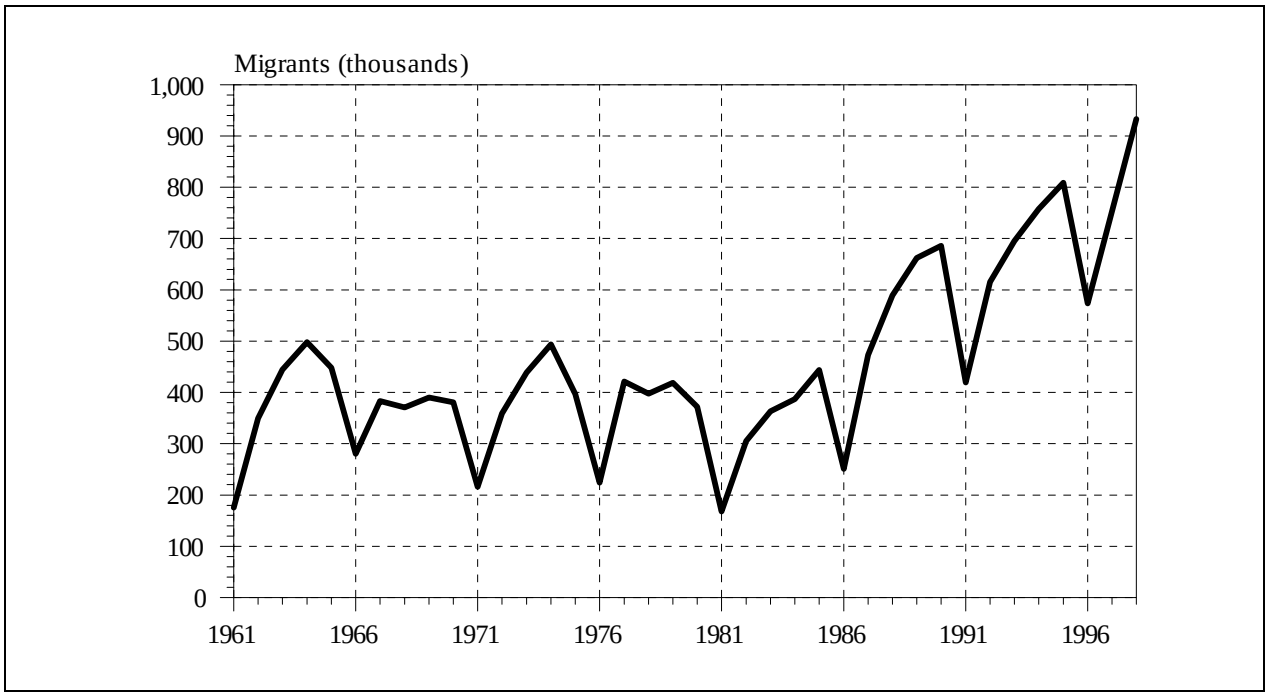
group and sex to 2005 (INE, 1996b). The results of these forecasts show a reasonable level of correlation when compared with real populations in 1994.

There are several sources of data on internal migration in Spain. One of the most important of these is the population census which, in 1991, provided information about place of usual residence ten years, five years and one year previously. García Coll and Stillwell (1999, 2000) have used data from consecutive censuses to examine time series migration trends for three intercensal periods. The 1991 Census was the first in Spain for which all data were computerised and two files of anonymised records were produced, a 2% sample for use at the national scale and a 10% sample for provincial scale analysis. One important advantage of the 10% sample, which has been used for detailed analysis of internal migration in the 1980s by García Coll (1998), is that it can be used to identify out-migration as well as in-migration flows disaggregated by various socio-economic and demographic characteristics. The sporadic timing of the population census is clearly a disadvantage to this data source and, until the 2001 Census results appear, it will not possible to compare recent migration patterns with those shown by the previous census.

An alternative source of migration data is the Residential Variations Statistics or *Estadísticas de Variaciones Residenciales* (EVR). The EVR are the counts obtained from a continuous register of changes of residence between municipalities managed by the INE. Registration data has been provided annually since 1961. In theory, all changes of residence occurring between municipalities should be recorded. This registration data is 'movement' data and differs conceptually from census 'transition' data in that it contains every move that an individual makes, rather than a count of those persons involved in migration over a specified time period. Problems of under-registration were apparent before 1987 with the EVR but since then the registration system has been improved with computerisation and higher levels of registration have been achieved. Previous research by Camarero (1993), Pujadas *et al.* (1995) and Cardelús *et al.* (1999) has shown the utility of this data source for monitoring migration. The EVR data provide little by way of disaggregation other than age and sex, but do record the birth municipality as well as the origin municipality and the destination municipality of each registration. One of the problems associated with the EVR is that the number of registrations tends to be much lower in those years that coincide with a census (1960, 1970, 1981, 1991) or a *padrón* (1965, 1975, 1986, 1996) as indicated by Pujadas *et al.* (1995). This occurs because, during the fieldwork for the census or *padrón*, it is less essential for the latest migration arrivals

to register again with the municipality. Thus, the time series of annual registrations dips in the respective years (Figure 1) and the EVR data become less reliable accordingly.

Figure 1: Annual EVR registration counts, 1961-1998



Source: Updated from Pujadas et al. (1995)

Thus, our choice to focus the analysis of migration on 1988 and 1994 as the initial and final time periods also reflects the fact that 1988 was the first year for which computerised data on individual registrations were available and 1994 was the most recent year for which comparable data were available when the project commenced. The data file for 1988 included 589,087 records of internal migration whilst the file for 1994 included 757,448 internal moves. The variables available from the EVR data that are consistent for 1988 and 1994 are as follows:

- sex (male coded 1; female coded 6);
- age (single year of age coded 000-110);
- province of origin (coded 00-52 plus code for abroad);
- municipality of origin (coded 1001 to 52001 plus code for abroad);
- province of destination (coded 00-52 plus code for abroad);
- municipality of destination (coded 1001-52001 plus code for abroad);
- province of birth (coded 00-52 plus code for abroad);
- municipality of birth (coded 1001-52001 plus code for abroad);

- level of education (1 = illiterate, 2 = primary education unfinished, 3 = primary education finished, 4 = secondary and further/higher education)

Although 94 categories of level of education were available in 1988, only the four categories indicated above were distinguished in 1994. The aggregation of secondary with further and higher education limits the value of this variable and consequently it has not been used in the report.

In addition to the unpublished municipality files containing EVR data, the INE publishes various sets of aggregated EVR data in its *Migraciones* series (INE annual), including:

(a) gross in-migration and out-migration by sex for inter-provincial and intra-provincial (between municipalities) movement;
(b) gross in-migration and out-migration by broad age groups (less than 16, 16-24, 25-34, 35-44, 45-54,55-64, 65+);
(a) immigration by sex and ethnicity (Spanish or non-Spanish); and
(b) emigration (to Europe or to elsewhere).

Although the immigration statistics appear to contain reasonable counts, the emigration counts are very low because international out-migration is not picked up by the register. INE also publishes aggregate flows of migration between the 50 provinces in its *Migraciones* series. Each matrix of inter-provincial flows contains a diagonal element that refers to a count of the migrations between municipalities located within each province.

Other data sets used in the report include births and deaths statistics and unemployment data. The births and deaths vital statistics for 1988 and 1994 (INE, 1992; 1997) enable natural change to be calculated, and by subtracting natural change from population change, a residual net migration component can be estimated. The only data available on economic activity of the population at the municipality scale come from the 1991 Census. These data include total economically active, employed and unemployed persons at census date (1 March 1991) (INE, 1994). Rates of unemployment are computed as unemployed persons expressed as a percentage of the total employed and unemployed.

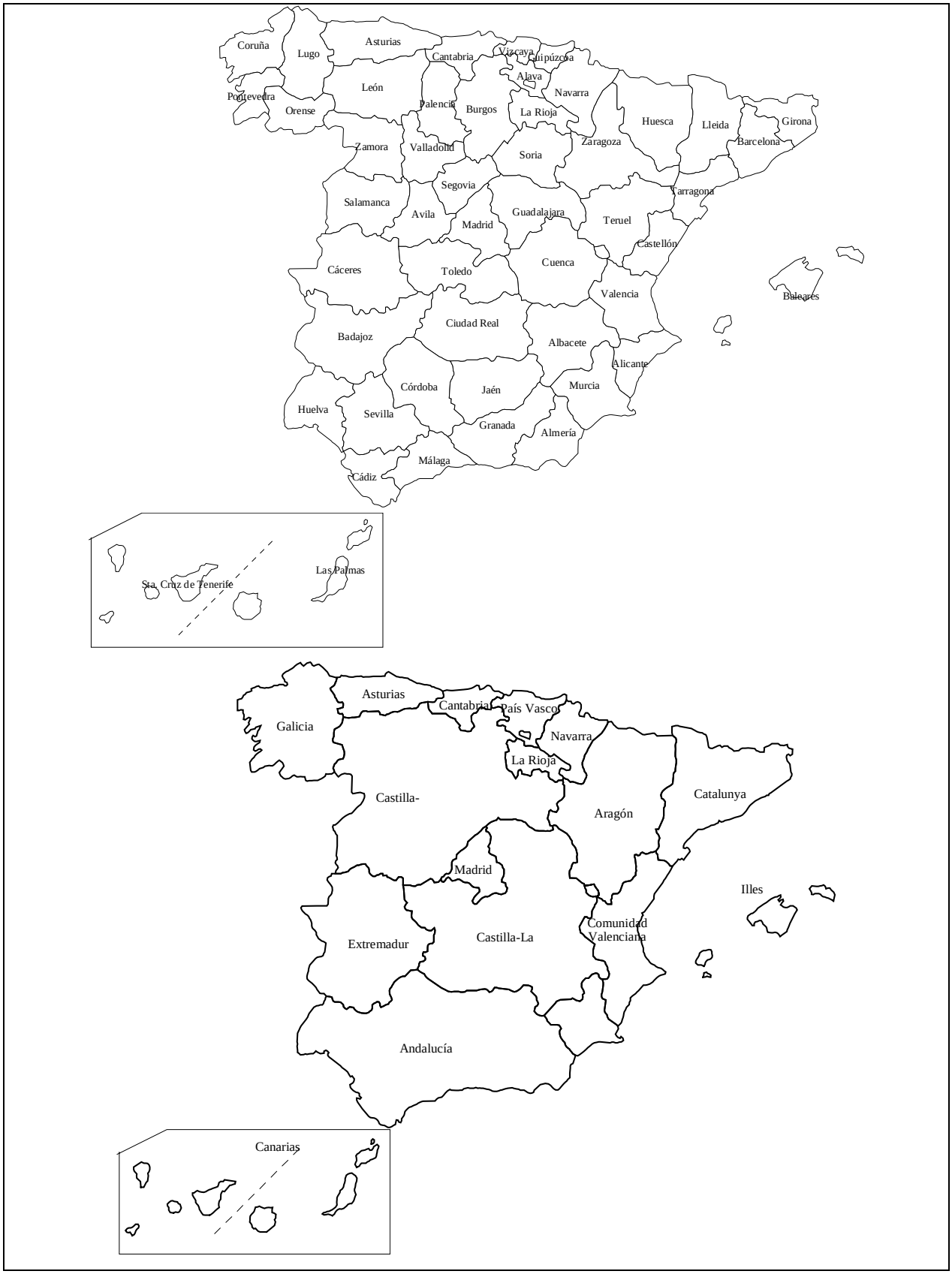
3.2 Spatial Frameworks

As in the other large EU countries, Spain has a hierarchy of administrative boundaries that constitute the NUTS regions. At NUTS level 1, there are seven regions that are groups of the 17 autonomous communities (*comunidades autónomas*) that comprise the set of NUTS 2 regions (Figure 2) together with Ceuta and Melilla, the two small Spanish overseas territories in North Africa.

The NUTS 3 regions are equivalent to the 50 mainland and island *provincias* or provinces shown also in Figure 2. It is these geographical areas, together with municipalities or *municipios* that are used in the analysis reported in this project. Spain's municipalities are equivalent to NUTS level 5 zones. There are over 8,000 of them, providing a very detailed geographical coverage. Each municipality has a unique code and name but problems have arisen because (a) many of the municipalities in Baleares, Catalunya, Galicia, País Valenciano and the País Vasco changed their names between 1988 and 1995, adapting them to their own regional languages, and (b) the number of municipalities has changed from year to year. INE data were available for 8,094 municipalities in 1995 with assigned four or five digit codes. However, 36 new municipalities were created between 1988 and 1995 (Table 1) and five disappeared. Thus, in the province of Vizcaya, for example, the municipality of Baliarrain was separated from the old municipality of Iruerrieta in 1989; and in the province of Málaga, Torremolinos municipality was created as a separate entity from Málaga municipality. Three new municipalities had appeared in 1989, 21 in 1991, another seven in 1994 and five more in 1995; data are available for each of the 'new' municipalities for years following their creation as indicated in the Table 1.

The populations of these new municipalities are sometimes quite large (e.g. Torremolinos, Salou, Tres Cantos, Badia) and, in order to ensure geographical consistency between 1 January 1988 and 1995, data for these new municipalities have been re-aggregated with data for the old municipalities to which they belonged in 1988. In the case of Badia, which was created from two municipalities, Barberà del Vallès and Cerdanyola del Vallès, the 1995 population, births and deaths data were reallocated to the two municipalities in proportion to their original populations. A number of small municipalities without populations were found in the boundary data and these were merged with one of their neighbouring areas producing a set of 8,057 spatial units, each of which had a population in 1988 and in 1995 (Figure 3).

Figure 2: Spain's provinces and *comunidades autónomas*



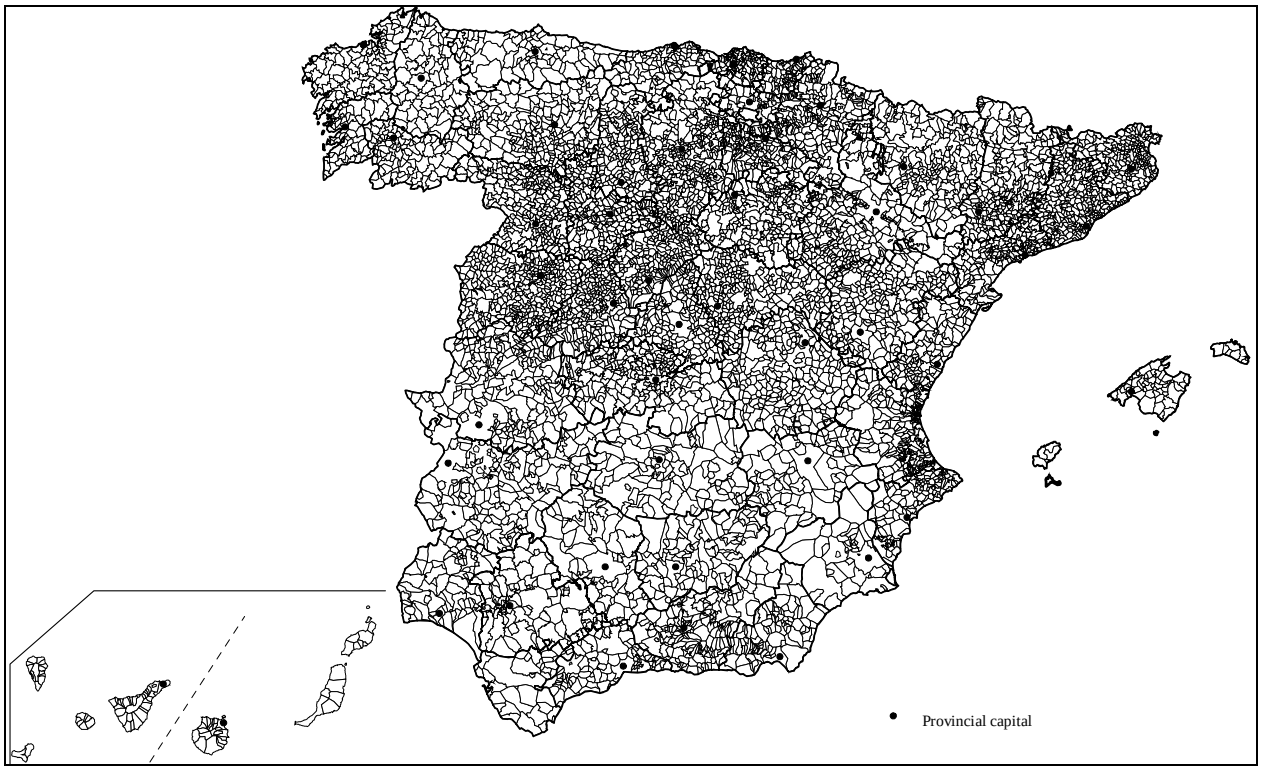
The five municipalities that disappeared were aggregated with another municipality or, in one case, with two municipalities. In Burgos, Villorobe became part of Villasur de los Herreros; in Girona, Palmerola joined Les Llosses; in Guadalajara, Alcorlo joined La Toba and Torrecilla de Duracado became part of Sienes; and in Léon, Fresnedo was aggregated partly with Cubillos del Sil and partly with Toreno. The municipality data include counts for Ceuta and Melilla.

Table 1: Municipalities created between 1988 and 1995

New municipality	1995 Population	Province	Municipality	First year for which data available
Baliarrain	97	Vizcaya	Iruerrieta	1989
Torremolinos	33,005	Málaga	Málaga	1989
Cariño	5,558	La Coruña	Ortiguera	1989
Orendain	92	Vizcaya	Irruerrieta	1991
Los Montesinos	2,393	Alicante	Almoradi	1991
Es Migjorn Gran	1,074	Baleares	Es Mercadal	1991
Sant Joan de Moró	17	Castellón	Villafames	1991
Ruidera	610	Ciudad Real	Argamasilla	1991
Altzaga	92	Guipúzcoa	Itsasondo	1991
Vencillón	509	Huesca	Esplus	1991
Cuevos de Provanco	253	Segovia	Sacramenia	1991
L'Ampolla	1,700	Tarragona	El Perelló	1991
Salou	10,359	Tarragona	Vila-seca i Salou	1991
Ajagiz	377	Vizcaya	Gernika-Lumo	1991
Alonsotegi	3,044	Vizcaya	Barakaldo	1991
Iurreta	4,731	Vizcaya	Durango	1991
Benalup	6,127	Cádiz	Medina-Sidonia	1991
Tres Cantos	24,555	Madrid	Colmenar Viejo	1991
Berrioplano	961	Navarra	Ansoain	1991
Berriozar	5,507	Navarra	Ansoain	1991
Irurtzun	2,043	Navarra	Arakil	1991
Beriáin	2,260	Navarra	Galar	1991
Orcoyen	1,217	Navarra	Olza	1991
Zizur Mayor	7,152	Navarra	Cizur	1991
Arratzu	395	Vizcaya	Gernika-Lumo	1994
Sant Julià de Cerdanya	222	Barcelona	Guardiola de Berguedà	1994
El Cuervo de Sevilla	7,504	Sevilla	Lebrija	1994
San Isidro	1,185	Alicante	Albatera	1994
Villanueva de Ávila	620	Ávila	Navaltargordo	1994
Valdelacalzada	2,533	Badajoz	Badajoz	1994
Gimenells i el Pla de la Font	1,191	Lleida	Alpicat	1994
Burela	7,834	Lugo	Cervo	1995
Badia	17,927	Barcelona	Barberà del Vallès and Cerdanyola del Vallès	1995
Rosalejo	2,025	Cáceres	Talayuela	1995
Gaztelu	143	Guipúzcoa	Leaburu-Gaztelu	1995
Villafranco de Guadalquivir	6,032	Sevilla	La Puebla del Rio	1995

Sources: INE (1994a, 1998)

Figure 3: Spain's municipalities and provincial capitals in 1995



4 Population Dynamics

In this section of the report, we use population and vital statistics data to address the following research questions:

- What are the spatial patterns of population change and its components?
- To what extent is population change explained by either natural change or net migration?
- To what extent is population change leading to increasing concentration or towards deconcentration to residential areas around cities and to urban areas lower down the urban hierarchy?

Published data on population, births and deaths registration data for provinces and municipalities are used to examine population distribution (Section 4.1), population change in 1988-94, 1988 and 1994 (Section 4.2), natural change (Section 4.3), residual net migration (Section 4.4) and the relationship between population change, natural change and net migration in 1988 and 1994 (Section 4.5). In the final section (4.6), we classify municipalities according to their population size and examine the changes occurring in different types of area.

4.1 Population Distribution

According to INE (1995), Spain's population on 1 January 1995 numbered 40,460,055, of whom nearly 138,000 were living in the overseas territories of Ceuta and Melilla. The addition of 1.24 million people since January 1988 represents a rate of increase of 3.1% over the seven-year period, an annual average growth of 0.44%, with rates of 0.83% during 1988 and 0.57% in 1994. The national population growth rate has slowed as fertility has fallen progressively since 1981 (Gil and Cabré, 1997; Delgado and Castro, 1998) and immigration has remained low because of very restrictive immigration laws (Izquierdo, 1997).

The distribution of the population between provinces is very uneven, with Madrid and Barcelona each having around five million inhabitants compared with the Ávila, Guadalajara, Segovia, Soria and Teruel, all of which have less than 100,000 residents. Table 2 indicates the population shares of the 11 provinces with over one million inhabitants that accounted for 54.6% of the national population on 1 January 1995. Those provinces that contain the biggest cities with extensive metropolitan areas are inevitably the most populated. The large populations of Madrid, Barcelona, Bilbao and Valencia reflect the results of the country's dominant process of urbanisation over many years. Inland provinces have traditionally been the

out-migration areas whilst the coastal Mediterranean zones are the poles of in-migration. Many of the southern provinces have experienced high fertility that has offset depopulation.

Table 2: Populations and population shares, main provinces, 1995

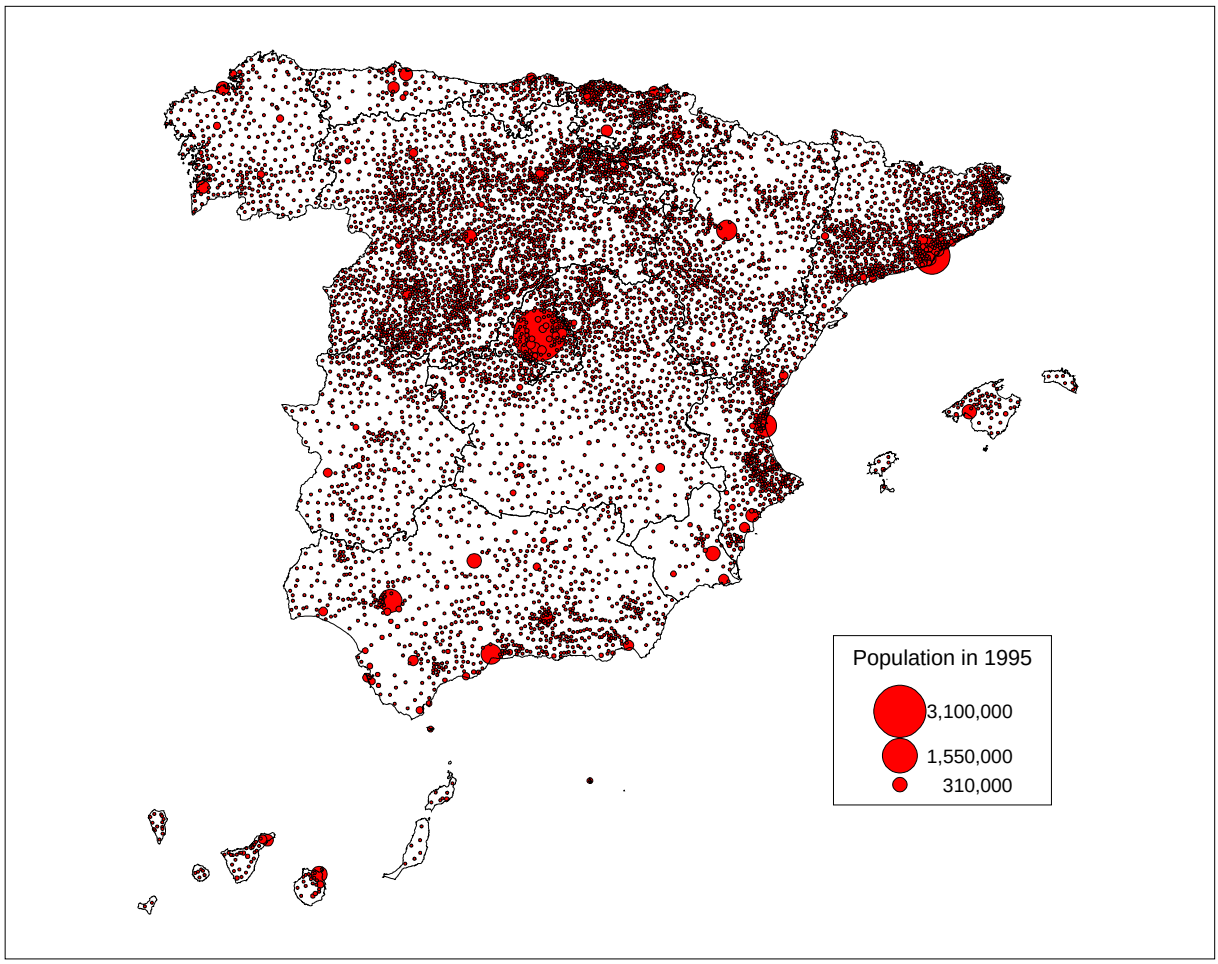
Province	1995 Number	1995 % Share
Madrid	5,181,659	12.8
Barcelona	4,748,236	11.7
Valencia	2,200,319	5.4
Sevilla	1,719,446	4.2
Alicante	1,363,785	3.4
Málaga	1,224,959	3.0
Vizcaya	1,163,726	2.9
La Coruña	1,136,283	2.8
Cádiz	1,127,622	2.8
Asturias	1,117,370	2.8
Murcia	1,109,977	2.7
Rest of Spain	18,366,673	45.4

Source: INE (1989, 1995)

The pattern of population distribution in 1995 (Figure 4) is influenced by the different sizes of the municipalities that, for historical reasons (Vinuesa, 1995), are smaller in the north and bigger in the south. The distribution of the population by municipality indicates the primate nature of the cities of Madrid and Barcelona, the coastal location of many of the second and third order cities (such as Valencia, Sevilla, Málaga, Las Palmas de Gran Canaria and Bilbao), the more densely populated areas of the north central and north eastern parts of the country, the clusters of population concentration on the Mediterranean and Atlantic coasts and the relatively sparsely populated southern interior. Some of the large cities have metropolitan areas that grew rapidly during the late 1960s and early 1970s, as a result of suburbanisation following the huge waves of in-migration to their inner areas during the 1950s and 1960s. Suburbanisation continued in the 1980s and 1990s (García Coll and Sánchez Aguilera, 1997) and has resulted in high population densities in these areas. The provincial capitals (such as Cádiz, Oviedo, Alicante, Palma de Mallorca and Murcia) and some of the industrial cities (such as Gijón, Vigo and Elche) contain major concentrations of their respective provincial populations because of the in-movement from surrounding smaller villages during the rural exodus as people sought better services and standards of living. The provincial capitals thus play a significant role in the urban structure of the country. The population distribution in 1995 is also the result of past

migration flows from places in the interior to areas on the Mediterranean coast and to the islands.

Figure 4: Municipality populations, 1 January, 1995



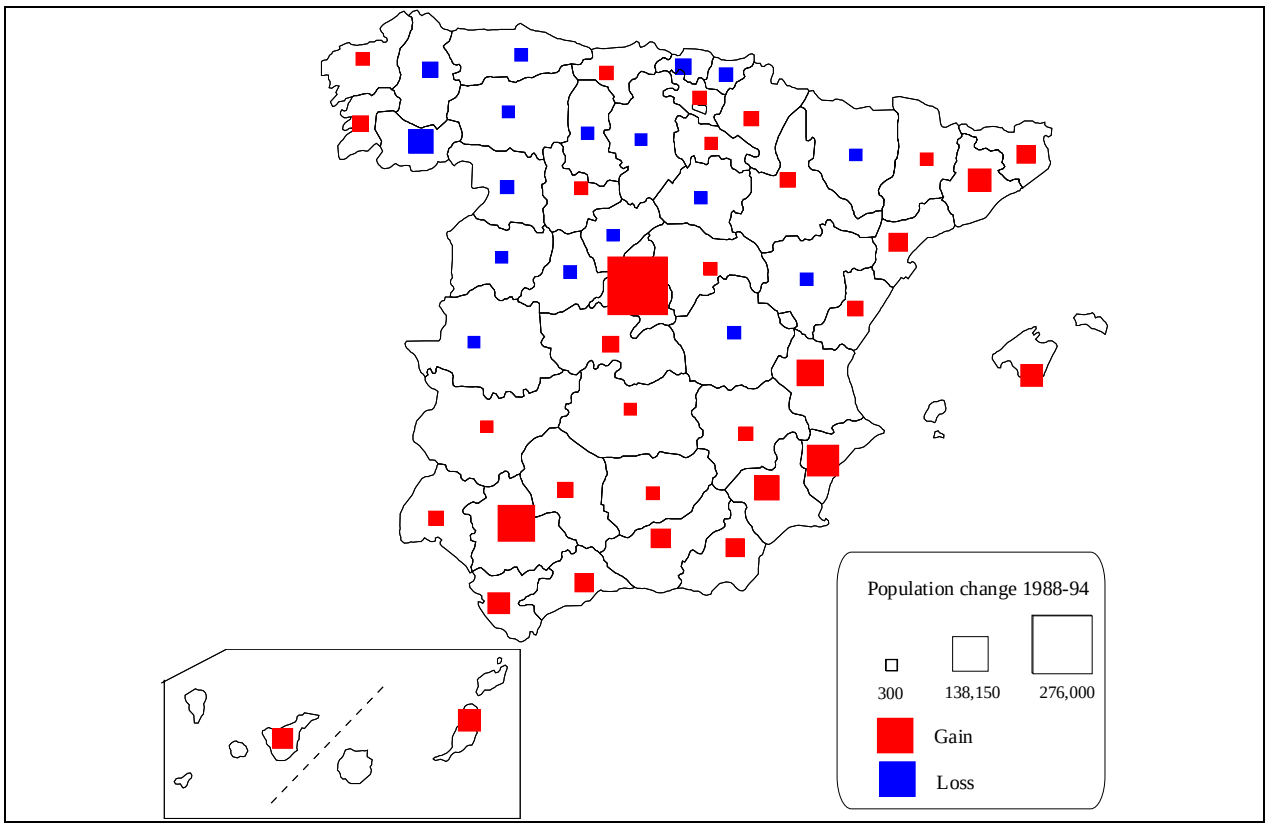
Source: INE (1995)

4.2 Population Change

The growth of Spain's population between the beginning of 1988 and the end of 1994 did not occur evenly across the country. In fact, seventeen provinces experienced population decline during the period, the largest fall occurring in Orense in the north west (Figure 5). Madrid dominates the map of population gain followed by Sevilla but there is a very clear pattern of population increase in each of the provinces along the whole of the Mediterranean littoral from Girona to Huelva, and in the three provinces of the island archipelagos. Moderate but positive population increases have occurred in the Ebro axis (Zaragoza, Navarra and Álava) and in Toledo and Guadalajara.

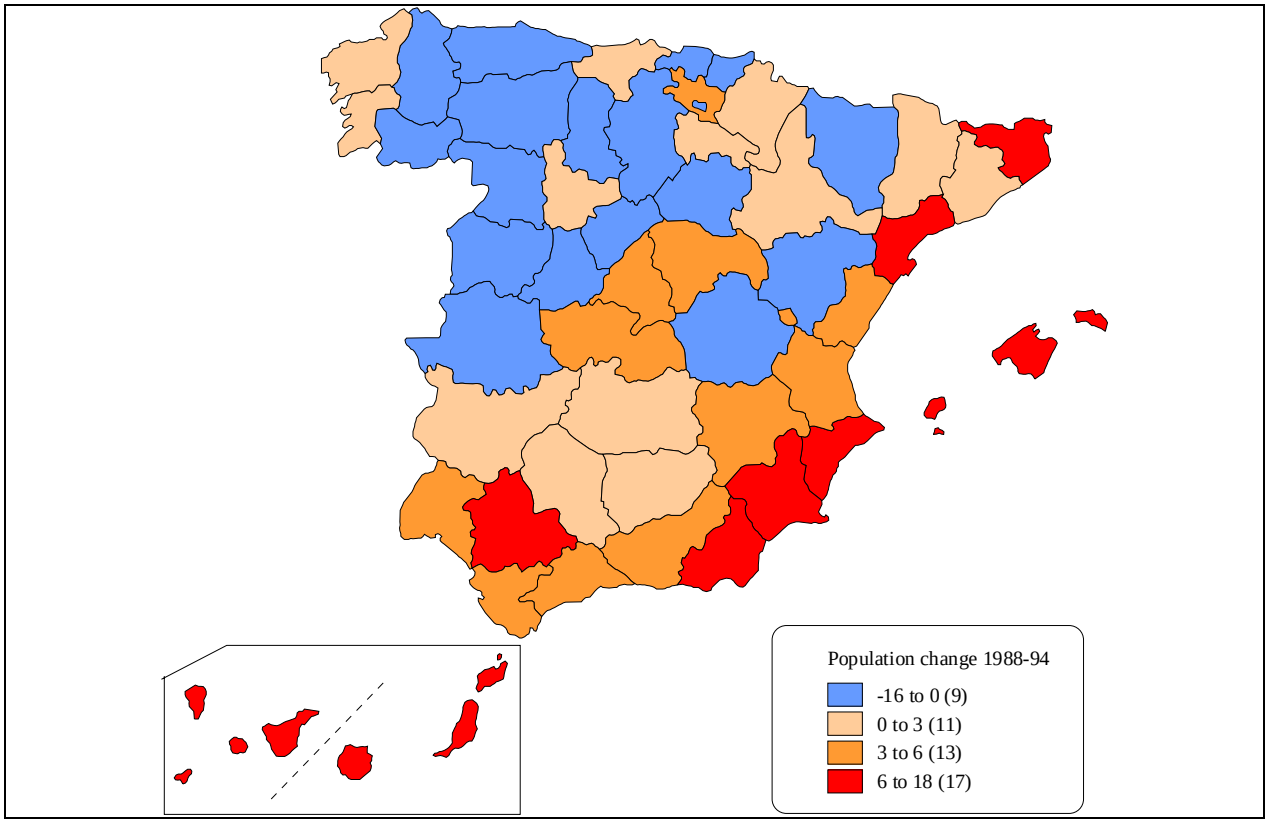
When change during the period is expressed as a percentage of the population on 1 January 1988 (Figure 6), Madrid's rate of increase (5.5%) was of a similar magnitude to that of two of its neighbouring provinces, Guadalajara (5.4%) and Toledo (4.9%), whereas the highest growth rates occurred in the islands, Sevilla, Almería, Alicante, Murcia, Tarragona and Girona, all of which have growth rates between 6% and 9%. Alicante was the province with the fastest rate of growth (8.8%), involving an addition of nearly 115,000 people, whereas the population of the province of Orense, at the other end of the spectrum, fell dramatically by over 71,000 or 17.8%. Orense's decline was exceptional, with Lugo (5.4%), being the only other province to have a rate of decline in excess of 5%. Figure 6 shows how provinces in the south and east of the country experienced increases in their populations whilst several of those in the north and west (not Valladolid, Cantabria or provinces in the Ebro axis and coastal Galicia) experienced population decreases. The areas of population increase include the economically developed areas (those with positive net migration) and the provinces with highest fertility rates.

Figure 5: Population change by province, 1988-94



Source: INE (1989, 1995)

Figure 6: Population change rate by province, 1988-94



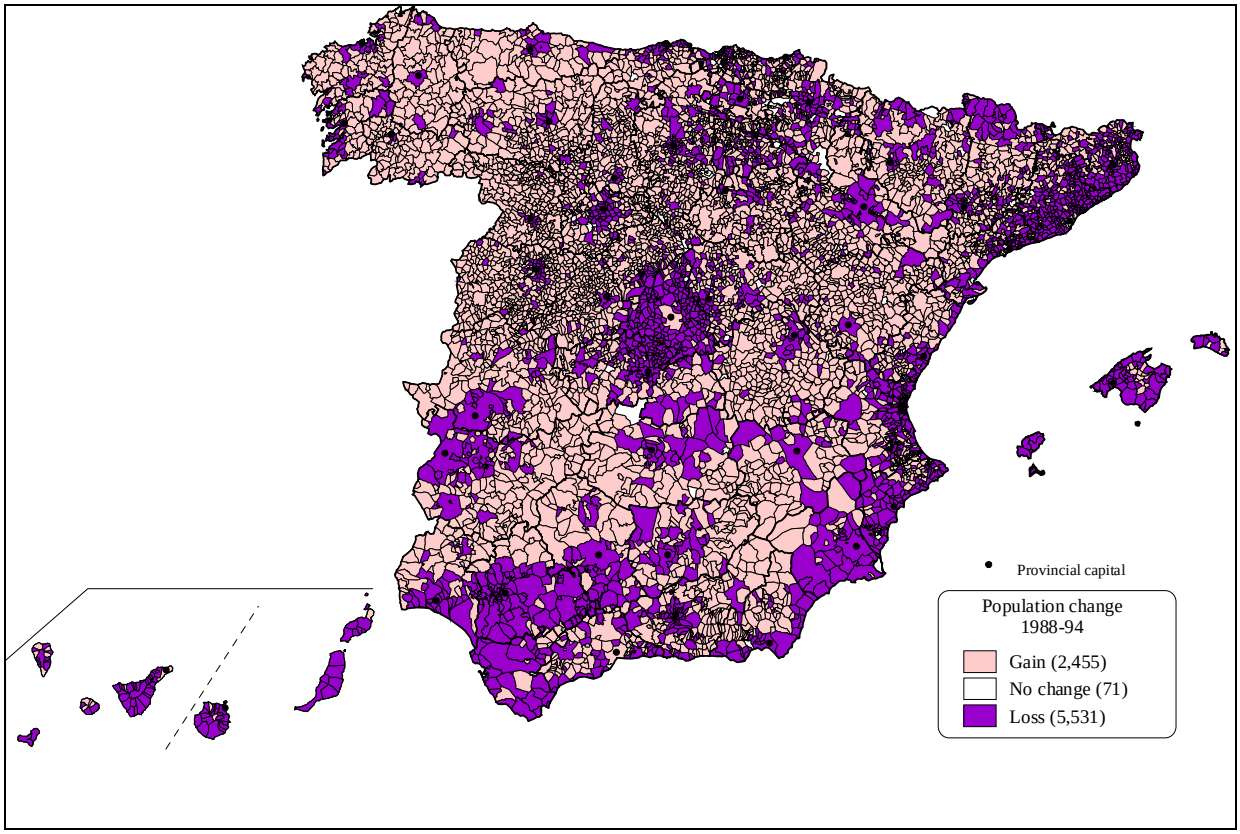
Source: INE (1989, 1995)

The distribution of population gains and losses at the local or municipality level (Figure 7) presents a much more complex pattern to disentangle, with no single province experiencing uniform change within its boundaries. Madrid and Barcelona provinces both have core city municipalities where population declines have taken place, whilst several of the coastal provinces, growing fast in aggregate terms, have large areas characterised by population decline. The municipalities of Madrid and Barcelona are losing population while their surrounding municipalities are growing, even beyond the provincial boundaries. Suburbanisation processes are taking place in many of the provincial capitals (like Málaga, Valladolid, Sevilla and Santander) although the central cities are still gaining population (except Málaga). Thus, we observe that in many provinces it is only the capital city municipalities, some municipalities close to the core municipalities and some isolated municipalities that are gaining population whilst the majority of the municipalities are experiencing population decline. Much of the population growth between 1988 and 1994 has taken place in municipalities along the Mediterranean coast, within the Ebro axis, and in western Andalucía. The distinctive pattern of gains in coastal areas and losses in non-coastal areas can be found Tarragona and Castellón, and even in Pontevedra. Exceptions to the general pattern of growth occur in the north of the provinces of Lleida and Huesca, where the

populations of several Pyrenean municipalities are increasing due largely to the development of winter sports tourism.

In conclusion, it is clear that low population gains are territorially polarised. In fact, across the whole of the country, 68.7% of municipalities recorded a population decline compared with 30.5% in which there was population increase, with 71 municipalities out of 8,057 having the same populations on 1 January in 1988 and 1995.

Figure 7: Municipalities gaining or losing population, 1988-94



Source: INE (1989, 1995)

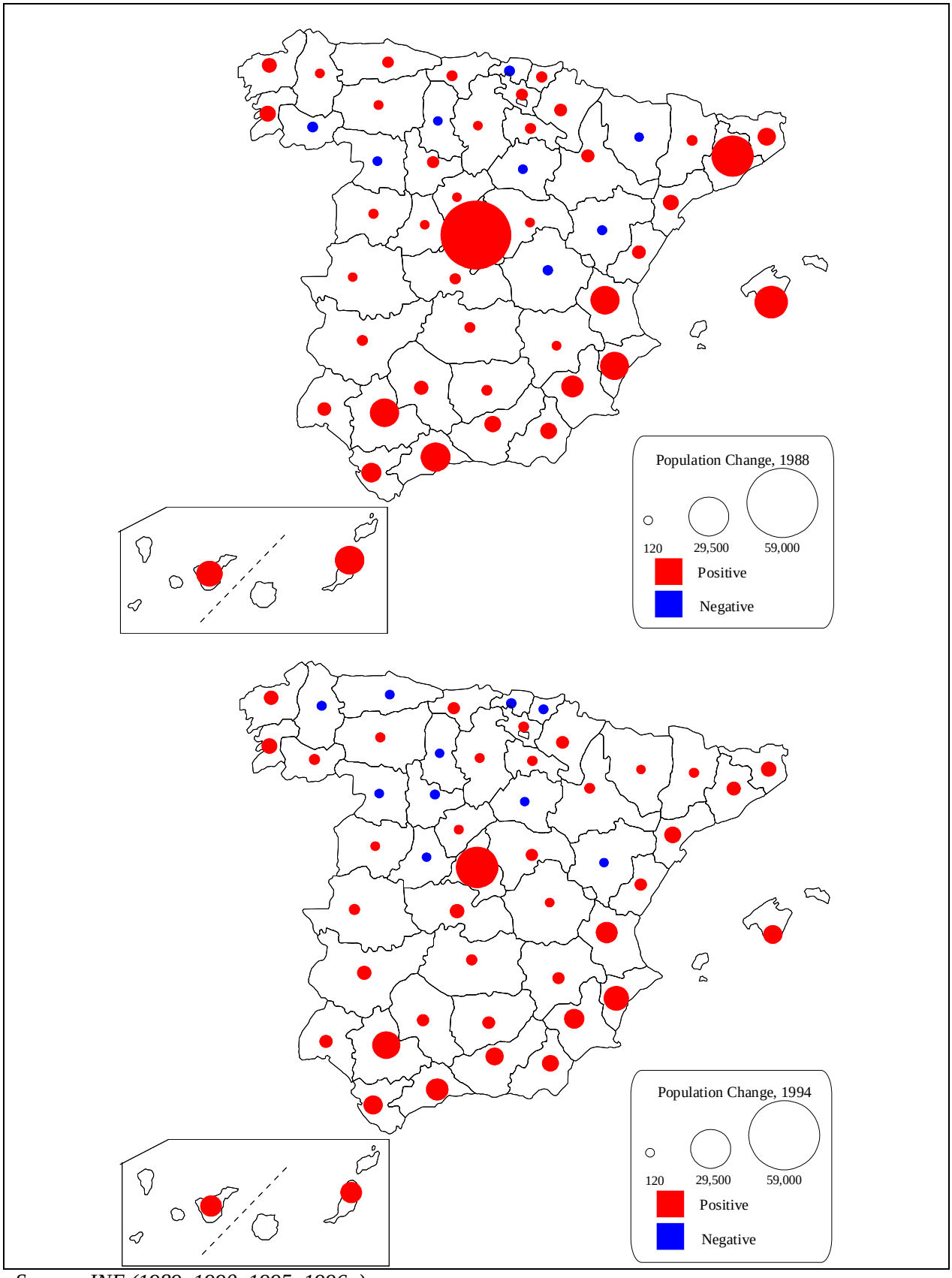
What changes have taken place in the spatial patterns of population change between the years at the start and end of this seven year period? At the provincial scale, the distribution of population gains in 1994 was similar to that in 1988, but the absolute changes were smaller, particularly so in Madrid and Barcelona (Figure 8). Total changes tend to be smaller in 1994 with the exception of Guadalajara, Toledo, Badajoz and Cantabria. Orense, despite its massive losses over 1988-94, had population growth in 1994, as did Huesca. The opposite situation occurred in Lugo, Asturias, Valladolid and Guipúzcoa. In 1988, it was the three islands provinces that had the highest rates of growth of over 2% in each case (Figure 9) whereas, by

1994, the highest rate of growth occurred in Gudalajara (1.8%). In general, changes between 1988 and 1994 tend to suggest an axis of population decline located in the northern provinces (from Guipúzcoa to Lugo), with the exception of Cantabria. Valladolid and Ávila are other examples of provinces that are losing population like Palencia and Zamora in the north west. In fact, the number of provinces with population decline increased between 1988 and 1994. Population changes in provinces in the south, in the islands and in the Mediterranean axis all remain positive but the highest rate of growth in 1994 is in Guadalajara. The provinces surrounding Madrid increase their rates, except Ávila, as do the provinces situated at the western end of the Ebro axis (like Navarra, La Rioja and Álava). In order to understand fully these population changes, it is necessary to undertake an analysis of the components of provincial population change. We return to this in the next section.

At the municipality level, despite a lower rate of growth overall, the incidence of population gain was, paradoxically, much more widespread in 1994 than it was in 1988 (Figure 10). In comparison with 1988 when 36.1% of municipalities gained and 57.2% lost inhabitants, the proportions of municipalities in 1994 that showed population increases and declines were approximately the same (46.8%). Thus, although population growth was slower in the year at the end of the period than it was in the year at the beginning, its spread across the country was more extensive.

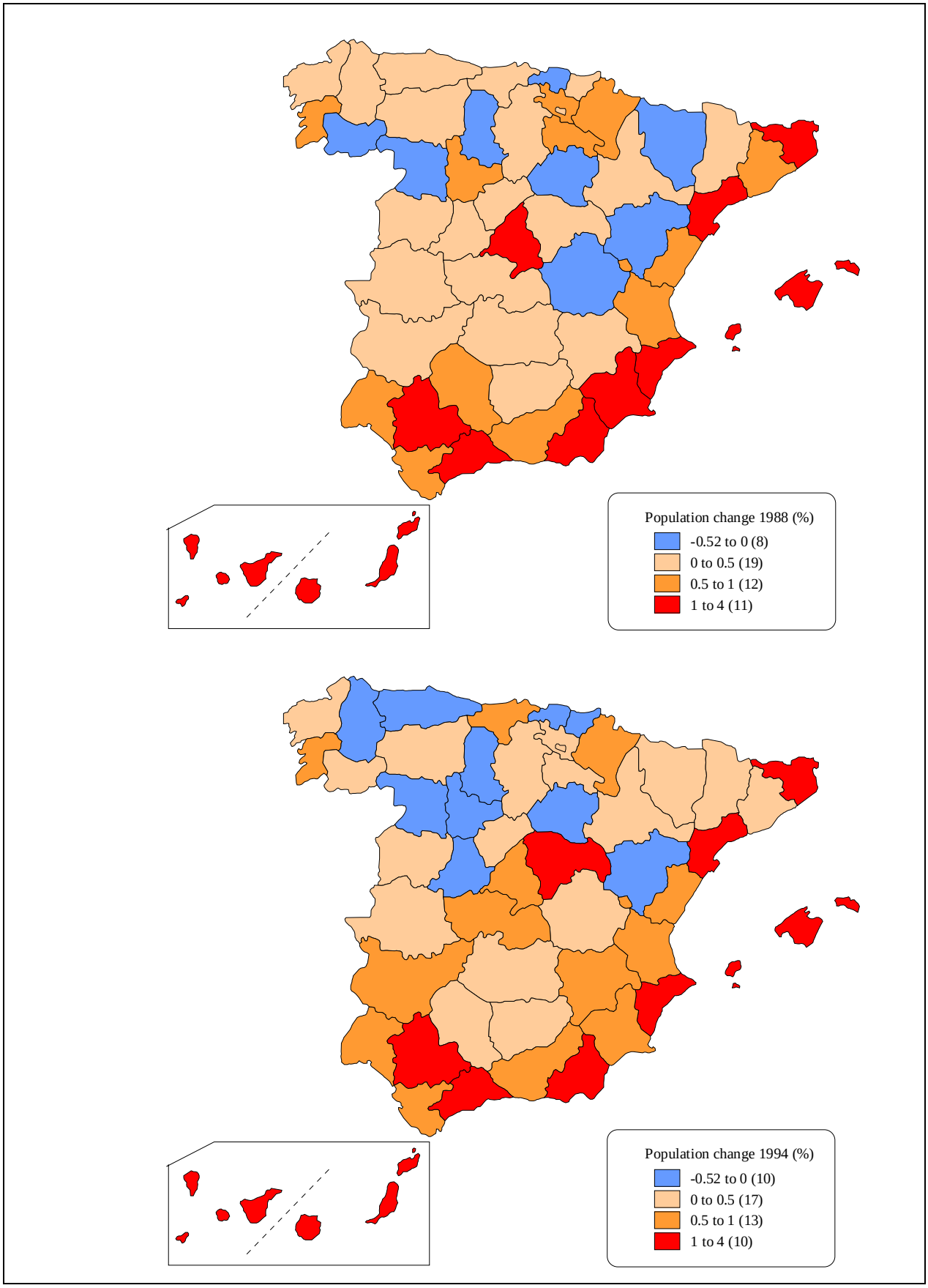
One of the most significant changes involved the expansion of Madrid's area of influence into Toledo and Guadalajara and, to a lesser extent, into Cuenca, Ávila and Segovia. The number of municipalities gaining population increased in Andalucía (particularly in provinces like Jaén and Granada) where most of the municipalities experienced growth. Burgos and Pontevedra had a similar tendency but there is still a widespread heterogeneity in these provinces.

Figure 8: Population change by province, 1988 and 1994



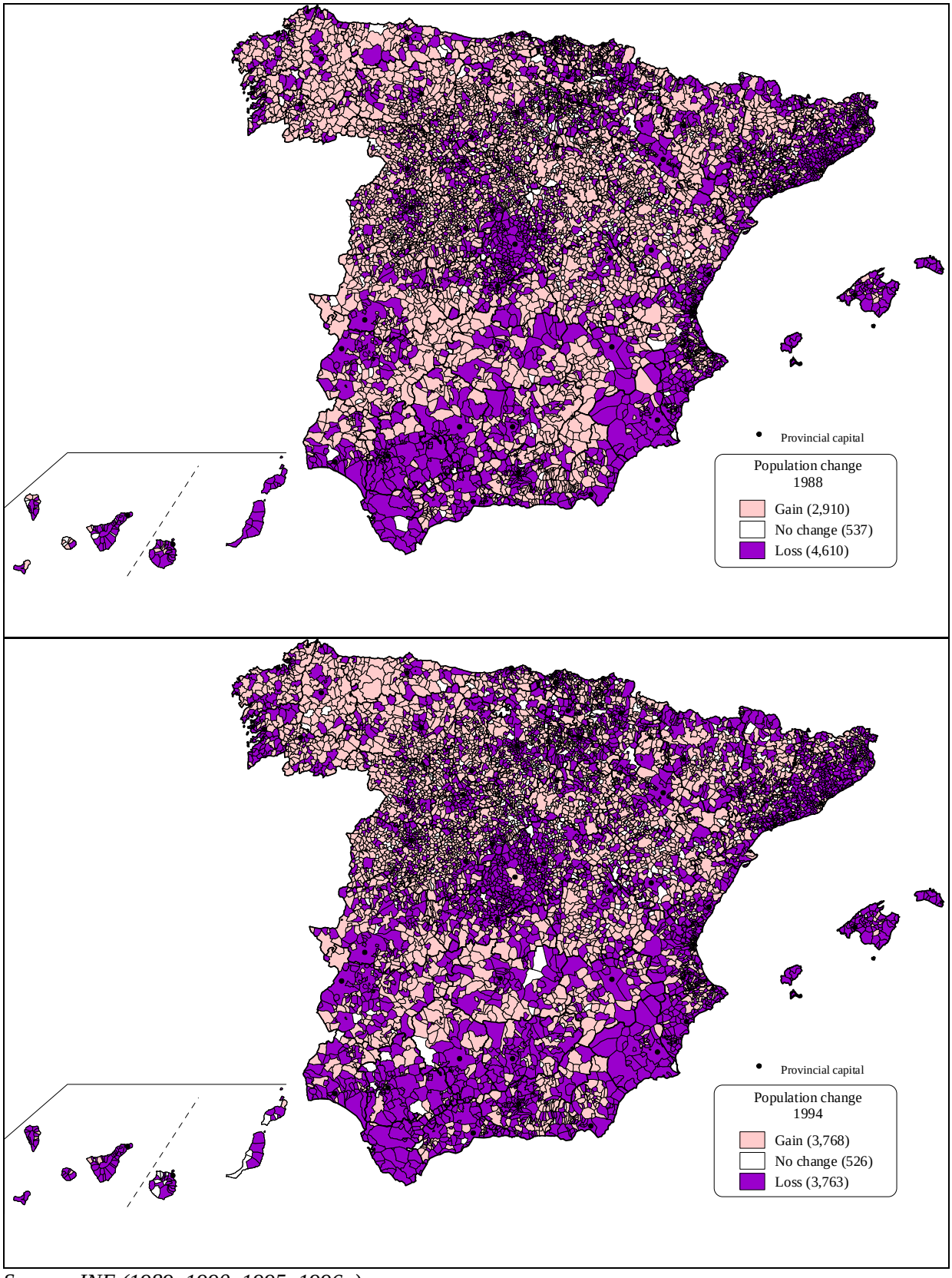
Source: INE (1989, 1990, 1995, 1996a)

Figure 9: Population change rate by province, 1988 and 1994



Source: INE (1989, 1990, 1995, 1996a)

Figure 10: Population change by municipality, 1988 and 1994



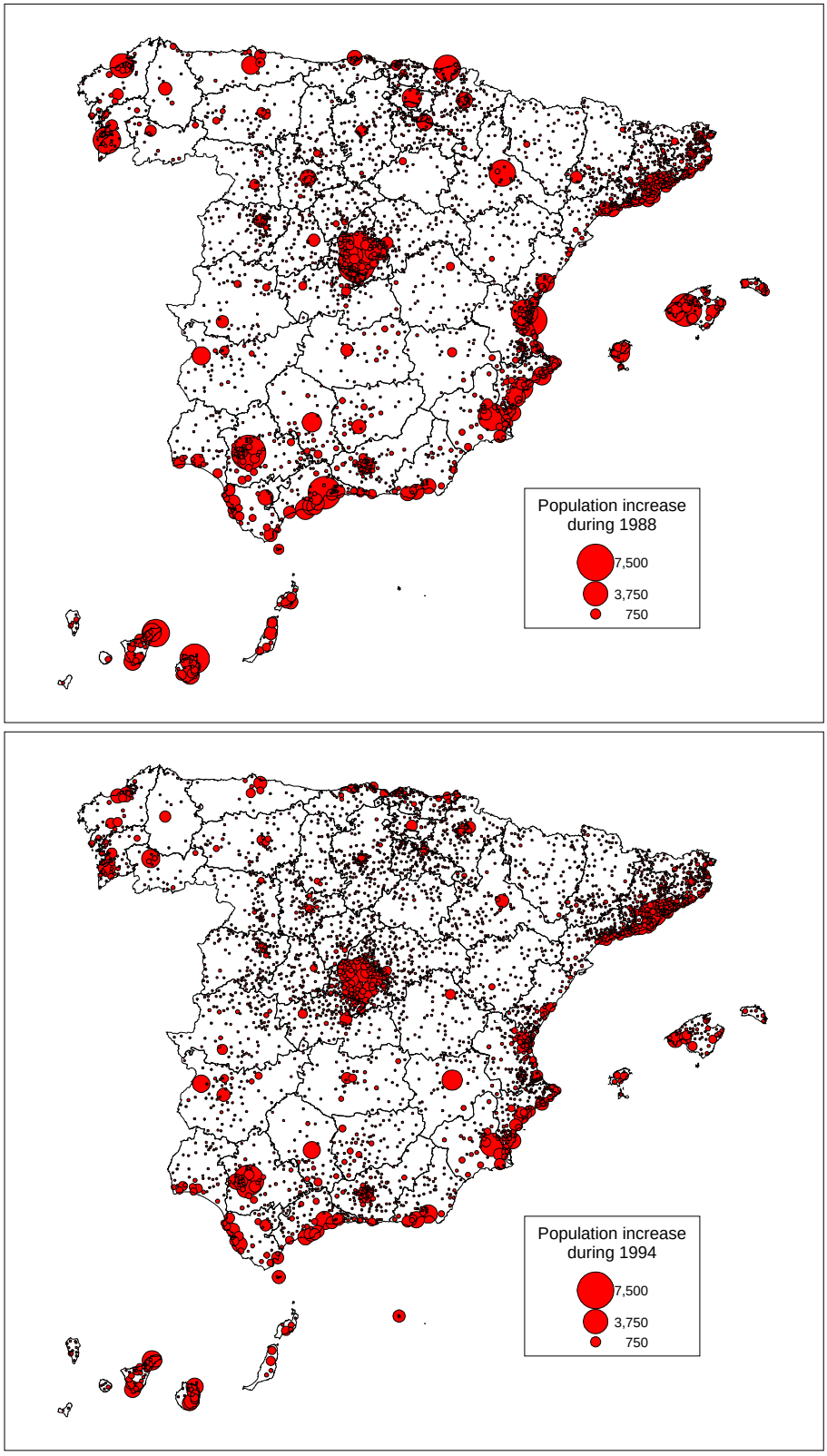
Source: INE (1989, 1990, 1995, 1996a)

Figures 11 and 12 show population increases and declines mapped by municipality for each year. In 1988, the variation in population growth is considerable with major increases in several of those urban municipalities bordering the Mediterranean and the Atlantic, as well as in the islands. The municipalities in the province of Madrid, together with a number of other urban interior municipalities have substantial population growth.

In contrast, the variation in population decline is much narrower, with the core of Barcelona showing the greatest population loss. The Basque country has a concentration of municipalities which experience population losses in 1988 and there is a broad band of municipalities with declining populations across north central Spain from Salamanca and Zamora in the west through Burgos and La Rioja to inland Catalunya.

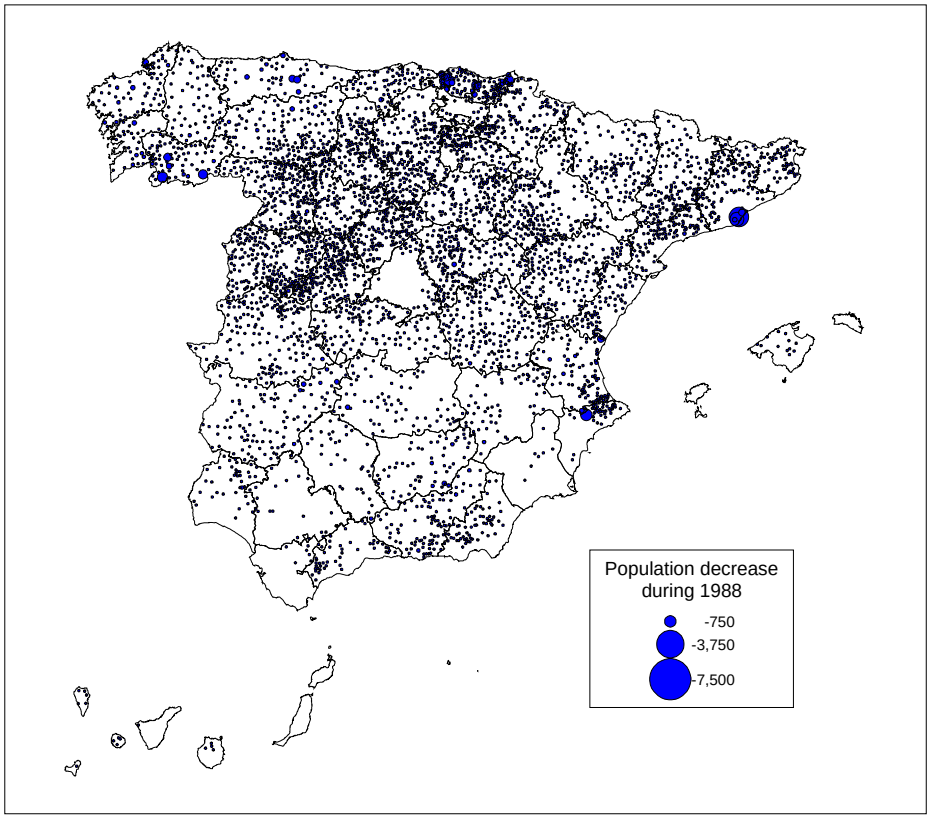
By 1994, the pattern of population loss has become characterised by massive declines in core municipalities in the provinces of Madrid and Barcelona, whilst the pattern of population gain remains similar to that in 1988 although the larger volume changes are smaller than those occurring in 1988. In the case of Barcelona, population losses occur not only in the central municipalities, but also in some of the other municipalities that make up its metropolitan area, such as Hospitalet de Llobregat, Santa Coloma de Gramanet, Badalona and Cornellà. In other cities like Valladolid, Valencia, Cádiz, Bilbao and Pamplona, the volume of population loss increased between 1988 and 1994.

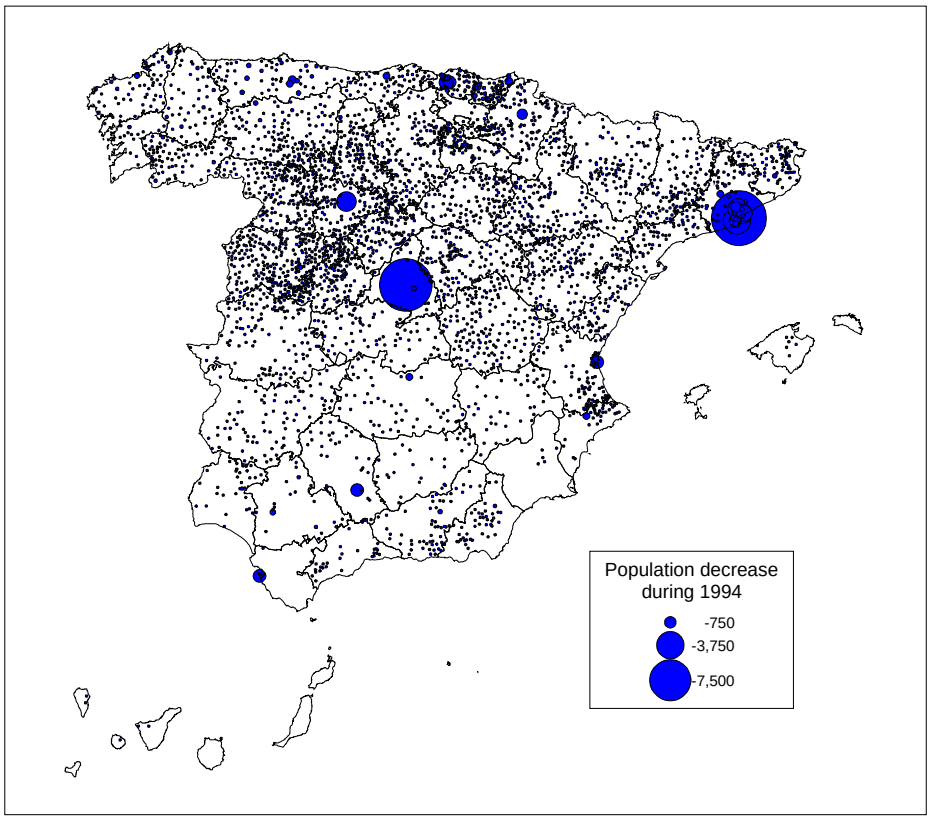
Figure 11: Municipalities with population increases, 1988 and 1994



Source: INE (1989, 1990, 1995, 1996a)

Figure 12: Municipalities with population declines, 1988 and 1994





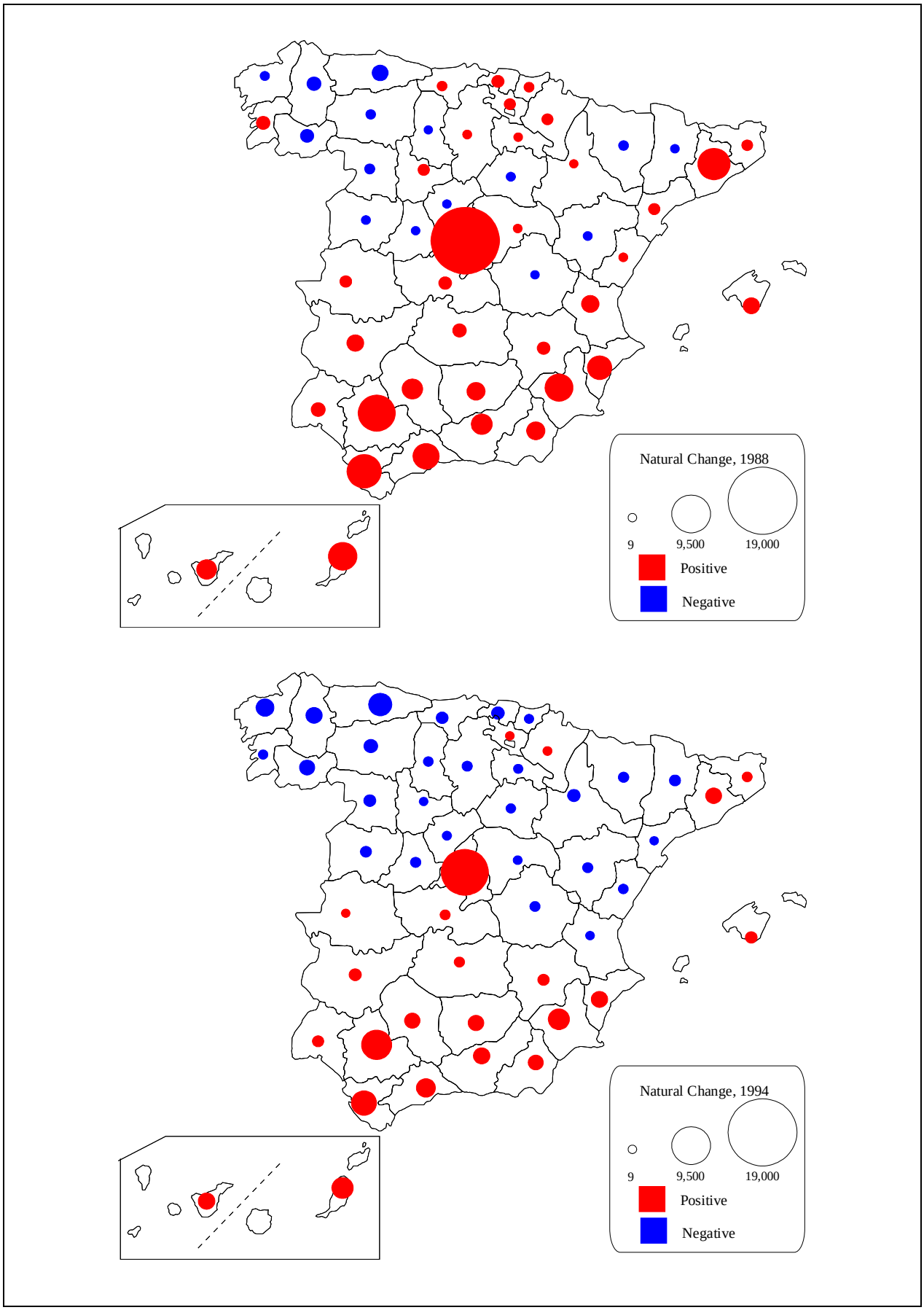
4.3 Natural Change Component

In 1988 and in 1994, births exceeded deaths at the national level by 99,500 and 32,200, representing rates of natural increase of 2.5 and 0.8 per thousand respectively. The decline in the rate of natural increase is a general trend caused by the fall in national fertility. In the 1990s, Spain had one of the lowest fertility rates in the world. In 1988, natural change at the provincial scale was positive in Madrid and across the whole of the south of the country as well as in the islands. In addition, Barcelona and the provinces of País Vasco had more births than deaths, whereas, Lugo, Orense and Asturias in the north west were the primary losers of population through natural change (Figure 13). By 1994, a somewhat different geographical pattern of natural change became evident, with a larger number of provinces recording more deaths than births, including almost all the provinces in the northern part of the country and even Valencia, Vizcaya, Guipúzcoa and Pontevedra, all of which had positive natural change in 1988. In the north, only Girona, Barcelona, Navarra and La Rioja retain positive natural change in 1994, whilst Madrid, together with southern provinces in Andalucía, Murcia and the Canary Islands, are the areas with the highest fertility rates.

The pattern of high fertility in the southern provinces and in the Canary Islands is shown in the maps of natural change rates shown in Figure 14. Areas with elderly demographic structures have negative natural change. Soria, Teruel and Huesca are traditional out-migration provinces without high fertility. The general trend indicates a weakening in the rate of natural change in those provinces with natural gains and an increase in those provinces with natural losses, creating more negative natural change balances in 1994 than in 1988.

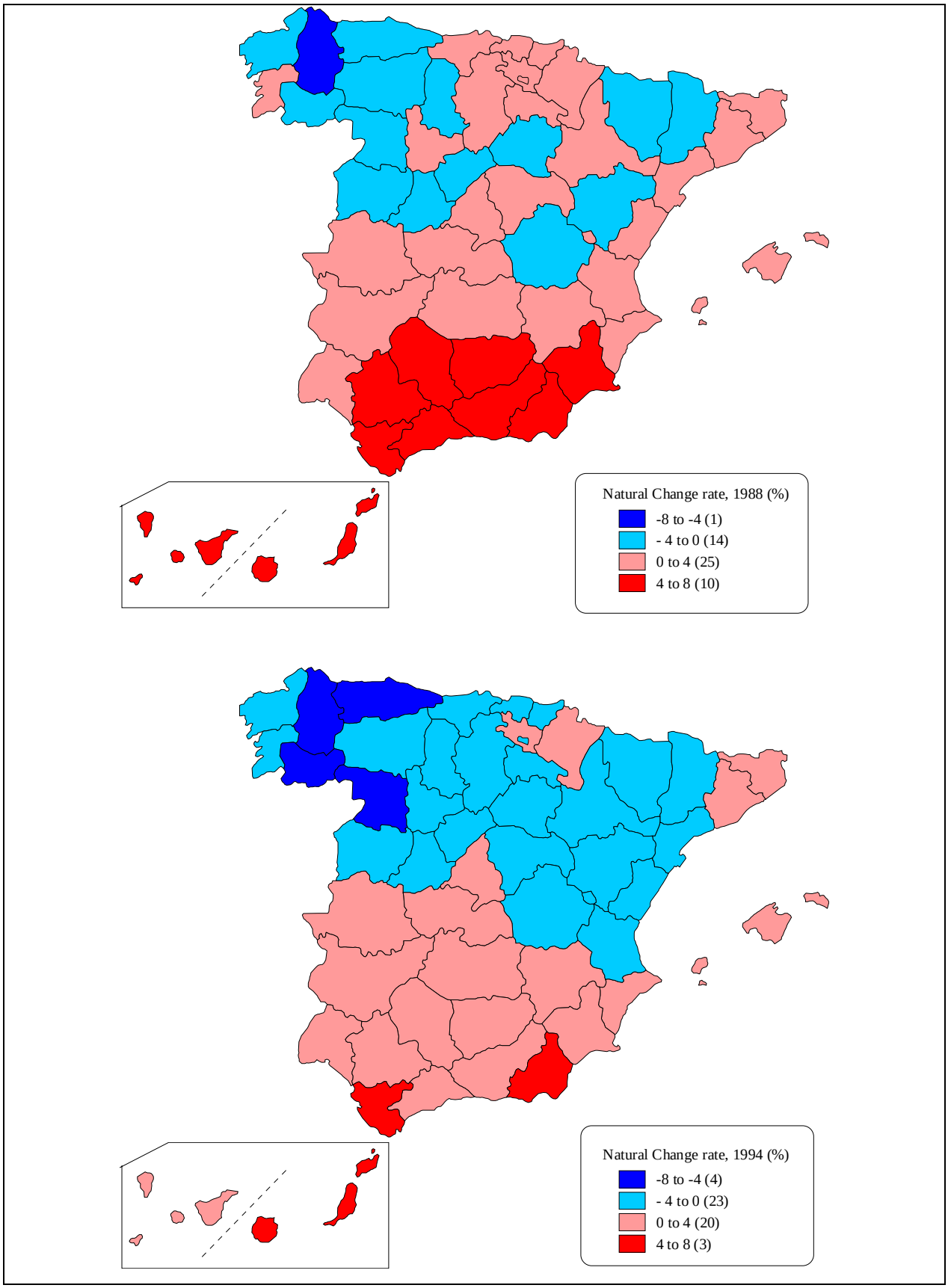
When we consider the municipality scale (Figure 15), the geographical pattern of natural change is very similar in 1988 and 1994, although the number of municipalities with negative natural change increases, as fertility falls. There is an important internal division between the north and the south as illustrated by the provincial maps. In Andalucía, Extremadura and Murcia, the number of municipalities with positive natural change are predominant, although in inland areas of Almería and Granada, the balances tend to become negative. The main parts of the north and centre of the country show negative natural change except in some municipalities with younger age structure due to in-migration. Thus, with a fertility rate of around 1.3 children per woman, natural change in Spain has become very low; some experts (Gil and Cabré, 1997, for example) expect to see a recovery. The weakness of the natural change component in spatial population dynamics means that the migration component is of more significance.

Figure 13: Natural change by province, 1988 and 1994



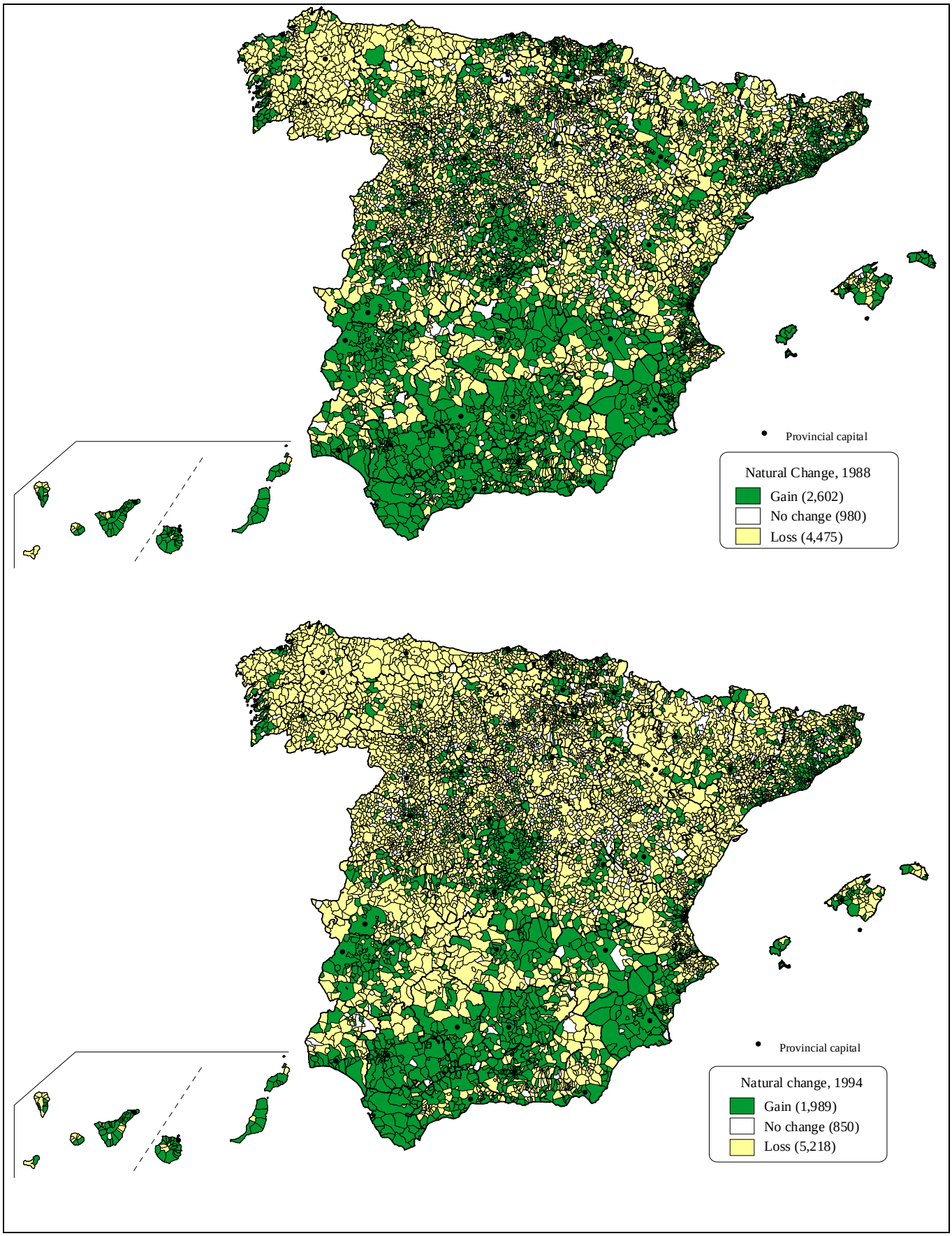
Source: INE (1992, 1997)

Figure 14: Natural change rates by province, 1988 and 1994



Source: INE (1992, 1997)

Figure 15: Municipalities with natural gains and losses, 1988 and 1994



Source: INE, (1992, 1997)

4.4 Residual Net Migration Component

Residual net migration refers to the component of population change that is not explained by natural change. It includes the balance of people who move into and out of an area from somewhere else in the rest of the country or abroad. The residual net migration balances do not sum to zero and should be treated with some caution because they may contain errors that occur as a result of any inaccuracies in the estimates of populations, births and deaths as well as counts of immigrants but not emigrants.

Figure 16 indicates that the estimated residual net migration balances are mostly positive in both time periods with Madrid, the islands, Mediterranean coastal provinces, and provinces in the north west having significant gains in 1988. Vizcaya has the biggest negative balances and only 10 provinces have smaller losses. A comparison of the patterns in 1994 with those in 1988 suggests that net migration gains have reduced in Madrid, Barcelona, Valencia, Alicante and Málaga. Exceptional increases occurred in Guadalajara, Orense, La Coruña and Las Palmas. Only Guipúzcoa and Valladolid have negative net migration whilst the other provinces have small positive residual net migration.

The maps of residual net migration rates (Figure 17) indicate how the negative rates disappear and the majority of provinces have low positive rates. In 1988, the highest rates are recorded by Girona, Alicante, Málaga and the islands, whilst in 1994, the highest rates are found in the provinces of Almería, Tarragona, Guadalajara and Orense. Only Baleares and Santa Cruz de Tenerife have high rates in 1988 and 1994. It is important to distinguish internal migration from residual net migration and consequently, the results presented in this section need to be contrasted with migration information obtained from the registration data and reported later.

At the municipality scale, the maps are a complex mosaic of gains and losses that deserve more detailed attention than can be given here. The main difference between the two maps illustrated in Figure 18 is the extent to which positive balances have replaced negative net migration such that 58.3% of municipalities had estimated residual net migration gains in 1994 compared with 41.7% in 1988.

Figure 16: Residual net migration by province, 1988 and 1994

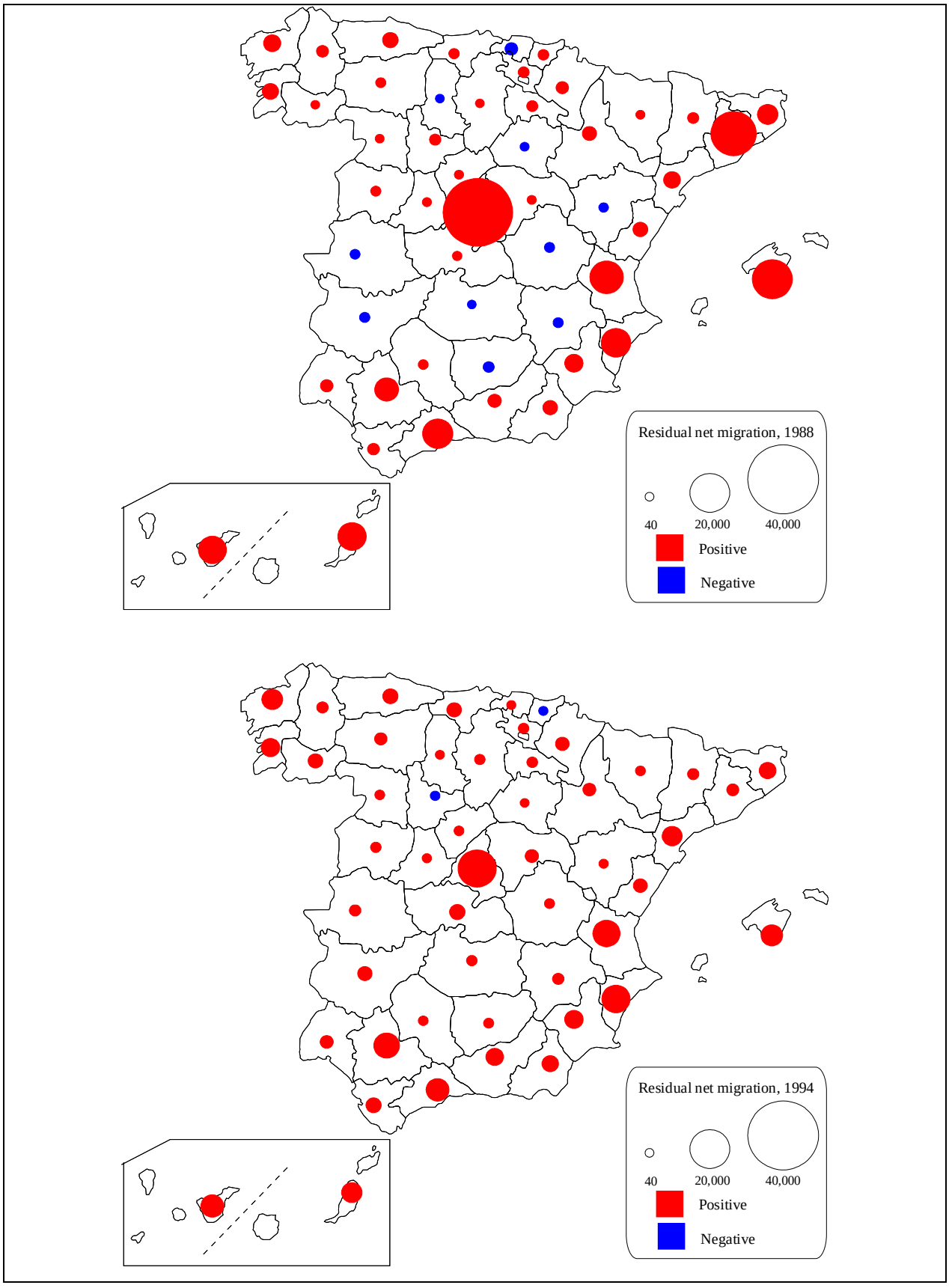


Figure 17: Residual net migration rates by province, 1988 and 1994

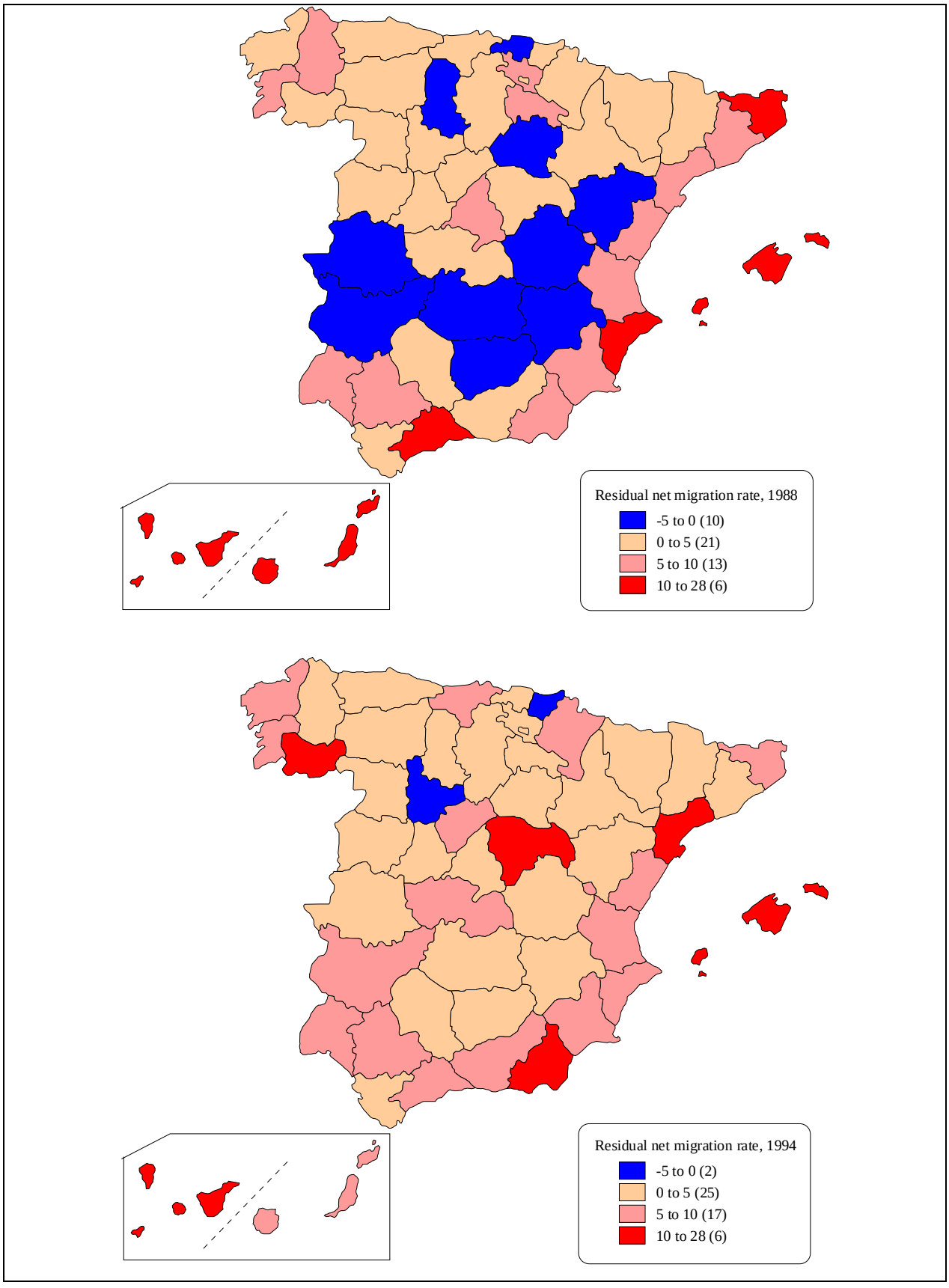
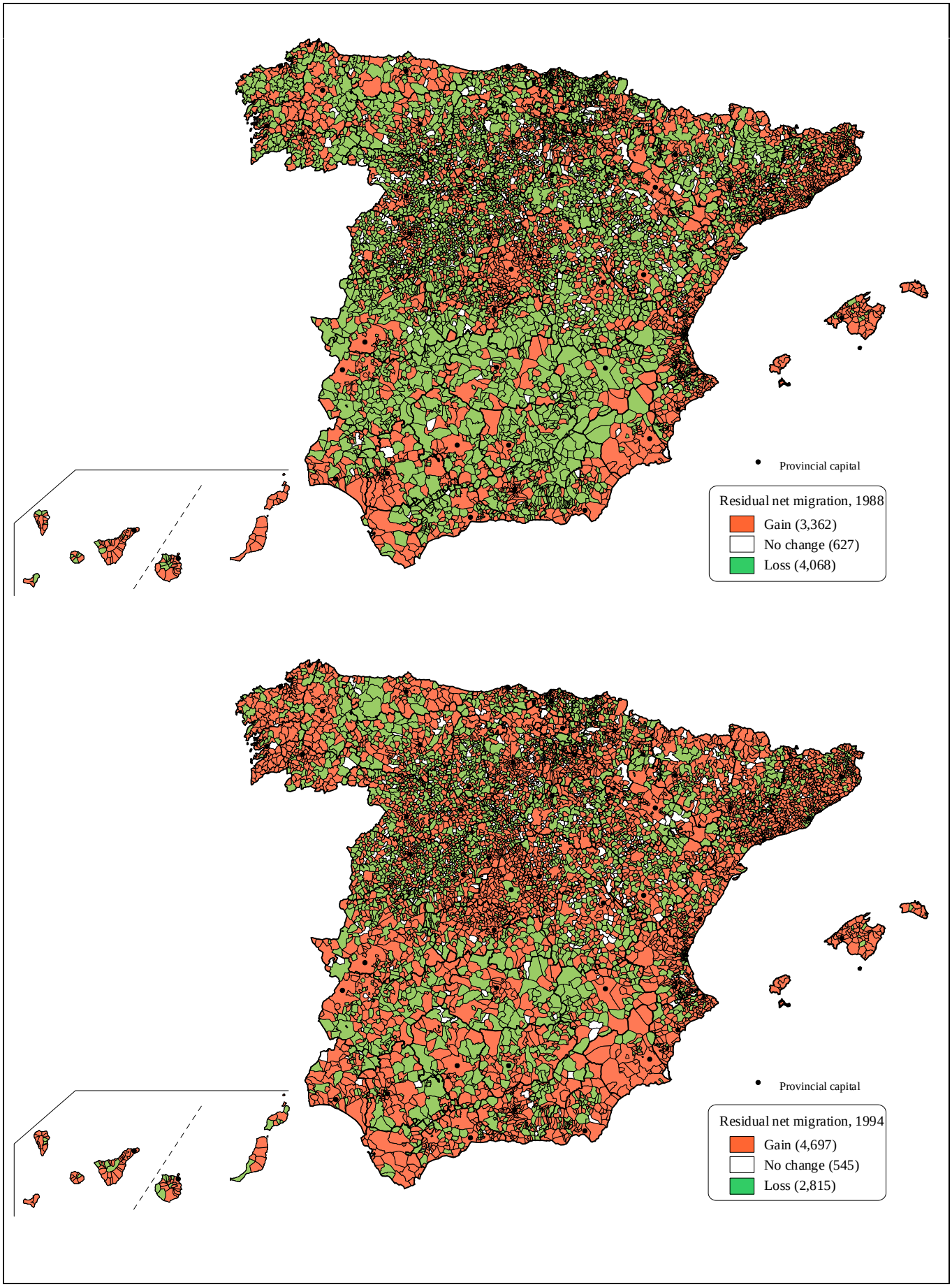


Figure 18: Municipalities with residual net migration gains and losses, 1988 and 1994



4.5 Synthesis of Components

In this section, we use a (Webb) classification framework for providing a synthesis of the components of population change at the municipality scale in 1988 (Figure 19) and 1994 (Figure 20). This classification divides all the municipalities into six groups depending on the relationship between natural change and net migration. The first three groups involve population growth (PG) and are defined as:

- natural gain (NG) + net migration gain (NMG)
- natural gain (NG) + net migration loss (NML)
- natural loss (NL) + net migration gain (NMG)

The second three categories of population loss (PL) are defined as follows:

- natural gain (NG) + net migration loss (NML)
- natural loss (NL) + net migration gain (NMG)
- natural loss (NL) + net migration loss (NML)

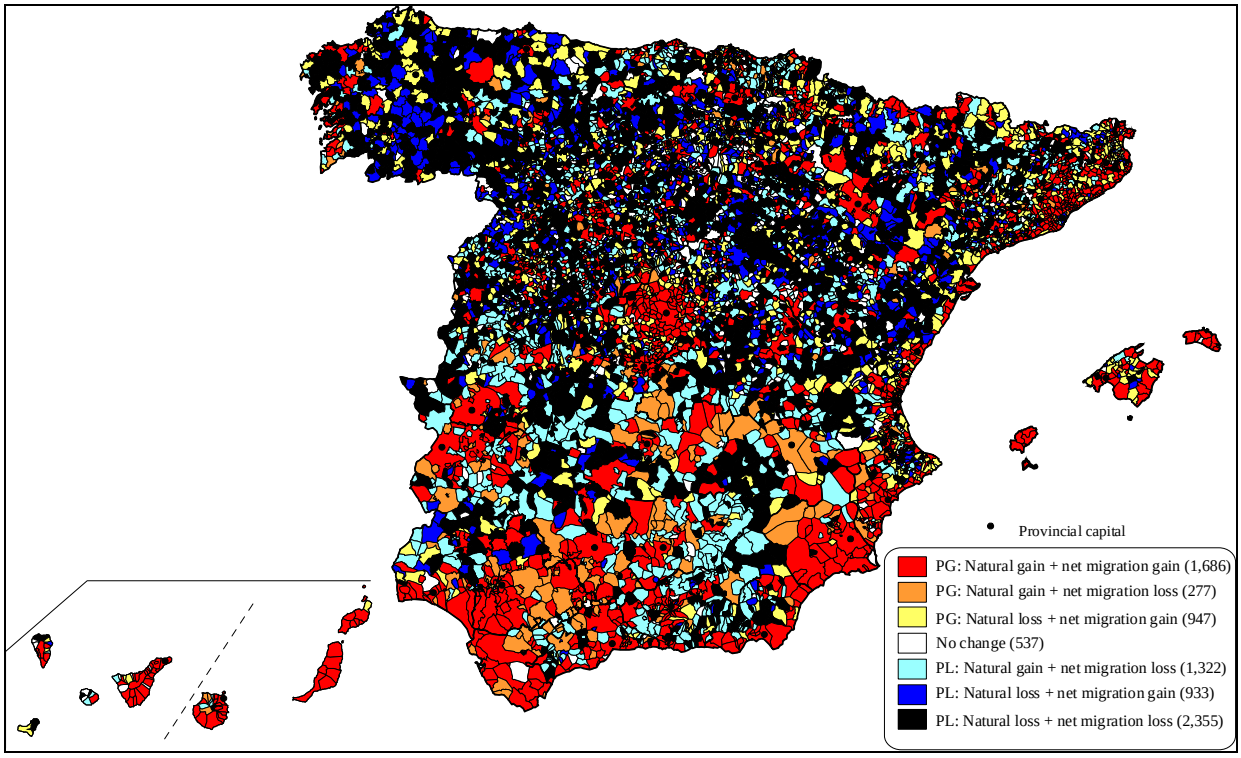
Finally, there is and special category for municipalities where population change is zero in this analysis (No change). This category contains around 6% of all municipalities. Table 3 summarises the number of municipalities in each category in 1988 and 1994 and indicates where changes have occurred between the two periods.

Table 3: Municipalities classified by natural change and net migration, 1988 and 1994

	1988		1994		1988-94	
Category	Number	Share	Number	Share	Change	% change
PG: NG + NMG	1,686	20.9	1,783	22.1	97	5.8
PG: NG + NML	277	3.4	172	2.1	-105	-37.9
PG: NL + NMG	947	11.8	1,814	22.5	866	91.4
No change	537	6.7	526	6.5	-11	-2.0
PL: NG + NML	1,322	16.4	645	8.0	-677	-51.2
PL: NL + NMG	933	11.6	1,190	14.8	257	27.5
PL: NL + NML	2,355	29.2	1,927	23.9	-428	-18.1
Total	8,057	100.00	8,057	100.00		

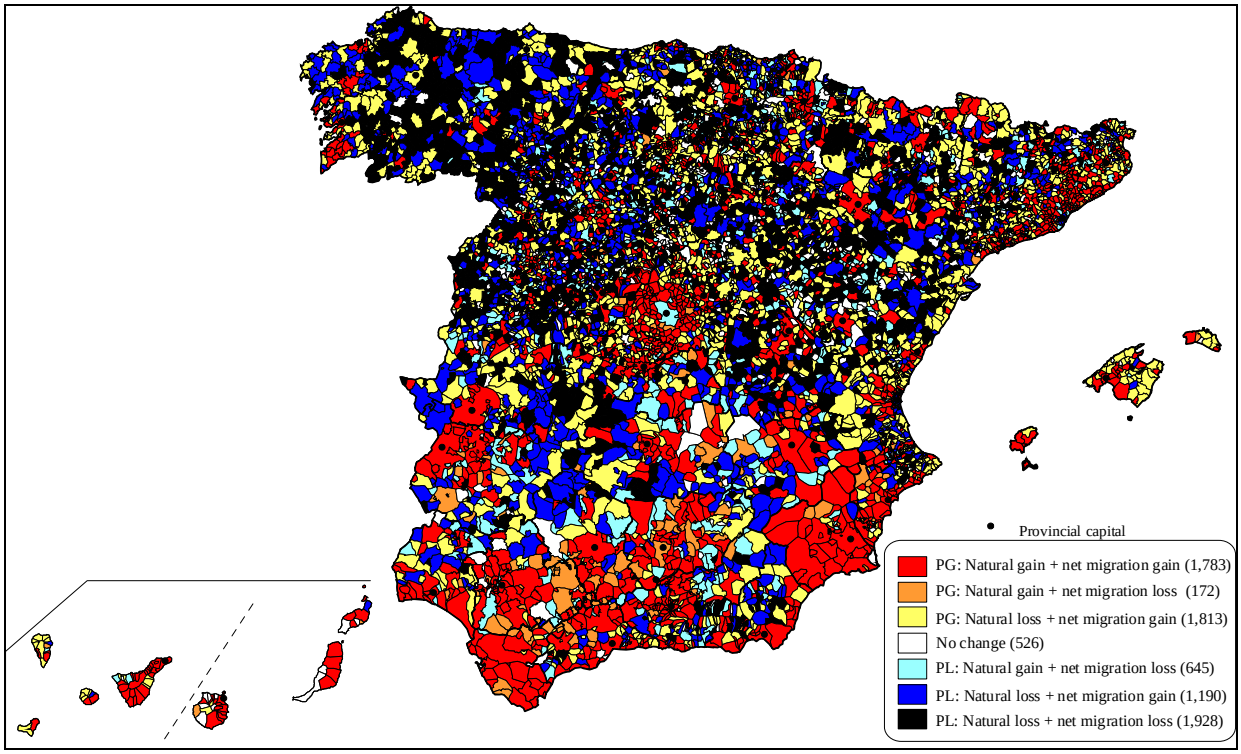
Between 1988 and 1994, the proportion of municipalities losing population (PL) decreases from 57.2% to 46.7%. This occurs even though natural and total growth rates are lower for the whole country. Thus, more population redistribution is occurring in 1994 than in 1988. In both years, the largest category of municipalities involved those losing population through natural change and net migration, but this situation affects 29.2% of all municipalities in 1988 and only 23.9% in 1994. The most important change that explains the decrease in the proportion of municipalities experiencing population loss occurs in the municipalities with natural gains and net migration losses. These areas represented 16.4% of all municipalities in 1988 but only 8% in 1994. In contrast, the proportion of total municipalities losing population because net migration gains are offset by natural losses, increases from 11.6% to 14.8%. The maps presented in Figures 19 and 20 help us to understand the geographical dimension of these changes. Municipalities with both components negative are practically non-existent in the south of the country and only a few are found in the mountain areas of Granada and Córdoba and in some other remote rural areas. Municipalities with population decline in 1988 in the south of the country tend to have population gains in 1994 or to have population losses due to negative natural change. The maps show that areas with natural gain and negative net migration had practically disappeared in the south of the country. Return migration may be one of the factors causing this change.

Figure 19: Webb classification of municipalities, 1988



In the northern part of the country, population decline is very common, and only the provincial capitals, the bigger cities, some coastal tourist municipalities (e.g. along the coast of Pontevedra and Cantabria) and their areas of influence experience demographic growth. In general, municipalities with negative components (black shading in the maps) tend to diminish between 1988 and 1994 and are found in rural areas of Galicia and some of the provinces with the oldest age structures, such as Teruel, Cuenca, Huesca, Soria, Zamora, Salmanca and León. There are more municipalities with positive net migration rates in the north of the country in 1994 and some of these have overall population growth, generally in areas close to dynamic areas (such as larger cities or important main roads). Municipalities with positive net migration and negative natural change make up the category with biggest percentage change between 1988 and 1994.

Figure 20: Webb classification of municipalities, 1994



Municipalities with positive net migration and natural change components comprise 20.9% of all municipalities in 1988 and 22.1% in 1994. They are concentrated in Andalucía and Murcia, in or close to the metropolitan areas of Madrid, Barcelona and Valencia, in the Ebro axis, and near to provincial capitals (e.g. Cáceres, Badajoz, Ciudad Real, Valladolid, Burgos, Pamplona and Vitoria) where they resemble 'islands' (red shading on maps). This population gain (PG) category is still dominant in the Mediterranean axis and in the islands, but its occurrence is less frequent in 1988 than in 1994, due to more municipalities with negative natural change but with net migration gains. Exceptions to the pattern of municipalities with positive components include the coast of Pontevedra where summer tourism is important and Pyrenean municipalities in Lleida and Huesca,

near the French border, where winter tourism has become important. On other hand, patterns of components in the provinces of Madrid and Barcelona depend upon location in relation to the central cities. In both cases, municipalities of other provinces well connected with the two cities have positive gains in both components. In the case of the city of Madrid, the maps in Figures 19 and 20 show how the picture has changed from population increase in 1988, through gains in both components, to population loss in 1994 due predominantly to net migration loss. In addition, some of Madrid's closer municipalities increased their population but have moved to the category with net migration loss. Even more striking patterns of change occurred in Barcelona and Valencia, where not only did the central cities experience declining population, but the municipalities close to the central areas have declined also. The latter municipalities are the exceptions but changes within them are of sufficient magnitude to distinguish them as the areas of greatest population dynamism in the country.

An alternative classification of provinces into 'Industrial', 'Urban', 'Coastal' and 'Rural' categories allows geographical summary of the components of population change (Table 4) to be produced. The Coastal provinces collectively have the highest rates of population change in both periods where high rates of residual net migration are combined with relatively strong natural change rates. Population change between the two periods declines in the Industrial and Urban categories but increases in the Rural areas. Natural change rates fall in all categories and have values getting close to zero except for Coastal areas. Table 4 demonstrates the importance of net migration in explaining population growth, particularly in 1994. In the case of the Coastal provinces, very high rates of residual net migration are evident together with relatively strong natural change rates. Net migration rates decline for Coastal and Industrial provinces, but increase for Urban and Rural provinces. Industrial provinces have the lowest migration rates of the four types in 1994 and net migration rates for Rural provinces increase significantly between 1988 and 1994.

In 1994, the natural change component in industrial provinces is only 0.5 per thousand and population change is driven by positive net migration. In the rural areas, the rate of population growth increases between 1988 and 1994 due to a rise in net migration from 1.3 per thousand in 1988 to nearly 4.6 per thousand in 1994.

Table 4: Components of population change by type of province, 1988 and 1994

Component	Coastal		Industrial		Urban		Rural	
Rate per thousand	1988	1994	1988	1994	1988	1994	1988	1994
Population change	17.3	11.6	7.5	3.0	7.4	6.0	3.4	4.8
Natural change	4.4	2.4	1.9	0.5	2.3	0.4	2.2	0.2
Residual net migration	12.9	9.1	5.6	2.5	5.1	5.6	1.3	4.6

Provinces classified as follows:
Coastal: Alicante, Almería, Baleares, Castellón, Girona, Las Palmas, Málaga, Murcia, Sta. Cruz de Tenerife, Tarragona.
Industrial: Asturias, Barcelona, Guipúzcoa, Madrid, Valencia, Vizcaya.
Urban: Álava, Coruña, La Rioja, Navarra, Pontevedra, Sevilla, Valladolid, Zaragoza.
Rural: Albacete, Ávila, Badajoz, Burgos, Cáceres, Cádiz, Cantabria, Ciudad Real, Córdoba, Cuenca, Granada, Guadalajara, Huelva, Huesca, Jaén, León, Lleida, Lugo, Orense, Palencia, Salamanca, Segovia, Soria, Teruel, Toledo, Zamora

4.6 Population Change by Size of Municipality

In this section, we consider the changes taking place in populations of different types of areas. Data on municipalities are appropriate because provinces are too coarse to pick up metropolitan trends. However, there is no classification of municipalities in Spain that allows the distinction between different types of municipality to be drawn. Thus, we have used a classification of municipalities based on population size. Table 5 illustrates the population changes and rates per 1,000 people for 1988 and 1994.

Table 5: Population changes by size of municipality, 1988 and 1994

	No of municipalities		Population		Population change		Change rate (per 1000)	
Size band	1988	1994	1988	1994	1988	1994	1988	1994
< 101	684	793	42,224	48,760	-306	482	-7.2	9.9
101 - 500	2,900	2,912	758,953	743,010	-6,586	-1,191	-8.7	-1.6
501- 2,000	2,280	2,198	2,356,374	2,285,828	-4,859	9,799	-2.1	4.3
2,001 - 5,000	1,077	1,024	3,335,082	3,159,334	10,435	27,521	3.1	8.7
5,001 - 10,000	527	514	2,582,907	3,511,384	31,859	31,104	8.9	8.9
10,001 - 20,000	311	326	4,239,902	4,523,103	56,421	56,701	13.3	12.5
20,001 - 50,000	169	175	4,828,252	5,129,404	78,008	62,881	16.2	12.3
50,001 - 100,000	55	60	3,617,561	4,022,356	37,410	32,817	10.3	8.2
100,001 - 500,000	48	49	9,074,867	9,486,398	95,091	29,349	10.5	3.1
500,001 +	6	6	7,380,961	7,320,270	26,542	-19,749	3.4	-2.6
Total	8,057	8,057	39,217,083	40,229,847	324,015	229,714	8.2	5.7

Source: INE (1988, 1989, 1994a, 1995)

Columns 2 and 3 of Table 5 highlight the very large number of ‘small’ municipalities with populations under 2,000 that exist in Spain. It is clear from the aggregate statistics for size

categories that population change in these areas (5,864 in 1988; 5,873 in 1994) switched collectively from negative to positive between 1988 and 1994. Population growth turned to population decline in the six largest municipalities (in aggregate terms) and growth rates reduced considerably in the municipalities with 20,001 to 500,000 populations. Thus, the biggest cities are losing population; growth is falling in mid and large urban areas; growth is increasing in smaller towns and losses have become gains or have reduced considerably in the small areas. These statistics constitute evidence of a shift of population expansion down the urban hierarchy to smaller and medium-sized places. However, some caution is required when interpreting the changes over time in Table 5 since the municipalities aggregated into the different size categories vary between 1988 and 1994 in all but the largest category.

The trends are summarised in Table 6 which presents a further aggregation of the population changes into three size categories, rural (with <2,000 population), intermediate (with between 2,000 and 10,000 population) and urban (with >10,000 population). In 1994, 39% of the most rural areas gained population in comparison with 26.5% in 1988. A higher percentage of the intermediate areas were already gaining population in 1988 but this increased from 48.7% in 1988 to 58.5% in 1994. In contrast, the proportion of large municipalities gaining population dropped from 81.8% in 1988 to 76.4% in 1994.

Table 6: Population change by municipality size grouping, 1988 and 1994

Municipality group	1988 Population change			1994 Population change		
	Negative (%)	Zero (%)	Positive (%)	Negative (%)	Zero (%)	Positive (%)
Rural (< 2,000)	64.8	8.7	26.5	52.4	8.6	39.0
Intermediate (2,000-10,000)	45.9	5.5	48.7	36.4	5.1	58.5
Urban (> 10,000)	13.2	5.0	81.8	17.8	5.8	76.4

Source: INE (1988,1989, 1994a,1995)

5 Aggregate Internal Migration

This part of the report uses movement data from the EVR to address the following questions:

- What are the key trends in internal migration propensities?
- How important is internal migration as a determinant of population change?
- Which are the provinces responsible for attracting and generating most aggregate net internal migrants and why?
- What changes have occurred in the patterns of net migration at the municipality scale?
- How can we measure the changes taking place in inter-provincial migration between 1988 and 1994?
- Is there any evidence of a relationship between internal net migration and either unemployment rates or density?

We begin by looking at how the level of migration has changed between 1988 and 1994 (Section 5.1) and visualising the relationship between population change and net internal migration at provincial and municipality levels (Section 5.2). The changing spatial patterns of net migration are mapped in Section 5.3 at different spatial scales and different measures of inter-provincial migration flows are used in Section 5.4 to summarise the changes in aggregate flow patterns between 1988 and 1994. Net migration patterns at the municipality scale are presented in Section 5.5. Finally, in Section 5.6, we explore whether provinces and municipalities with high levels of net migration loss also suffer from higher unemployment.

5.1 Levels of Migration

Published INE data indicates that 178,000 more people moved between municipalities in Spain or migrated into Spain from abroad in 1994 compared with 1988 (Table 7). This represents an increase of 29%, although the level of inter-provincial migration increased by only 23,000 or 8.2%. These figures include movements to and from Ceuta and Melilla. The aggregate figures indicate the continued transition from longer distance, inter-provincial migration (whose share of internal migration declined from 47.6% in 1988 to 40.1% in 1994) to shorter distance, intra-provincial migration (whose share increased 52.4% in 1988 to 59.9% in 1994). Immigration increased by almost 10,000 or 39.4% but we must remember that these data just count the legal migrants who are registered in the municipalities where they become residents. No data is available on the numbers of moves occurring within municipalities.

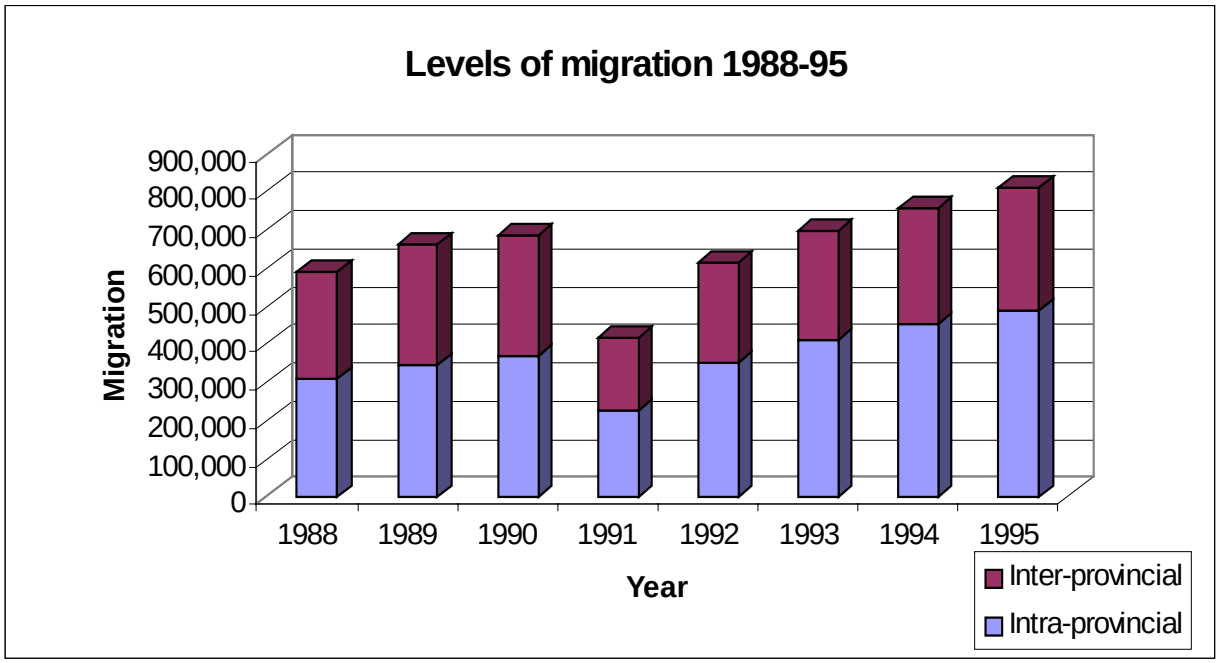
Table 7: Migrant totals, 1988 and 1994

Scale	1988		1994		Change 1988-1994	
	Migrants	%	Migrants	%	Migrants	%
Intra-province	308,709	50.3	454,082	57.4	145,373	47.1
Inter-province	280,378	45.7	303,366	38.3	22,988	8.2
Immigration	24,467	4.0	34,123	4.3	9656	39.5
Total	613,467	100.0	791,571	100.0	178,104	29.3

Source: EVR individual registrations, 1988, 1994 (INE)

When registration or movement data are being analysed, migration intensities can be computed as crude rates of migration based on the average populations at the beginning and end of the year in question as denominators. The intensity of internal movement in Spain in 1988 was 14.9 per thousand, of which 7.8 per thousand migrated between municipalities in the same province and 7.1 per thousand migrated between provinces. By 1994, the crude total rate had risen to 18.8 per thousand, of which 11.3 moves per thousand were intra-provincial and 7.5 per thousand were inter-provincial. The level of movement fluctuates from year to year (Figure 21) with the low count in 1991 explained by the fact that this was a census year and consequently levels of registration were lower.

Figure 21: Levels of inter-provincial migration, 1988-95



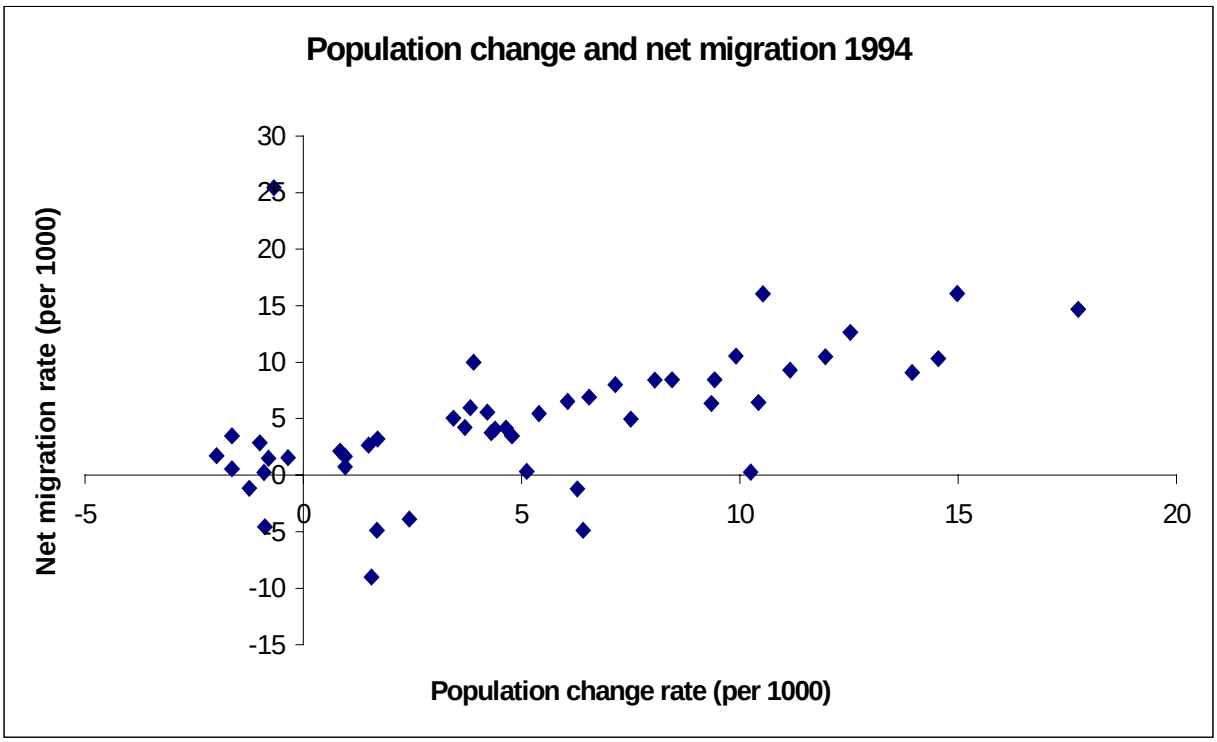
Source: INE (Annual)

The level of internal migration, which increased between 1988 and 1989, continued its upward trend in the early 1990s, reaching over 757,000 in 1995. Shorter distance residential migration is growing primarily, though not exclusively, as a result of suburbanisation trends in the big cities (Romero and Albertos, 1996). In Barcelona and Madrid in particular, suburbanisation has been encouraged by high city centre house prices and neighbour or ecological effects (Alabart, 1994; Leal, 1994; Leal and Cortés, 1989). The slower increase in inter-provincial compared with intra-provincial migration represents a proportional decline in longer distance migration in Spain over this period and represents the continuation of a trend established over the last two decades since the preponderance of 'traditional' long distance labour migration streams between provinces in the 1960s and 1970s.

5.2 Internal Net Migration and Population Change

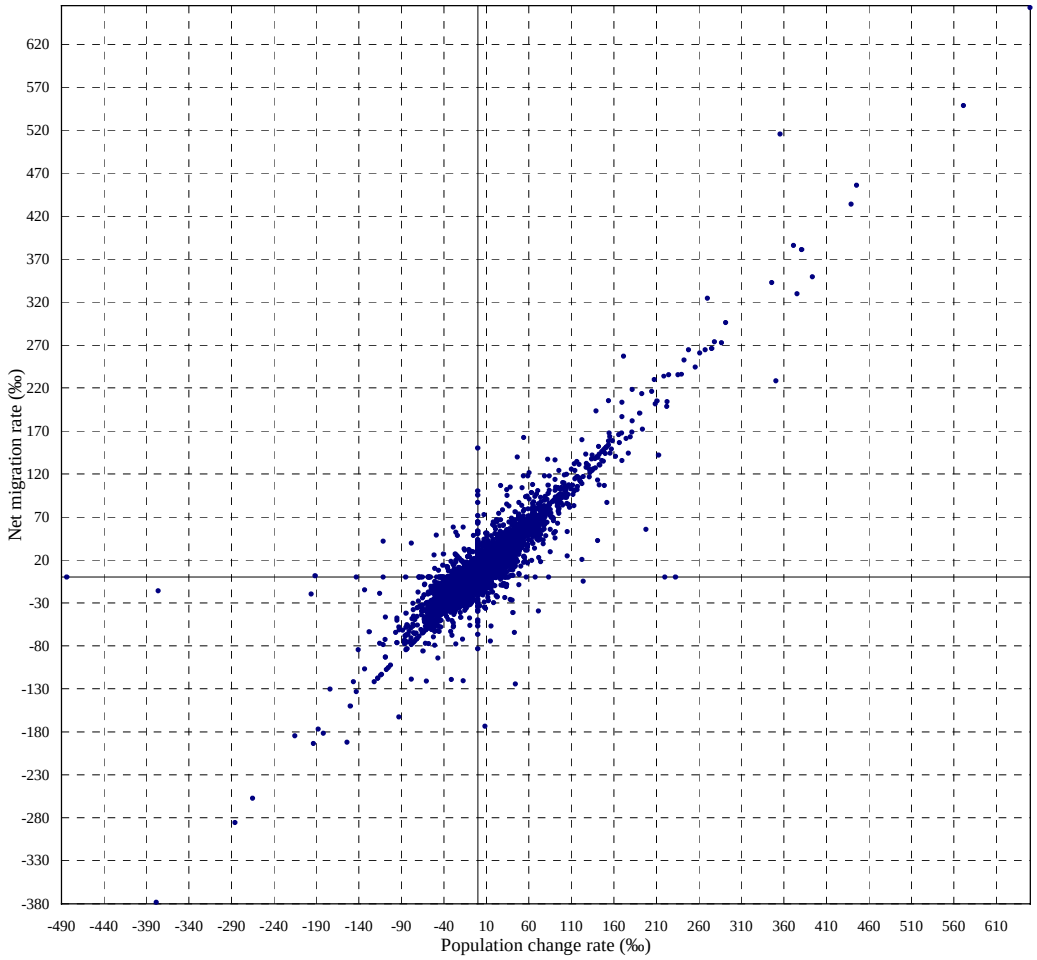
Strong linear relationships are evident from the scattergraphs that plot rates of internal net migration against rates of population change in 1994 for provinces (Figure 22) and municipalities (Figure 23). Thus net migration exerts a strong influence on the redistribution of the Spanish population since fertility levels are low (and falling) and therefore natural change is relatively low.

Figure 22: Internal net migration and population change rates for provinces, 1994



Source: EVR individual registrations 1994 (INE); INE (1995, 1996a)

Figure 23: Internal net migration and population change rates for municipalities, 1994

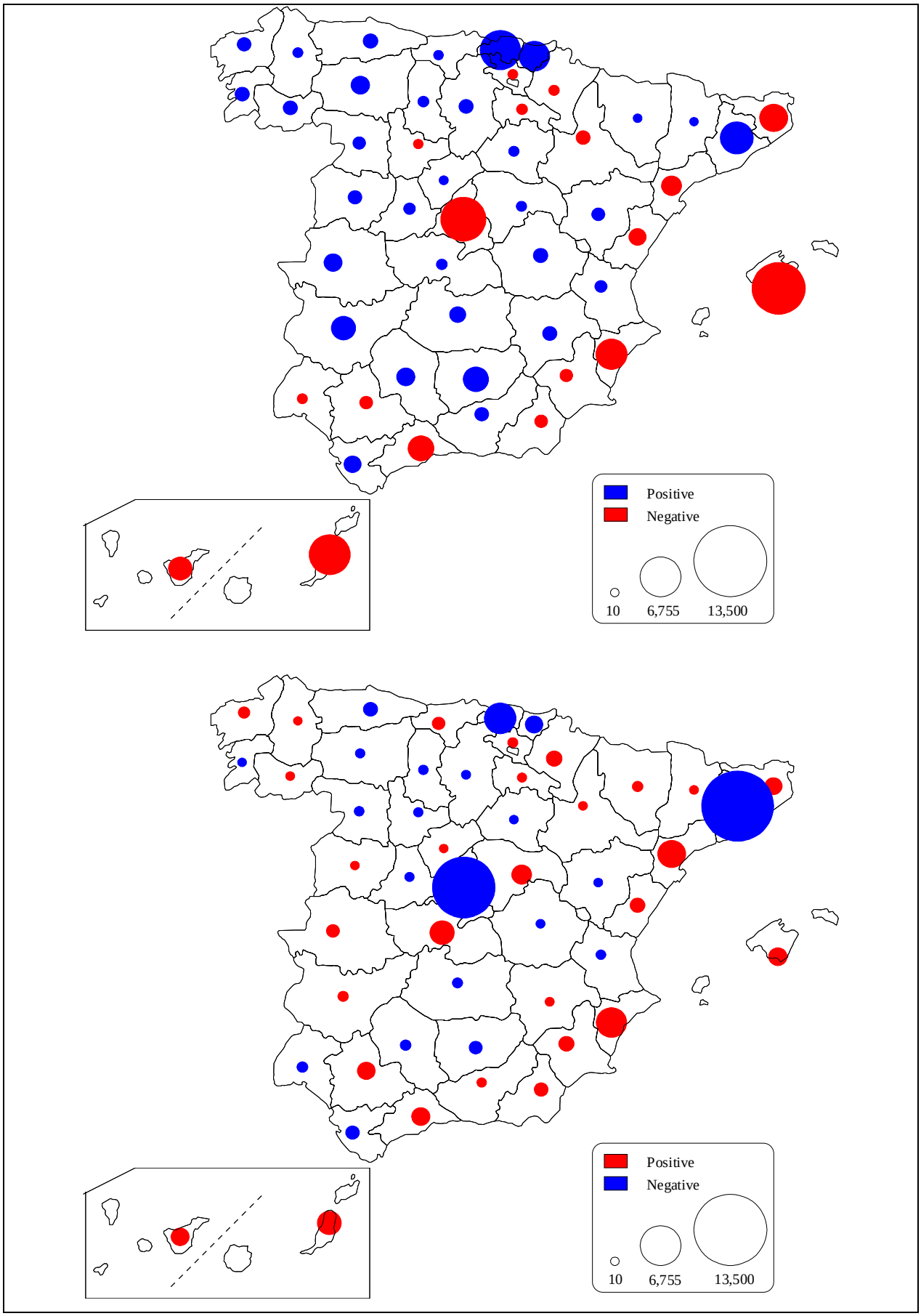


Source: EVR individual registrations 1994 (INE); INE (1995, 1996a)

5.3 Changes in Aggregate Net Migration and Migration Efficiency

The net migration balances of internal migration for provinces (Figure 24) illustrate that, in 1988, the major areas of gain were Madrid, the three islands archipelagos and the coastal provinces of Girona, Tarragona, Castellón, Valencia and Málaga. Provinces in the Mediterranean and Ebro axes have positive net migration with certain exceptions (e.g. Barcelona, Valencia and Cádiz). Only Valladolid and Sevilla are exceptions to this positive net migration pattern. The majority of provinces experienced net migration losses in 1988, particularly Barcelona, together with Vizcaya and Guipúzcoa in País Vasco and Jaén and Badajoz in the south. Since the beginning of the 1980s, industrial provinces like Barcelona, Valencia, Guipúzcoa and Vizcaya, that used to be the traditional attraction poles in the past, have recorded negative net migration balances.

Figure 24: Internal net migration by province, 1988 and 1994

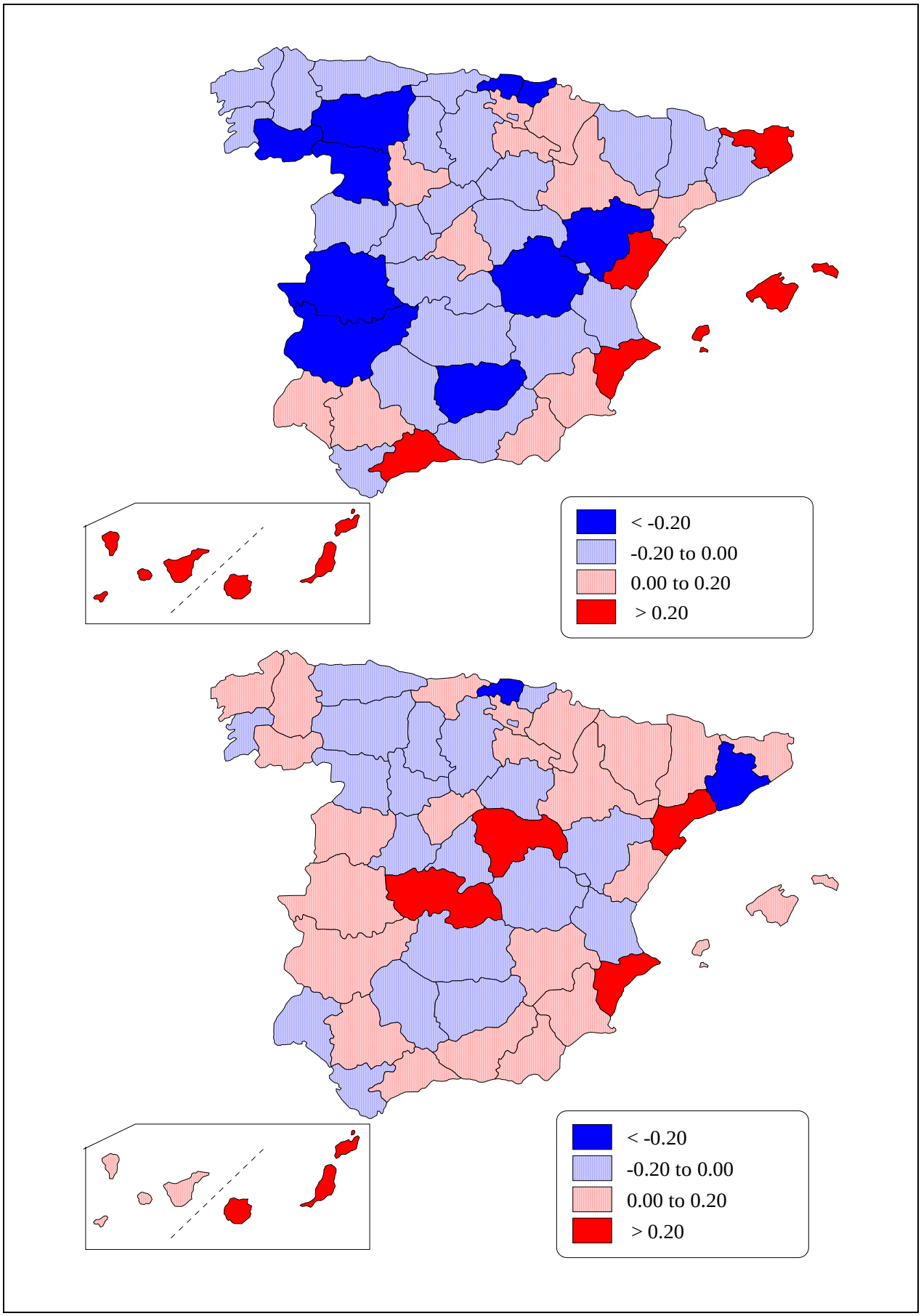


Source: EVR individual registrations, 1988, 1994 (INE)

By 1994, some significant changes had taken place. Madrid's positive internal net migration balance had become negative and the inter-provincial pattern of net migration had become dominated by the net outflows from Madrid, Barcelona, Guipúzcoa and Vizcaya. Huelva and Valladolid saw changes in their net migration balances from positive to negative. The net balances of Toledo, Guadalajara and Segovia, three of Madrid's adjacent provinces, together with Cáceres and Badajoz, had become positive. These are not isolated cases: other provinces like Lleida, Albacete, Granada, La Coruña. Lugo, Orense, Salamanca and Cantabria change from negative to positive net migration. Moreover, the larger net migration losses from southern interior and north western provinces had been largely reduced.

When the net migration balances are standardised to take into account the size of the respective inflows and outflows upon which their calculation is based, the dominance of Madrid and Barcelona is less apparent. The measures of migration efficiency (or effectiveness) shown in Figure 25 provide a useful comparative measure of migration, where the highest positive values reflect the attractiveness of the island provinces in particular, but also the mainland provinces of Girona, Castellón, Alicante and Málaga. In contrast, highest negative efficiencies occur in Vizcaya and Guipúzcoa. By 1994, Guadalajara and Toledo have emerged as the provinces in which net migration represents the highest proportion of total gross migration, along with the provinces identified as most attractive in the previous period. The negative migration efficiencies are lower throughout most of the country in 1994 with the exception of Barcelona whose capacity to generate net losses has increased. In fact, most of the provinces have low efficiency: 24 have efficiency between 0 and 0.2, and 19 are between -0.2 and 0. Some of the reasons underpinning these patterns become clearer when we consider age-specific migration in Chapter 6.

Figure 25: Migration efficiency by province, 1988 and 1994



Source: EVR individual registrations, 1988, 1994 (INE)

Table 8 provides a summary of net migration balances and rates (per thousand population) for aggregations of municipalities in different population size bands. The statistics reveal that, in aggregate terms, the largest municipalities (>100,000) showed substantial net migration losses that increased between 1988 and 1994. Municipalities with populations between 50,000 and 100,000 remained relatively unaffected by net migration, but aggregate gains were experienced in municipalities in all of the other smaller size bands in 1994. The largest volume changes occurred in the municipalities with populations of between 500 and 2,000, whose aggregate net migration changed from -2.8 per thousand in 1988 to 5.2 per thousand in 1994. The highest net migration rate in 1994 is that recorded for the municipalities with the smallest (<100) populations. Suburbanisation and return migration are the processes that explain why the bigger cities are losing population in favour of medium or small municipalities.

Table 8: Net migration by size of municipality, 1988 and 1994

	Net migration		Net migration rate	
Size band	1988	1994	1988	1994
< 101	-117	668	-2.68	13.39
101 - 500	-4,637	1,412	-6.12	1.90
501- 2,000	-6,619	11,960	-2.81	5.23
2,001 - 5,000	232	16,500	0.07	5.23
5,001 - 10,000	7,372	15,388	2.05	4.38
10,001 - 20,000	17,547	25,640	4.13	5.61
20,001 - 50,000	21,715	22,860	4.39	4.47
50,001 - 100,000	3,367	-428	0.93	-0.10
100,001 - 500,000	-2,515	-34,275	-0.20	-3.31
500,001 +	-36,345	-49,725	-4.91	-8.17

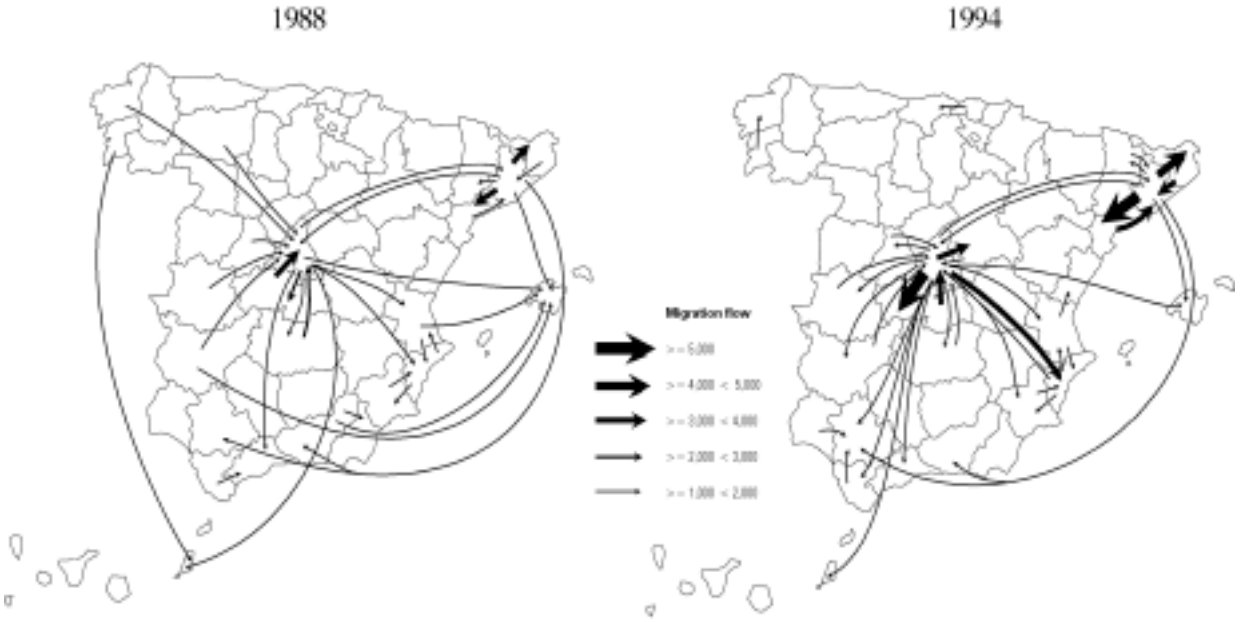
Source: EVR individual registrations, 1988, 1994 (INE)

5.4 Changes in Inter-provincial Migration Flows

A more detailed understanding on inter-provincial migration is derived from the published data on origin-destination flows. The importance of Madrid and Barcelona as the two 'engines' of Spain's inter-provincial migration system both attracting and generating the major flows (defined here to be those with over 1,000 migrants) are evident from the two maps in Figure 26. In both 1988 and 1994, the largest flows are those occurring between adjacent provinces: Toledo in the case of Madrid and Girona and Tarragona for Barcelona. The flow into Madrid from Ciudad Real was also greater than 2,000 in 1988. The turnaround in the flows between Madrid and Toledo is particularly interesting; the 1988 inward flow was greater than the outward in 1988 but by 1994, the net flow was outward from Madrid to Toledo, reaching 6,000

people in 1995. In Catalunya, outward flows from Barcelona to Girona and Tarragona exceeded flows in the opposite direction. In 1988, Madrid was attracting flows of 1,000-2,000 migrants from certain western provinces (La Coruña, León, Ávila, Cáceres, Badajoz) and generating flows of similar magnitude eastwards to the coast (Valencia, Baleares, Alicante, Murcia) and southwards to Sevilla and Granada. By 1990, Madrid was also attracting larger numbers from Cáceres and Badajoz but also from Vizcaya, Asturias, Guadalajara and Jaén, and in 1994, flows from Madrid to Alicante numbered between 2,000 and 3,000.

Figure 26: Major inter-provincial migration flows, 1988 and 1994



Source: (INE, Annual)

The two-way, inter-metropolitan flow between Madrid and Barcelona has been maintained throughout the period. Most other large flows are over relatively short distances i.e. between Barcelona and Lleida, Barcelona and Baleares, Cádiz and Sevilla, Alicante and Valencia, Alicante and Murcia, Pontevedra and La Coruña, and Valencia and Castellón. But there are some longer distance moves from Barcelona to Sevilla and Granada and from Madrid to the Canarias that continued in each year from 1988 to 1994. Long distances movements that were common in the past (e.g. from the south to Madrid, Barcelona and País Vasco) are no longer important flows. Vizcaya and Guipúzcoa are no longer the destinations of major inter-provincial flows and only the out-migration flow from Vizcaya to Cantabria appears in 1994. Sevilla, Alicante and La Coruña received flows from short distances, breaking the monopoly that Madrid and Barcelona had in the past. But the most significant trend, apart from the

turnaround of Madrid and Barcelona and they adjacent provinces, is the long distance migration in the opposite direction to that experienced in the 1960s. Thus, we observe movements from Barcelona to Granada and Sevilla and from Madrid to Ciudad Real, Badajoz, Cáceres and Sevilla. This is further evidence of return migration.

Summary measures of the two aggregate inter-provincial migration matrices have been computed (Table 9), following Bell *et al.* (submitted), showing that whilst the volume and intensity of migration in the system increased, the overall efficiency of net migration in redistributing the population declined significantly. In terms of the spatial focusing of migration across the system, the inter-provincial flows had become more concentrated in 1994 than they were in 1988. The mean distance of migration had dropped by 66 kilometres between the two years and the frictional effect of distance, obtained by the calibration of a doubly constrained spatial interaction model (González Díaz de Rábago, 2000), had increased accordingly.

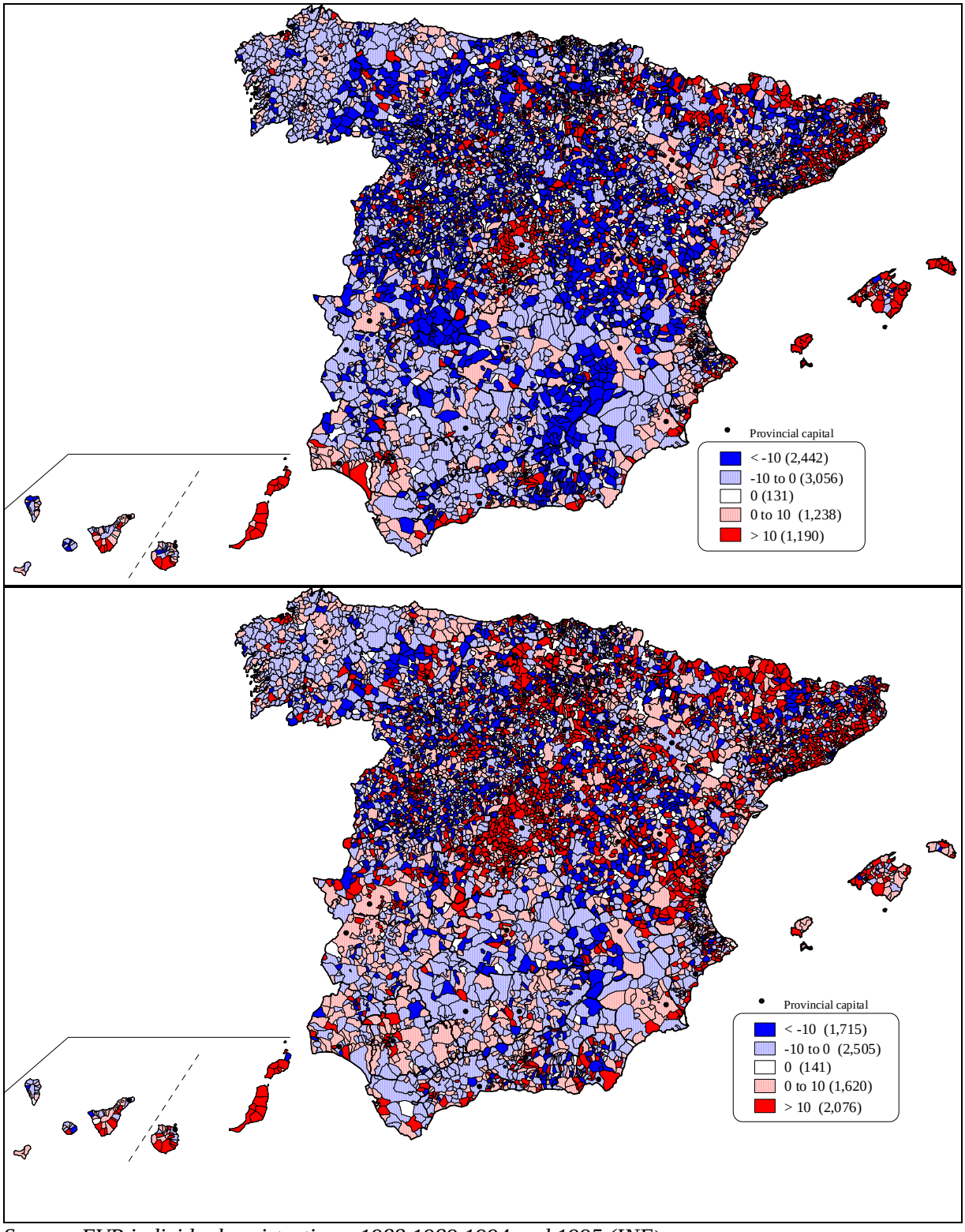
Table 9: Summary statistics of inter-provincial migration, 1988 and 1994

Measure	1988	1994
Total Migration	276,241	298,007
Migration intensity (per 1000)	7.0	7.4
Migration efficiency	17.9	12.7
Migration inequality	0.57	0.58
Migration concentration:		
Sum migration-weighted means	3.3	3.6
Coefficient of variation	2.2	2.6
Mean migration distance (km)	557.6	491.6
Distance decay parameter	0.824	0.985

5.5 Net Migration by Municipality

The EVR data allows us to obtain a more accurate picture of net internal migration at the municipality scale than is possible using the estimates of residual net migration. Figure 27 illustrates the rates of net migration gains and losses per thousand of the population in 1988 and 1994.

Figure 27: Net migration rates by municipality, 1988 and 1994



Source: EVR individual registrations, 1988,1989,1994 and 1995 (INE)

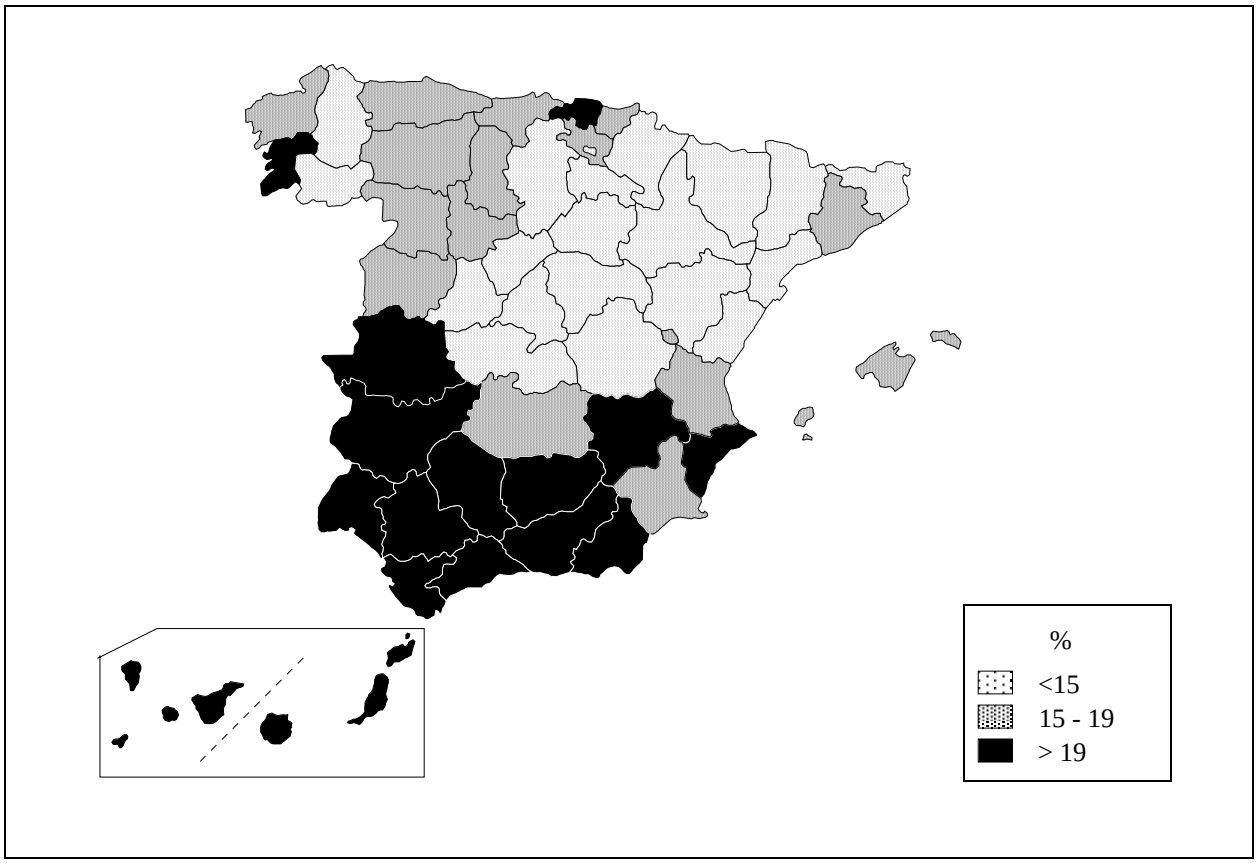
In 1988, a high proportion of the municipalities had negative net migration. The highest negative rates were located in inland areas in Castilla-La Mancha and Castilla-León in provinces like Cuenca, Soria and Salamanca. These areas have experienced considerable depopulation with many municipalities having small and elderly populations. Except for provincial capitals and some of the surrounding cities, fewer areas with net migration gains are identified: the Madrid and Barcelona metropolitan areas, the Ebro and Mediterranean coast axes, the Pyrenean area and large parts of the islands. In 1994, the number of municipalities with positive net migration increased, particularly those with rates higher than 10 per thousand. The suburbanization process has been more intense, not only for the major cities but also for the other cities like Valladolid, Sevilla and León. The axes evident from the 1988 map are also present in 1994, generally with higher rates, as in many municipalities in Navarra, La Rioja and Álava and in several Pyrenean municipalities. The exceptions to this occur along the Mediterranean coast, in Andalucía and in the islands, where gains were lower than in 1994. There is some evidence of new axes appearing in association with the new potential industrial areas from Madrid to Extremadura (south-west), to Valencia and to Burgos (north).

5.6 Net Migration, Unemployment and Density

Is there a relationship between net migration and unemployment in Spain? In other countries, e.g. the UK, there is evidence of a linear relationship such that areas of highest net migration gain have the lowest unemployment rates whereas areas with highest net migration losses have the highest unemployment rates (Rees and Kupiszewski, 1998). In Spain, this relationship is not apparent. Comparison of the aggregate net migration (Figure 24) and efficiency distributions (Figure 25) with patterns of provincial unemployment (Figure 28) in 1991 indicates that some provinces whose net migration changed from negative to positive did not have low unemployment rates. This suggests that classical theories of labour migration as human capital or neo-classical theories in which migration is regarded as an equilibrating mechanism for unemployment (Owen, 1992) are not entirely applicable.

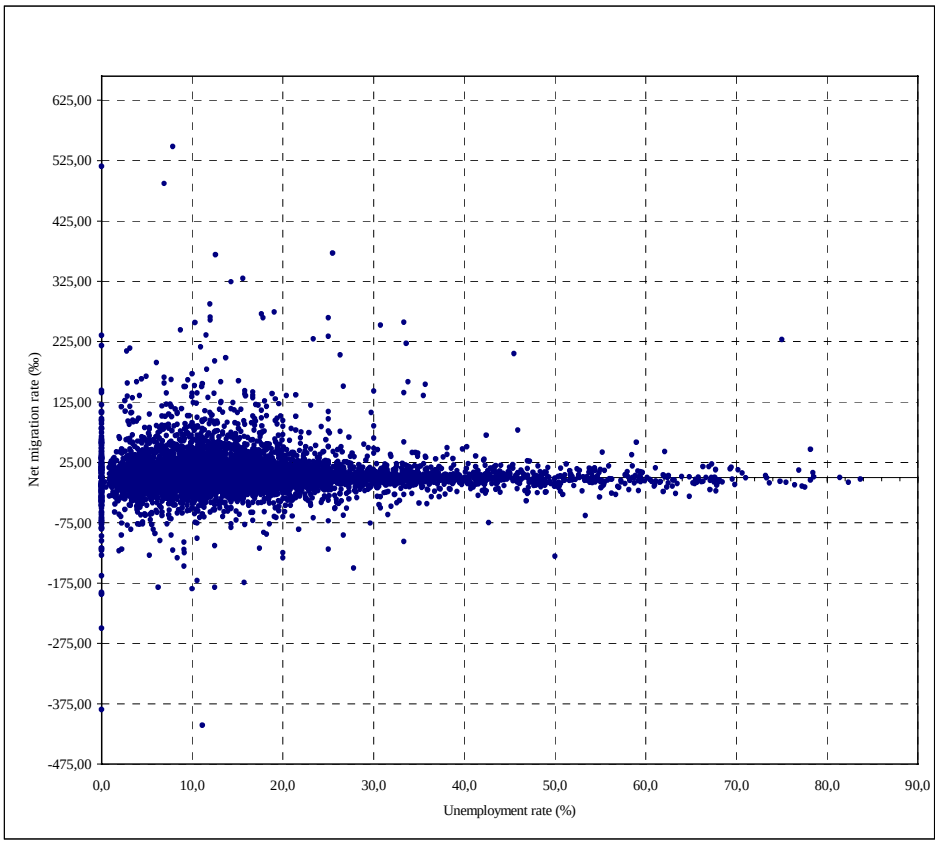
In Figure 29, net migration rates of municipalities in 1994 are plotted against unemployment rates in 1991 and indicate little evidence of net migration showing any distinct pattern of change as unemployment rises. It is likely that the lack of a relationship between net migration and unemployment rates is due partly to the diversity of factors that impact on migration in Spain and the fact that aggregate migration flows contain a host of different types of migrant motivated by different housing, retirement and other non-economic determinants.

Figure 28: Unemployment rates by province, 1991



Source: 1991 Census, INE (1994)

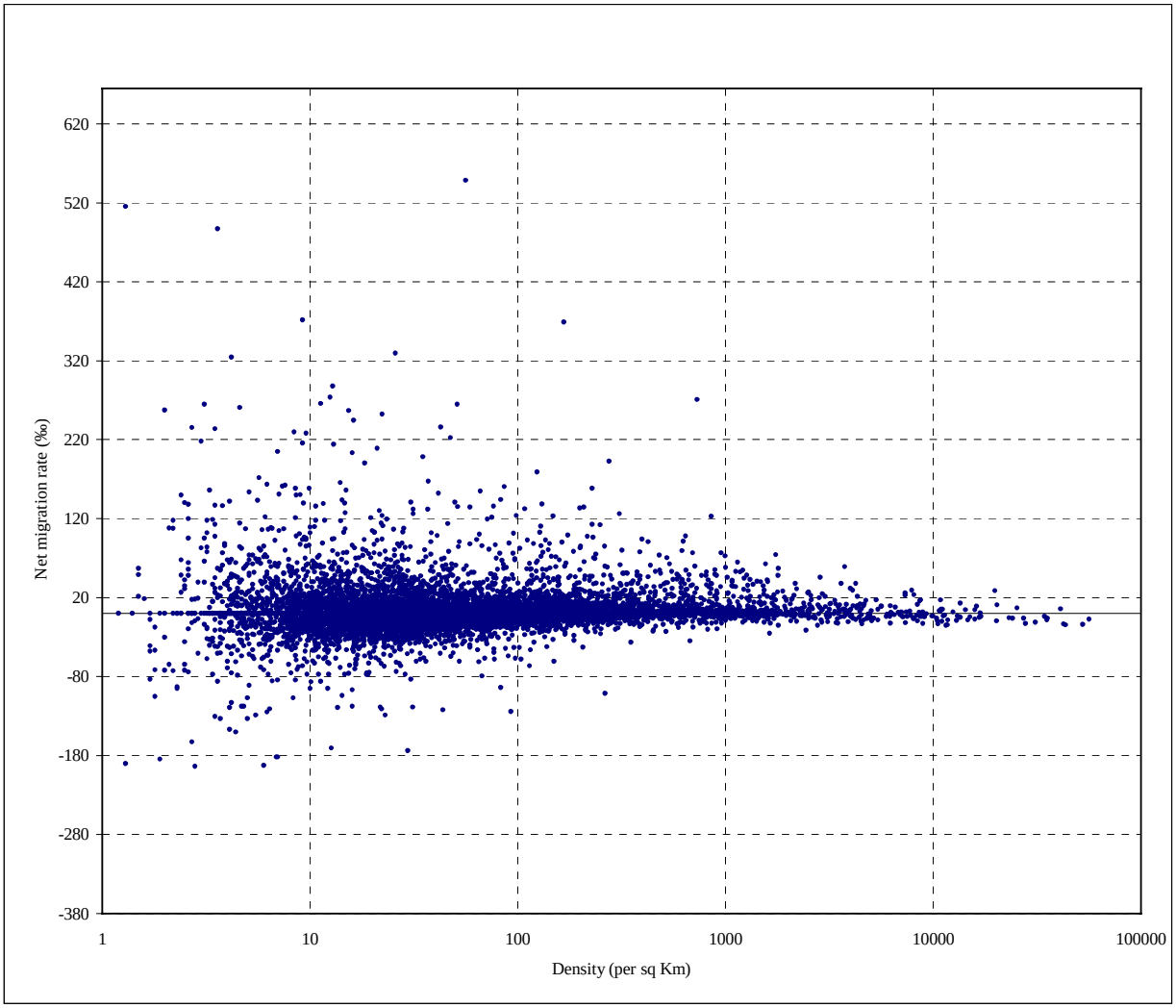
Figure 29: Municipality net migration rates, 1994 against unemployment rates, 1991



Source: EVR registrations, 1994 (INE); unemployment rates, 1991 (INE, 1994)

When municipality net migration rates are plotted against density (using logarithmic scale on the x axis in Figure 30), the scattergram reveals a wide distribution of net rates, both negative and positive, associated with each range of densities. It is only at very high densities that net migration appears to be more consistently negative.

Figure 30: Municipality net migration rates, 1994, against density, 1994



Source: EVR registrations, 1994 (INE); unemployment rates, 1991 (INE, 1994)

6 Age-specific Internal Migration

This section uses the EVR registration data to examine variations that are apparent in the demographic profile of migrants between provinces in Spain. The research questions posed are as follows:

- What are the differences in the levels of male and female migrants?
- How different are the age-migration schedules for longer and shorter distance migration?
- How do inter-provincial net migration rates vary spatially between age groups?
- What age-specific variations in migration efficiency are evident at the provincial scale?
- Which provinces show similar patterns of age-specific net migration?

Sex and age differentials have become important foci for migration researchers and in Section 6.1, we use sex ratios to indicate briefly the differences between the numbers of males and females who migrate, before examining the age schedules of inter-provincial and intra-provincial migrants. Our analysis concentrates on age in this chapter since differences by age are far more significant than variations by sex. In Section 6.2, age-specific net migration rate patterns are mapped and changes between 1988 and 1994 are identified. Provinces are categorised according to their aggregate migration efficiencies in 1988 and 1994 (Section 6.3) and certain provinces are selected to illustrate and explain the changes occurring in age-specific efficiencies between the two 12 month periods. The spatial variation in migration efficiencies in three broad working age groups is considered in Section 6.4.

6.1 Migration Sex Ratios and Age Schedules

Table 10 presents the crude sex ratios for migration in Spain at different spatial scales and indicates that more males than females migrated in each case. The differential is most pronounced for immigrants. The ratio is higher for inter-provincial rather than intra-provincial movements but the inter-provincial ratio drops between 1988 and 1994; male inter-provincial migration increased by 6.2% whereas female inter-provincial migration increased by 10.3%. Thus, by 1994, 1,006 males moved between provinces for every 1,000 female migrants compared with 1,045 males for every 1,000 females in 1988.

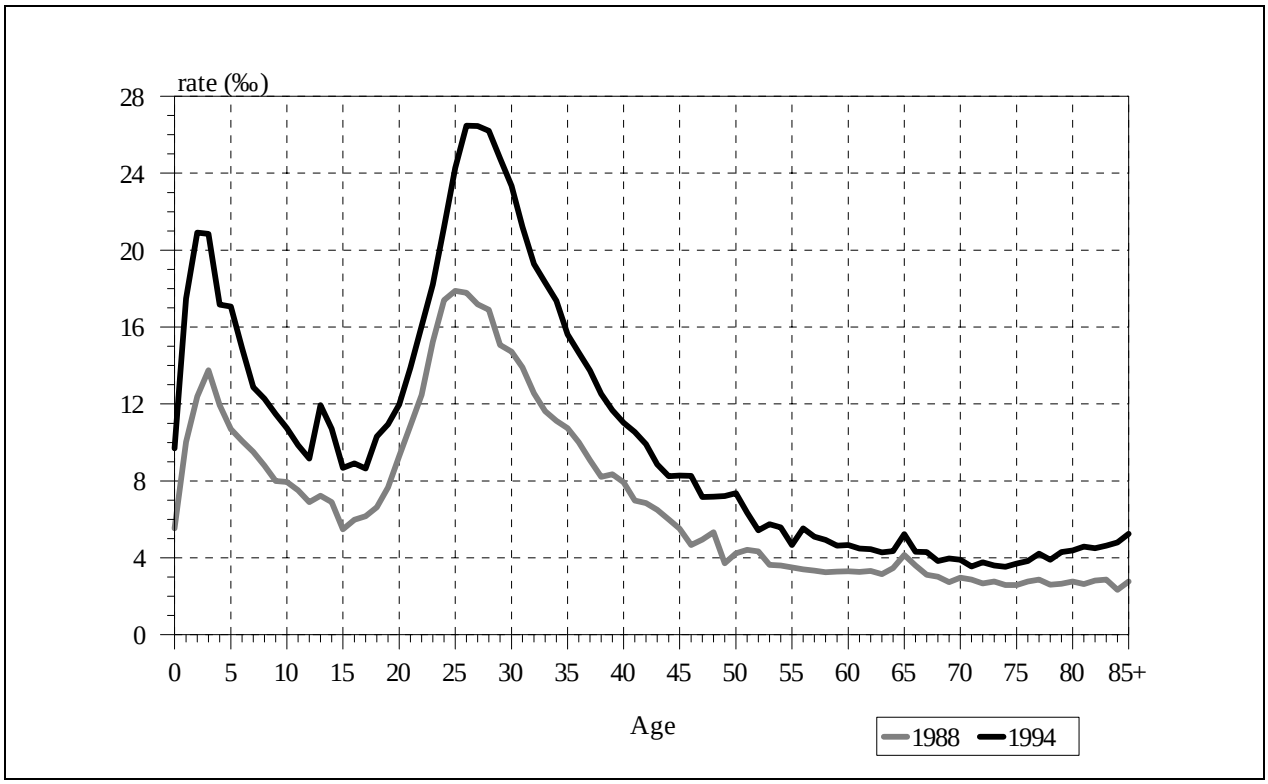
Table 10: Male/female ratios for migration, 1988 and 1994

Scale	1988	1994
Intra-province	1.0057	1.0028
Inter-province	1.0446	1.0057
Immigration	1.0648	1.1181
Total	1.0256	1.0086

Source: EVR registration data (INE)

The propensity to migrate varies with age as different events at particular stages in the life course induce individuals to move house either alone or with others. The seminal work of Rogers *et al.* (1978) has shown that the relationship between migration rates and age takes a general form that can be modelled. The age schedule typically consists of a pre-labour force or child component, a labour force component and a post labour force or retirement component, together with a constant component that reflects the underlying propensity to move at all ages. It is the labour force component that typically contains the majority of migrants and migration rates for young labour migrants tend to be by far the highest rates. Whilst working age in Spain starts, in theory, at age 16 and finishes at 65, in reality, many young people stay on in the education system for several years and early retirement has increased since the 1980s. The EVR data indicates that 71% of moves between municipalities were of working age in 1988 and 74% in 1994, an increase partly attributable to the cohort effect of a growing percentage of the total population of working age (Olivera and Abellán, 1997). The percentages were slightly higher for inter-provincial migrations compared with intra-provincial migrations. The age schedules for rates of migration between municipalities within the provinces or between provinces are shown in Figures 31 and 32. Although there are similar proportions of migrants in the three different components of the schedules, the rates of migration vary more dramatically in the pre-labour force and labour force ages in the case of intra-provincial migration and the increases between 1988 and 1994 are clearly evident across all ages at this scale. After the initial rise in propensities from age 0 to 3, child migration rates decline exponentially, in general terms, until age 15 as families feel the impacts of schooling on their migration behaviour. Thereafter, both intra-provincial and inter-provincial migration rates rise rapidly as teenagers and young adults move in search of new or improved work opportunities. The rates peak slightly earlier in 1988 at around age 24/25 and slightly later in 1994 at around age 26/27.

Figure 31: Age schedules, intra-provincial migration, 1988 and 1994

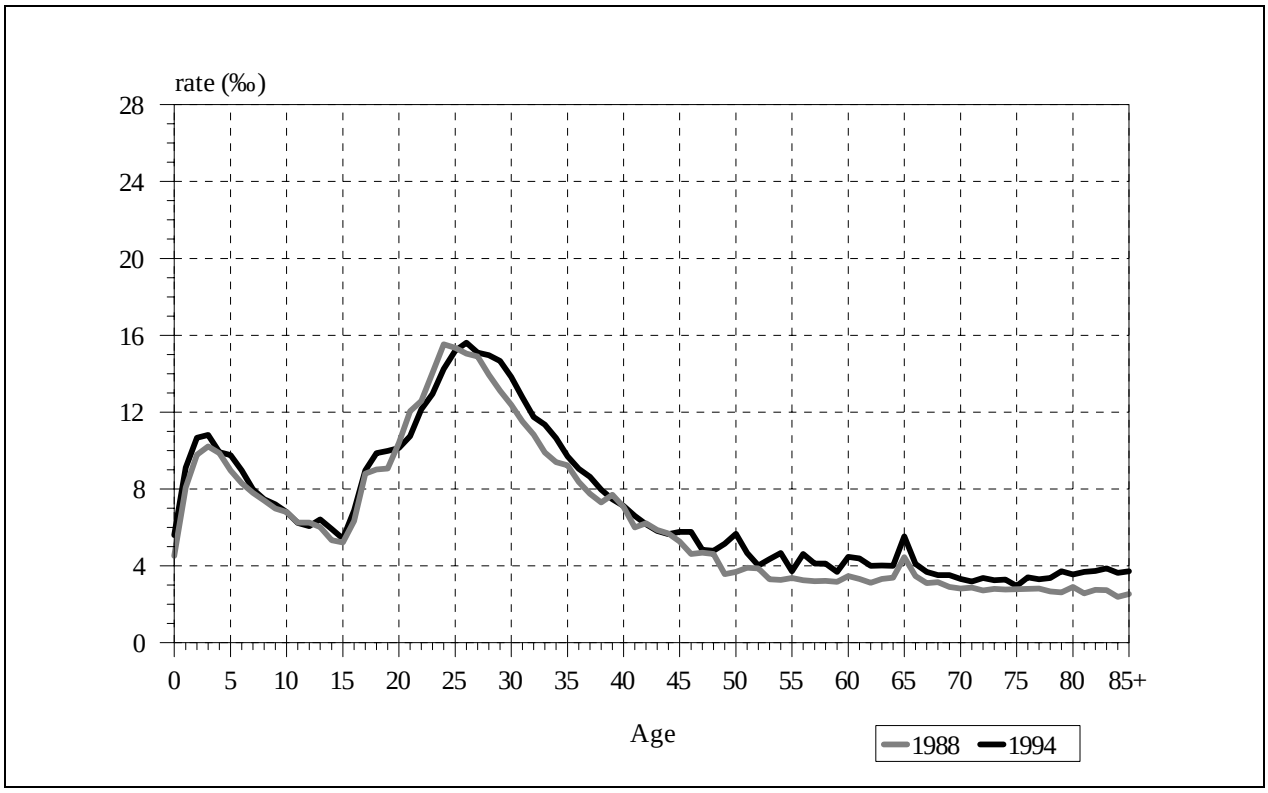


Source: EVR registration data (INE)

In comparison with the UK (Stillwell *et al.*, 1996), this peak is relatively late and the duration of time from the low point at the start of the labour force component to the high point is relatively long. Although many teenagers continue with their education beyond age 16 and go onto study in higher education, the student component of inter-provincial migration in this age range is likely to be relatively small because most students go to their local university. Limited access to labour markets and problems associated with finding better opportunities are likely to be factors explaining the delayed peak.

Migration rates fall in the mid-working ages as people become settled in jobs and have families. Thereafter, in the latter working age range, migration rates stabilise at around 4 per thousand for both intra-provincial and inter-provincial moves. Small peaks are seen in all four schedules coincident with the official age of retirement when many people move to their vacation residences, to sunbelt retirement homes or to destinations back in areas from which they originated. The schedules for 1994 both show rates of migration rising after age 75 as elderly people move to be near relatives, health facilities or care services.

Figure 32: Age schedules, inter-provincial migration, 1988 and 1994



Source: EVR registration data (INE)

6.2 Age-specific Net Migration

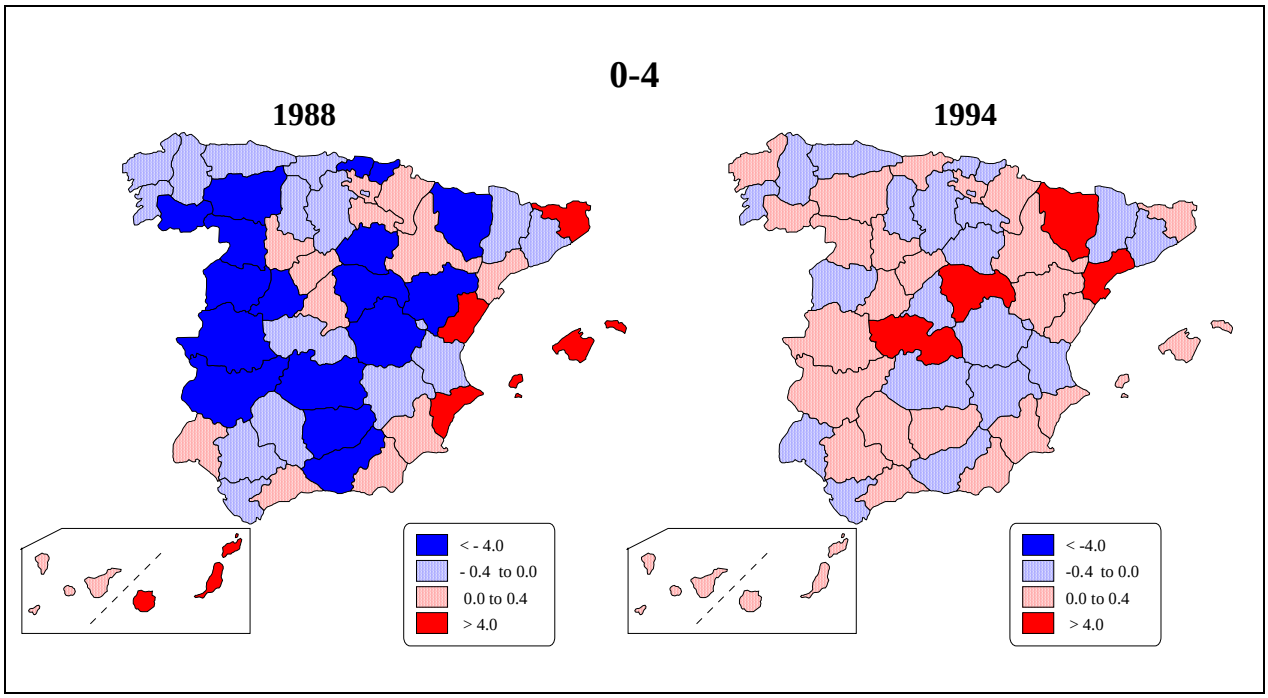
One of the most interesting characteristics of internal migration in Spain is the distinctive geographical differences that occur in rates of net migration per 1,000 people depending on the age of the migrants. The net migration rate balances for five-year age groups for 1988 and 1994 shown in Figure 33 contain a wealth of detailed information and it is clear that the motivation to migrate between provinces varies significantly according to stage in the life course. The most notable difference between 1988 and 1994, in general terms, is that the higher rates of net migration loss tend to have disappeared by 1994. The patterns of net migration in 1988 have a much wider range of rate values for age groups up until advanced age whilst the 1994 patterns are more homogeneous with relatively few rates in the high negative or positive ranges.

The net distributions of child migrants (age groups 0-4, 5-9 and 10-14) are very similar to those migrants aged 30-45 since together they represent family movement patterns. Since young adults migrate primarily for reasons associated with work, the patterns of net migration gain tend to align with the areas where economic development is most dynamic in the country - the islands, the Mediterranean and Ebro axes and Madrid. Toledo and Guadalajara have positive net migration overall because of the residential movements from Madrid, although it is the case that industry is also deconcentrating to these areas (Méndez and Caravaca, 1997). A similar

situation in experienced in Cantabria, with gains in 1994 because of the development its tourist sector and in-migration from in Vizcaya (Reques, 1997). While Madrid remains a province of net migration gain in 1988 and 1994, Barcelona has negative balances, losing its capacity to gain young working age people. A good example of the impact of the new development areas is shown in the map for 30-34 year olds in 1994, when compared to that for 1988. Guadalajara and Toledo have the highest rates followed by Tarragona and Girona, demonstrating the evolution of the Madrid and Barcelona conurbations. Almería, Álava and Alicante make up the second group of provinces with rates over 5 per thousand. The islands provinces and Málaga do not have rates amongst the highest group but are still important poles of attraction.

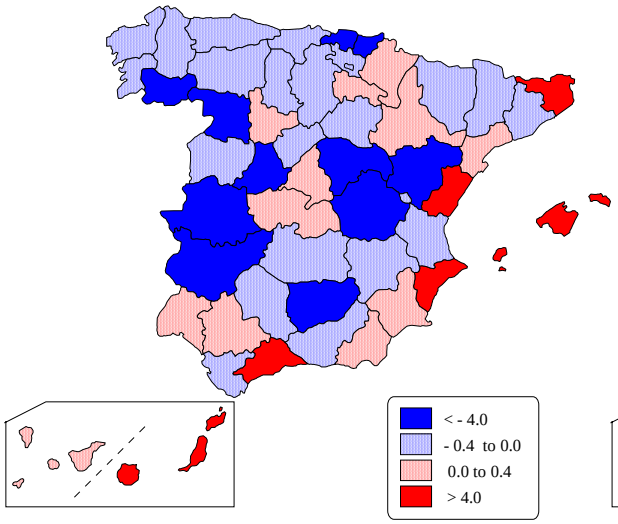
Beyond the 35-39 age group, although rates are lower, it is evident that more provinces have net migration gains, especially in 1994. The patterns tend to be more dispersed and when age increases, fewer provinces have negative net migration. Those that do have net losses are exactly the ones that were the most important poles of in-migration during the phase of rural exodus. An example of this is for those aged 65-69 in 1994, where net migration losses are found in Madrid, Vizcaya, Barcelona, Guipúzcoa, Asturias, Valencia, Valladolid and Zaragoza. This map might well be the reverse of that showing the net migration balances in the 1960s and it is this pattern that demonstrates the impact of return migration in older age groups which will be analysed in Section 7. The patterns of net migration rates for the older ages in Figure 33 have some similarities with the patterns of net redistribution of young adults.

Figure 33: Net migration rates by five-year age group, 1988 and 1994



5-9

1988



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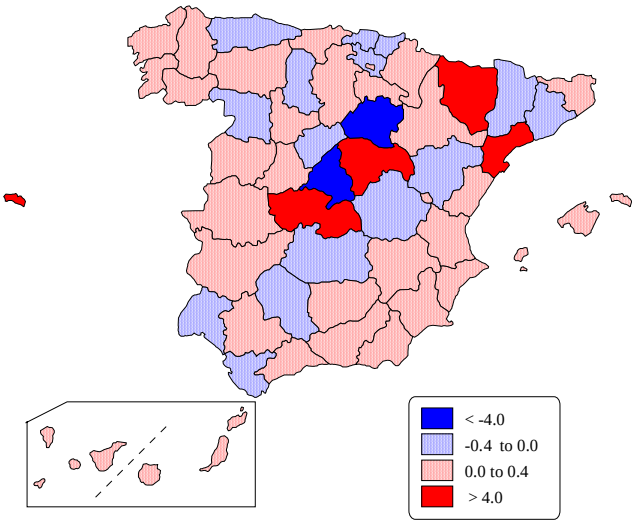
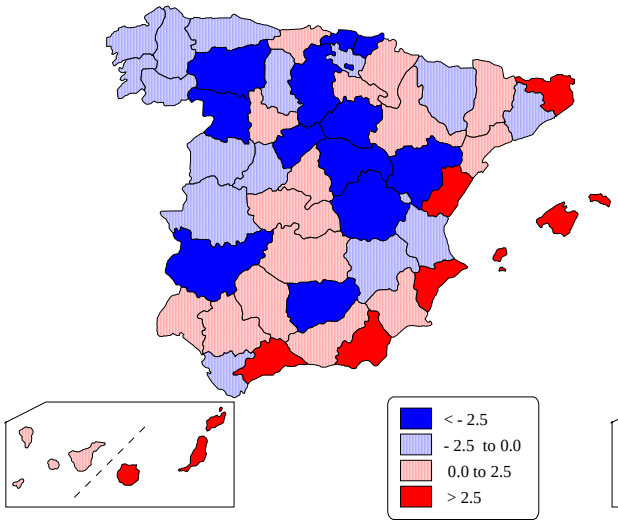


10-14

1988



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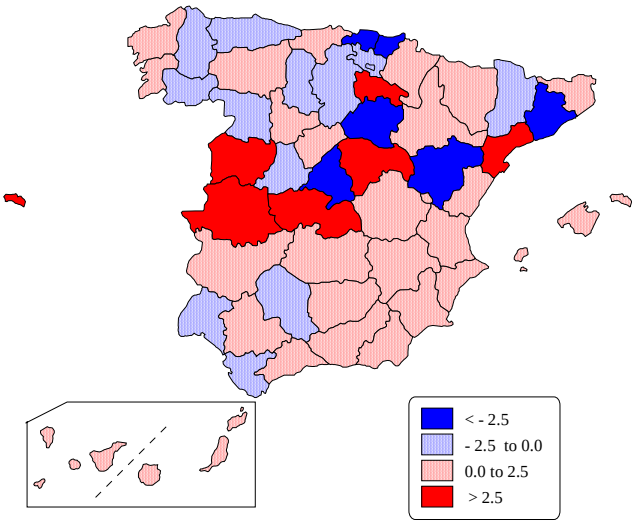
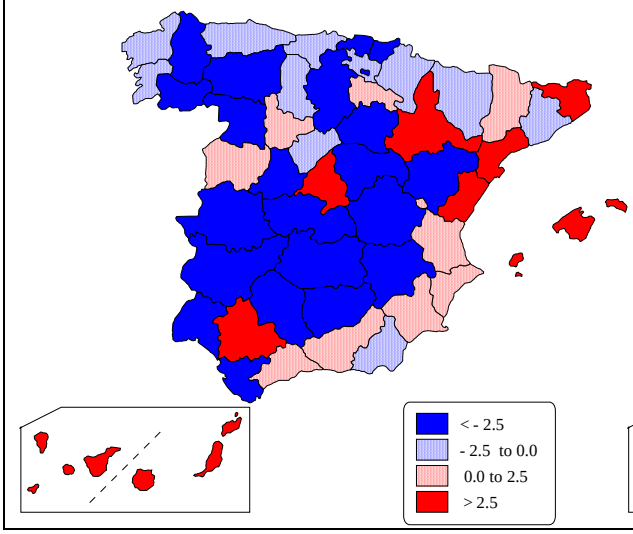


15-19

1988



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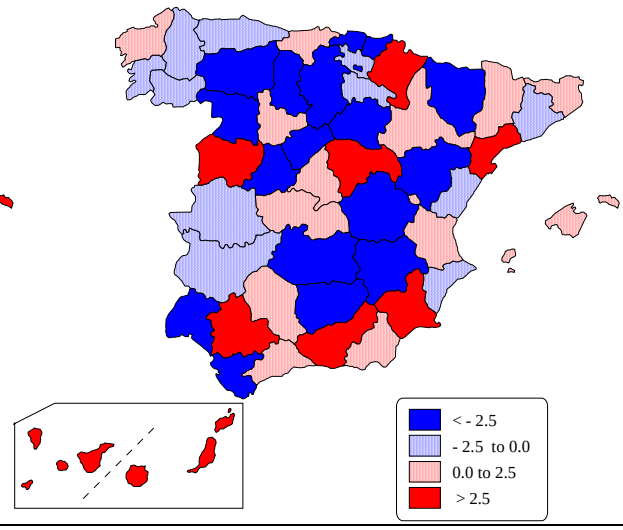
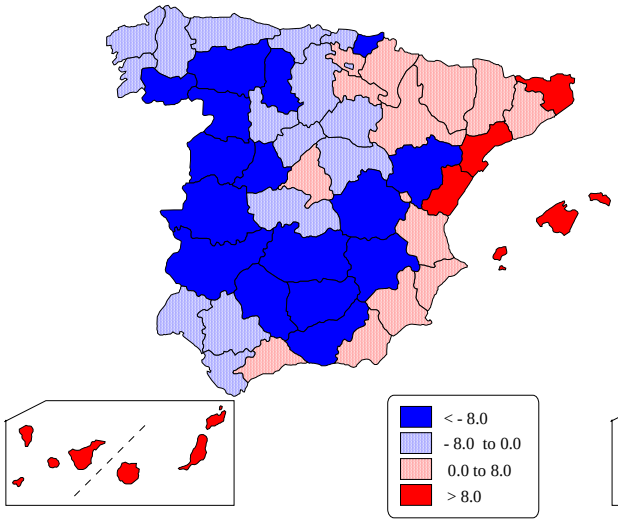


20-24

1988



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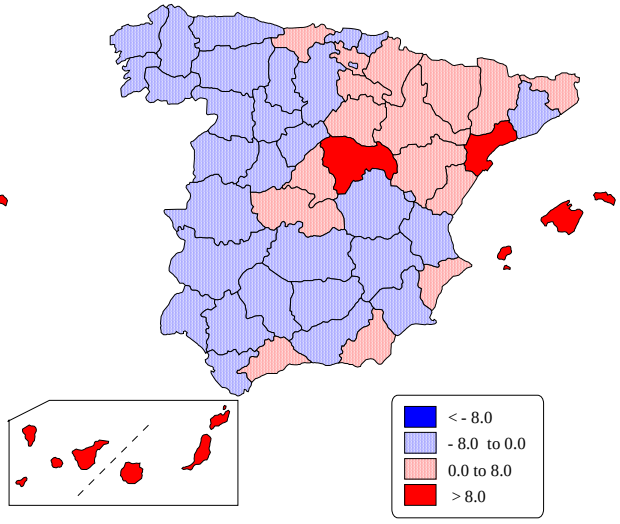
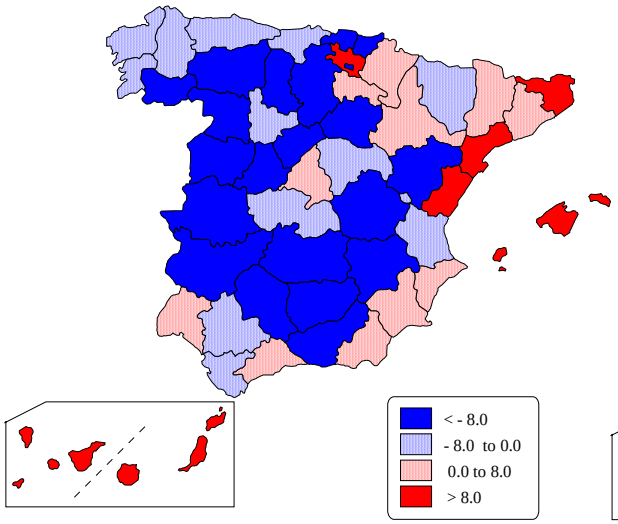


25-29

1988



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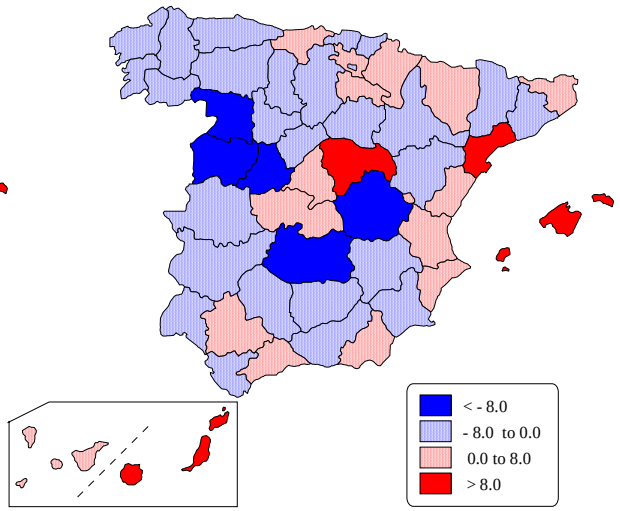
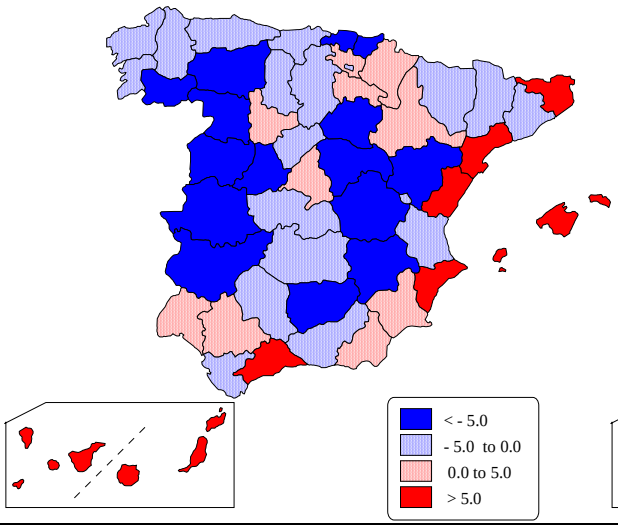


30-34

1988



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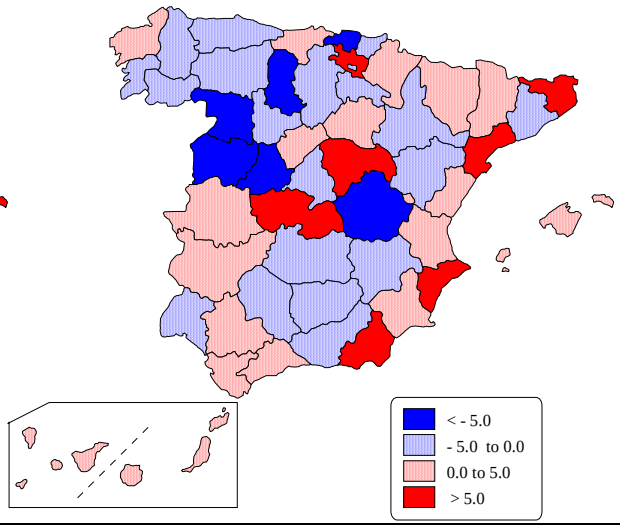
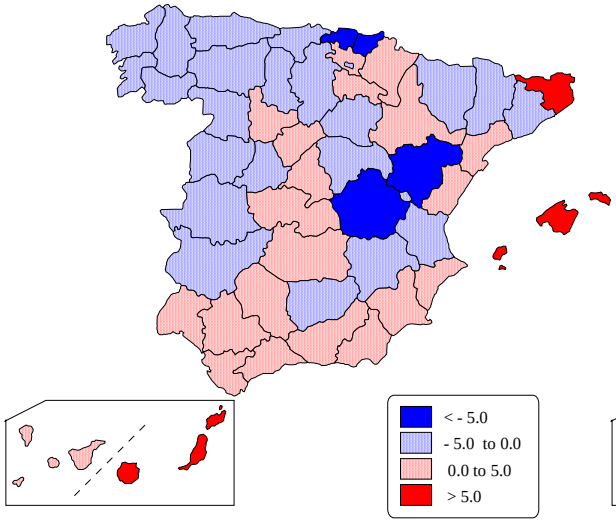


35-39

1988



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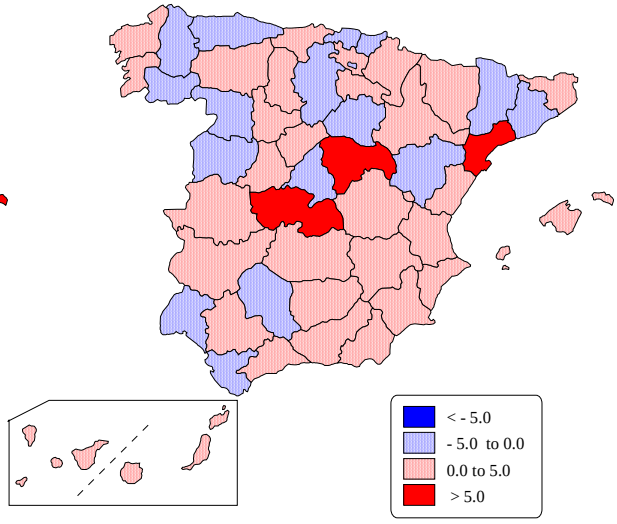
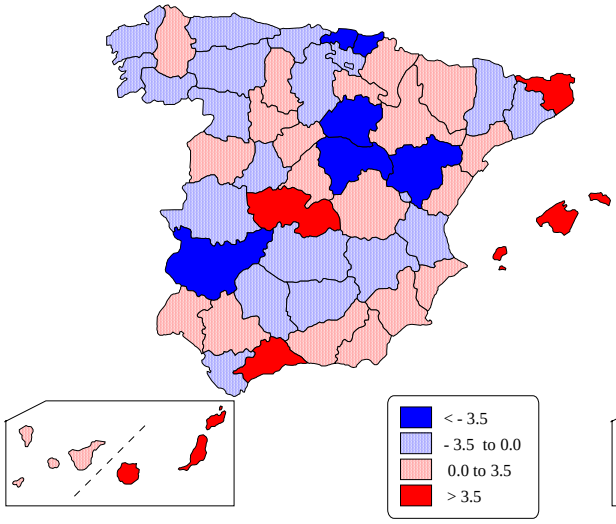


40-44

1988



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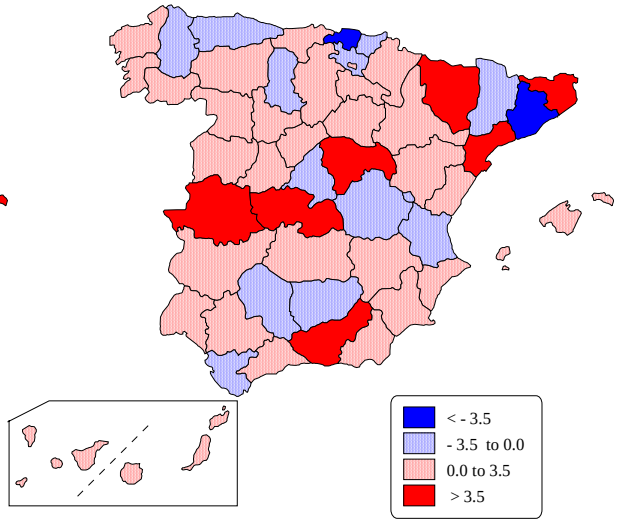
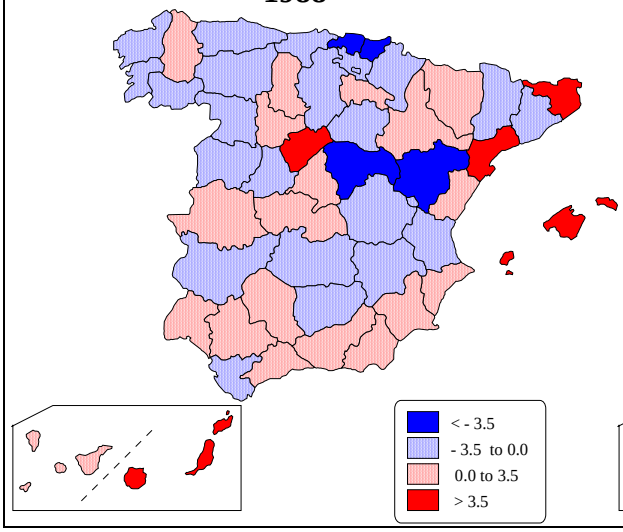


45-49

1988



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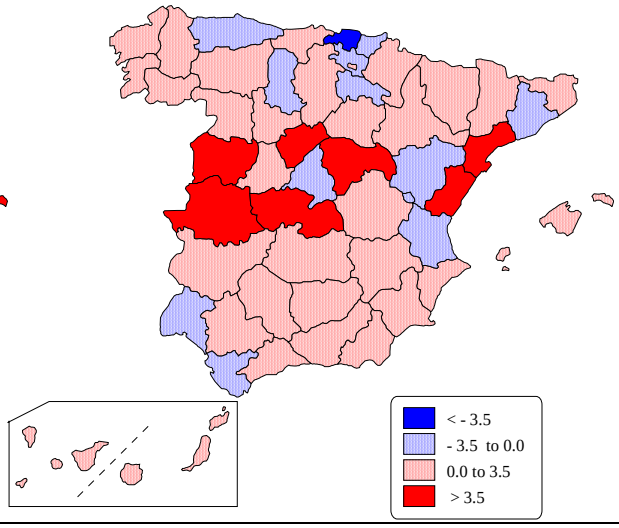
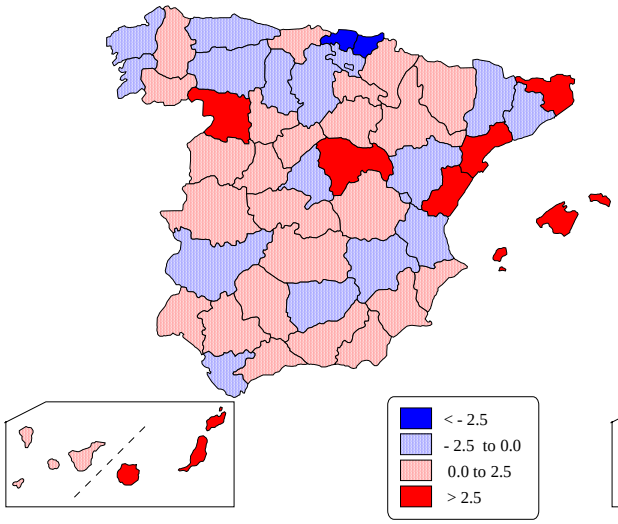


50-54

1988



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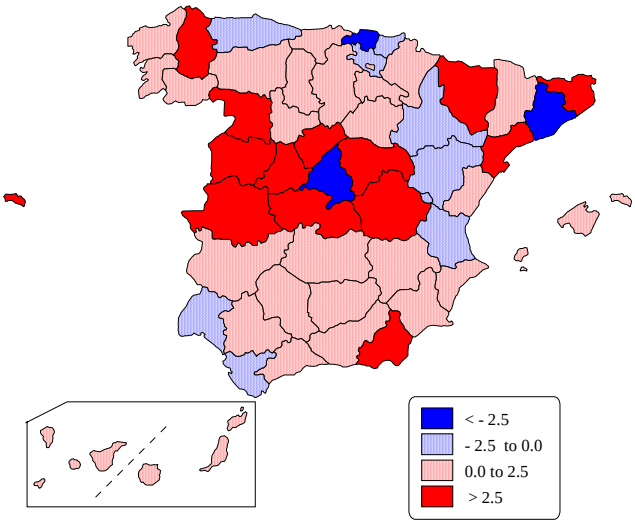
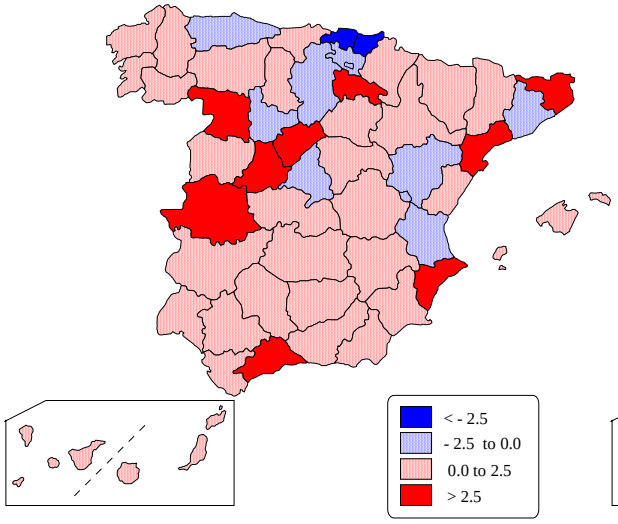
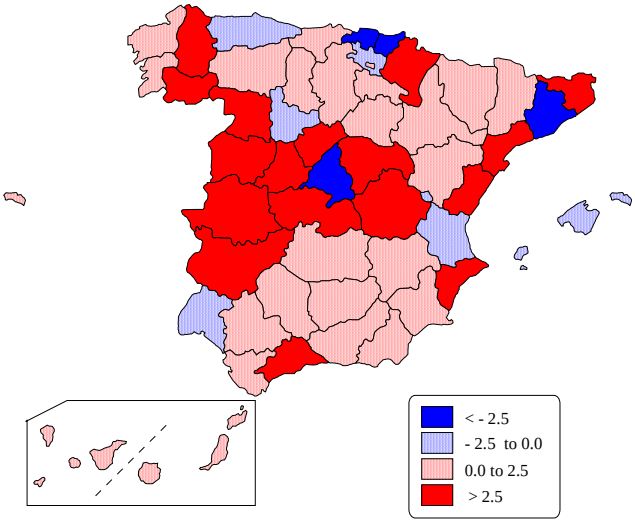


55-59

1988

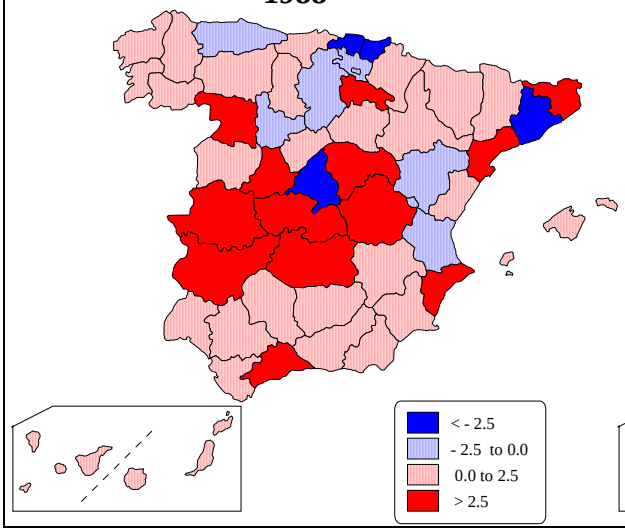


1994

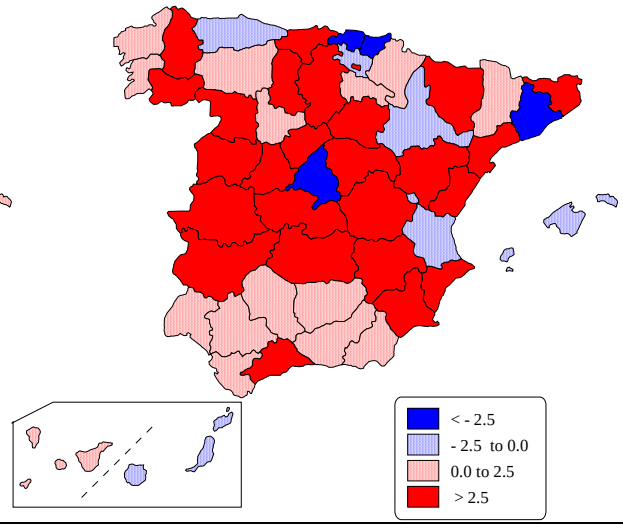


60-64

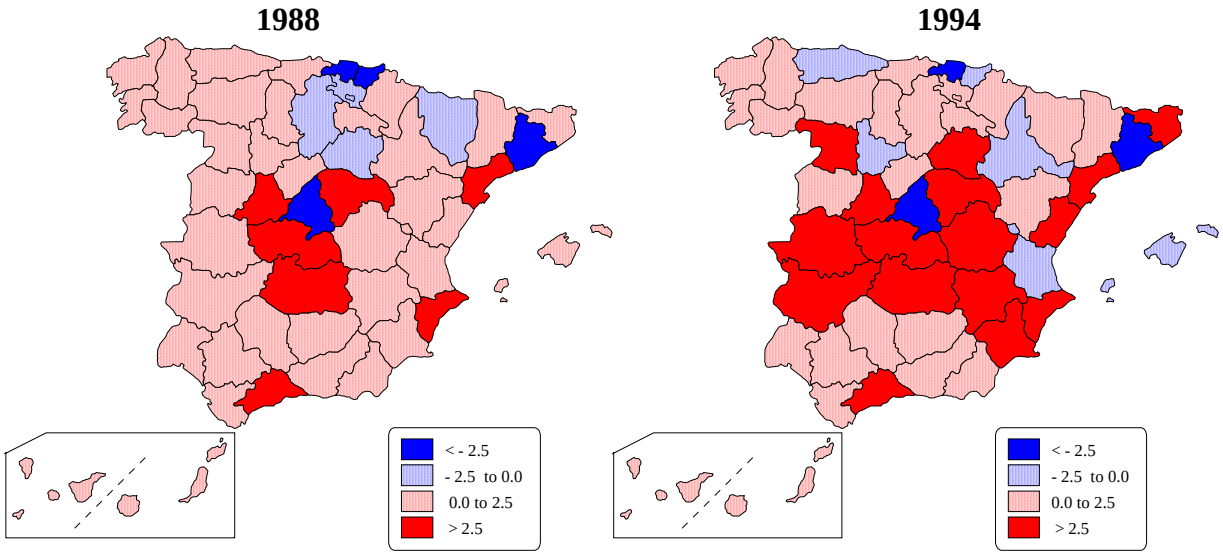
1988



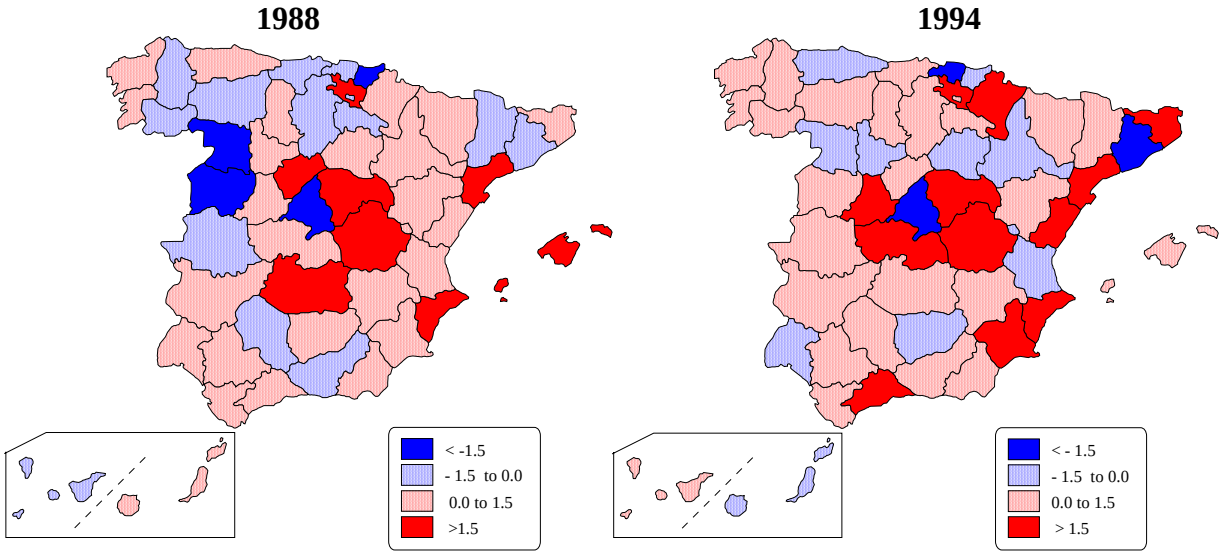
1994



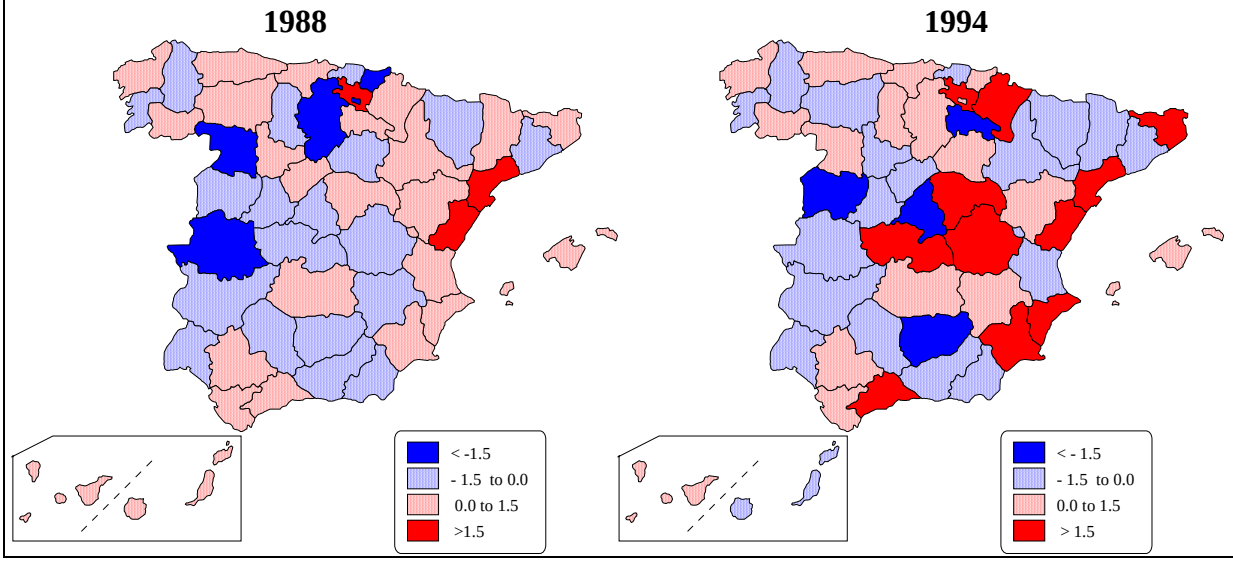
65-69

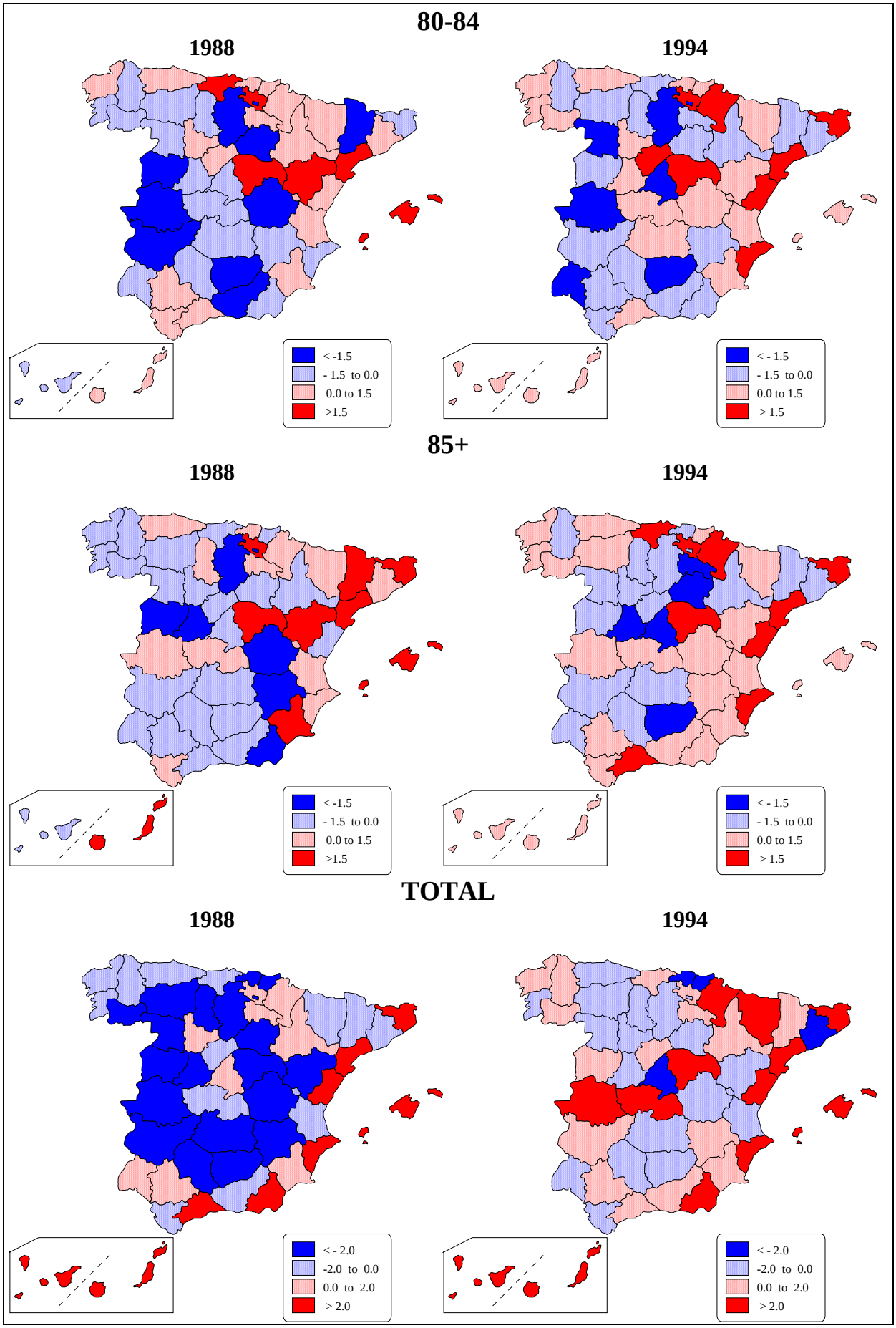


70-74



75-79



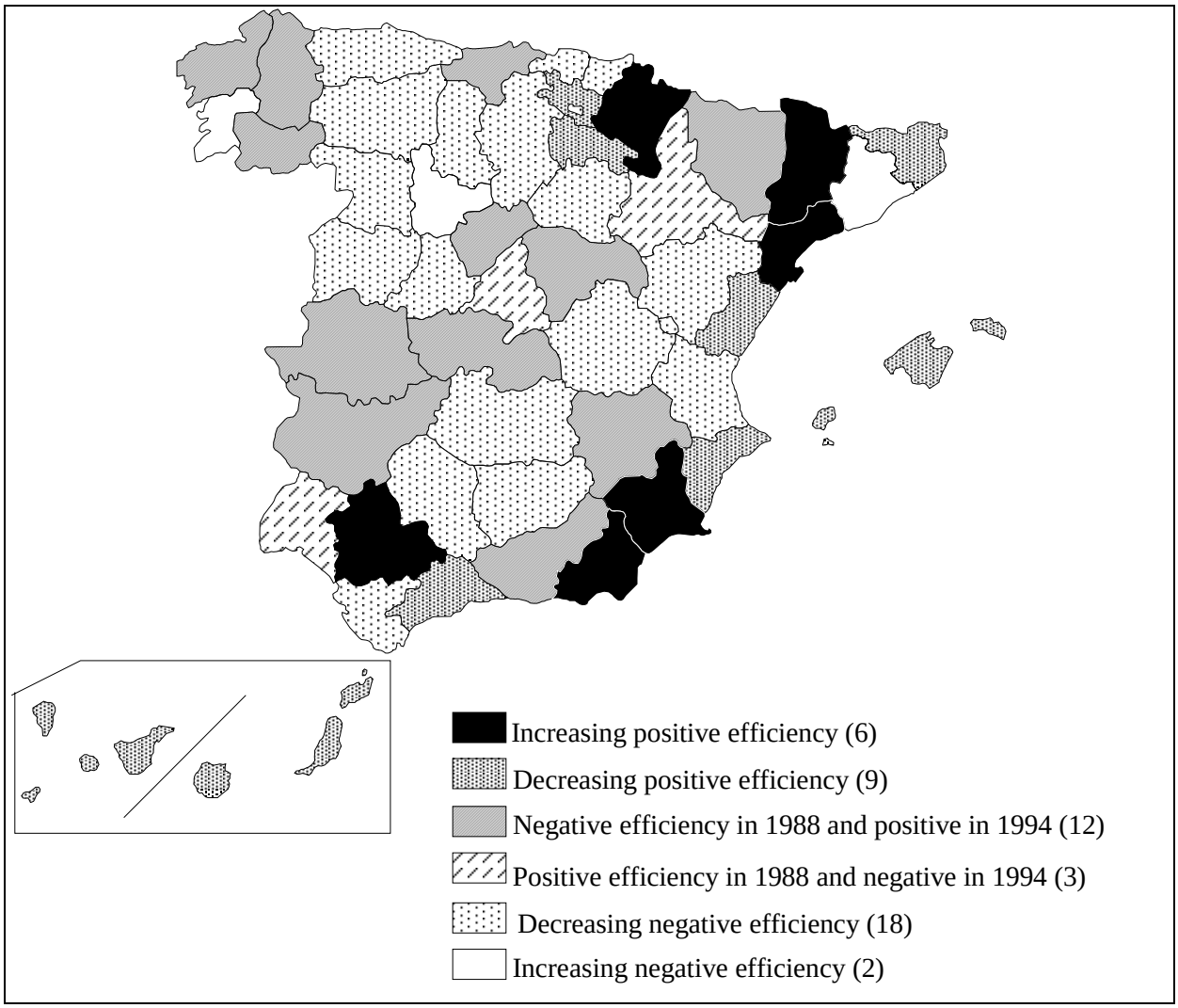


Source: EVR individual registrations 1988, 1994 (INE)

6.3 Age-specific Migration Efficiencies: Provincial Classification

A comparison of aggregate net migration efficiencies in 1988 and 1994 enables provinces to be classified (Figure 34) as those with positive scores in both years, those changing sign between 1988 and 1994; and those with negative values in each year. In this section, we look at the particular examples of provinces in each of these categories, using five-year age group data to provide a more detailed understanding of the components of aggregate efficiencies and to demonstrate how age variations changed between 1988 and 1994.

Figure 34: Changes in migration efficiency by province, 1988-94



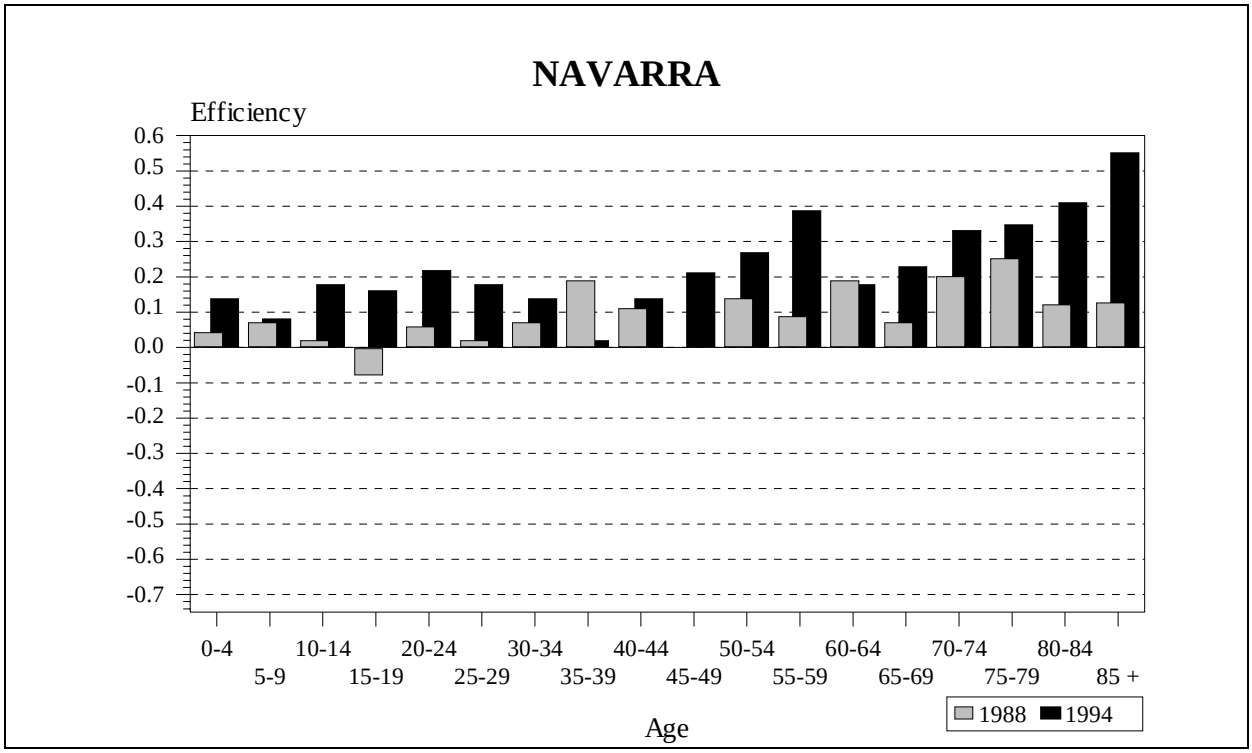
Source: EVR individual registrations 1988, 1994 (INE)

- ***Provinces with positive efficiency in 1988 and 1994***

This category contains 15 provinces mostly drawn from the Mediterranean and Ebro axes. They can be sub-divided into those with increasing and decreasing positive efficiency.

Increasing efficiency (Almería, Lleida, Murcia, Navarra, Sevilla and Tarragona): Almería and Murcia have both developed tourism and intensive agriculture relatively recently. Sevilla is undergoing consolidation as a regional capital and major service centre (Serrano, 1987; Bernabé and Albertos, 1986). Tarragona has a very diversified economy, where the chemicals industry is very important and summer tourism (Costa Dorada) has boomed. Tarragona is also influenced by out-migration from Barcelona (61% of its in-migration in 1994 came from Barcelona) and municipalities close to the border, like Cunit and Calafell, have received in-migrants as part of Barcelona's extensive suburbanisation (García Coll, 1999). The most spectacular increase in migration efficiency from 6% to 17% occurred in Navarra (Figure 35), with improvements in all age groups except 35-39 and 60-64. The economic development of Ebro Valley, and of Navarra in particular, is explained by Méndez and Caravaca (1993).

Figure 35: Migration efficiency by age, Navarra, 1988 and 1994

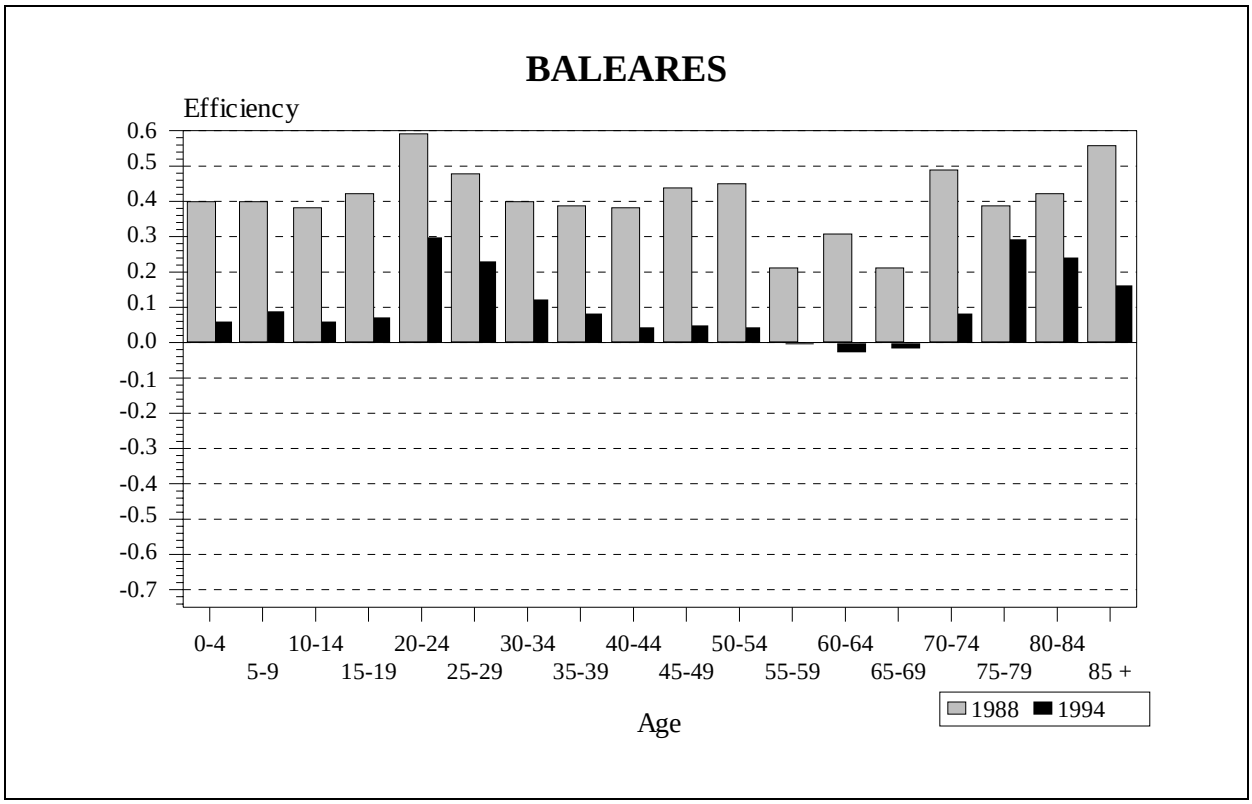


Source: EVR individual registrations 1988, 1994 (INE)

Decreasing efficiency (Álava, Alicante, Baleares, Castellón, Girona, Rioja, Málaga, Las Palmas, Santa Cruz de Tenerife): The provinces in this category are the main tourist provinces as Baleares, Las Palmas and Girona whose in-migrant total fell between 1988 and 1994. Rivero and Salvà (1999) suggest that the number of tourists from Europe to the Balearic Islands declined between 1989 and 1990 due to recession in the countries of origin, resulting in a

decline in investment and a decrease of labour in-migration. Figure 36 shows how, in the Baleares, efficiencies fell in all age groups and became negative for those aged 55-69.

Figure 36: Migration efficiency by age, Baleares, 1988 and 1994



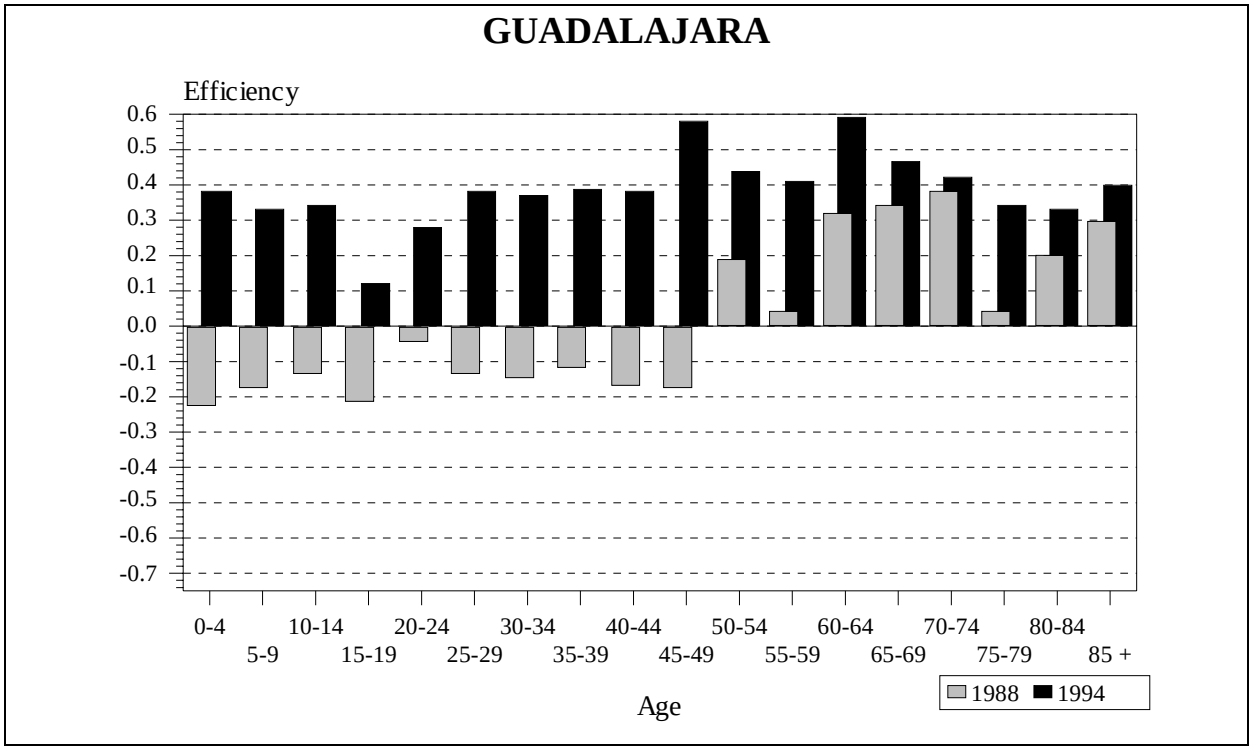
Source: EVR Individual registrations 1988, 1994 (INE)

- ***Provinces with changing efficiency between 1988 and 1994***

There are 12 provinces whose migration efficiency changes from negative to positive and three in the opposite direction.

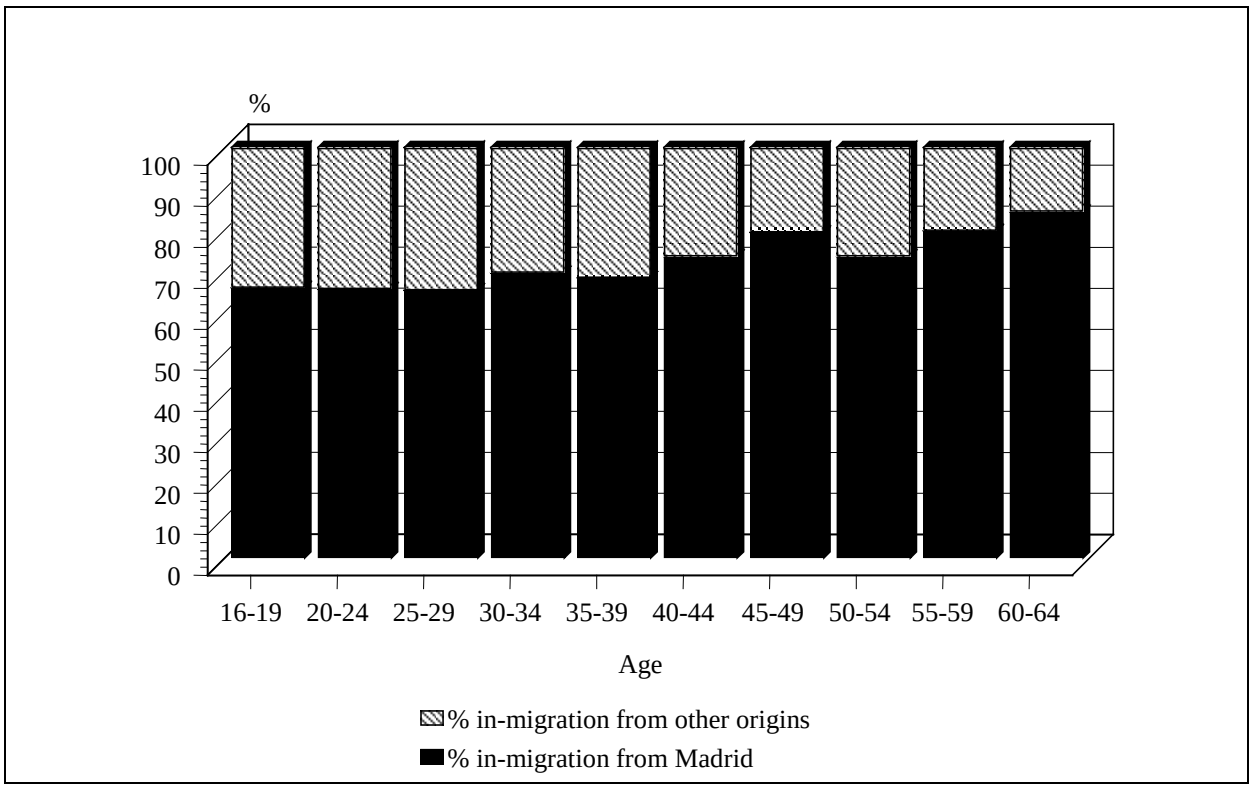
From negative to positive (Albacete, Badajoz, Cáceres, Coruña, Granada, Guadalajara, Huesca, Lugo, Orense, Cantabria, Segovia and Toledo): Many of these provinces have experienced net migration losses in the past. In some cases, out-migration has diminished, but in most cases, change has occurred due to increased in-migration. Efficiency tends to be generally close to zero although they are higher in Cantabria, Toledo and Guadalajara. In Cantabria, the effect of in-migration from neighbouring Vizcaya is important, and in Guadalajara and Toledo, efficiency is positive in all the ages. The increases in Guadalajara are especially pronounced in later working age groups (Figure 37). In 1994, around 70% of in-migrants to Guadalajara came from Madrid and in some older age groups, the proportion exceeded 80% (Figure 38).

Figure 37: Migration efficiency by age, Guadalajara, 1988 and 1994



Source: EVR individual registrations 1988, 1994 (INE)

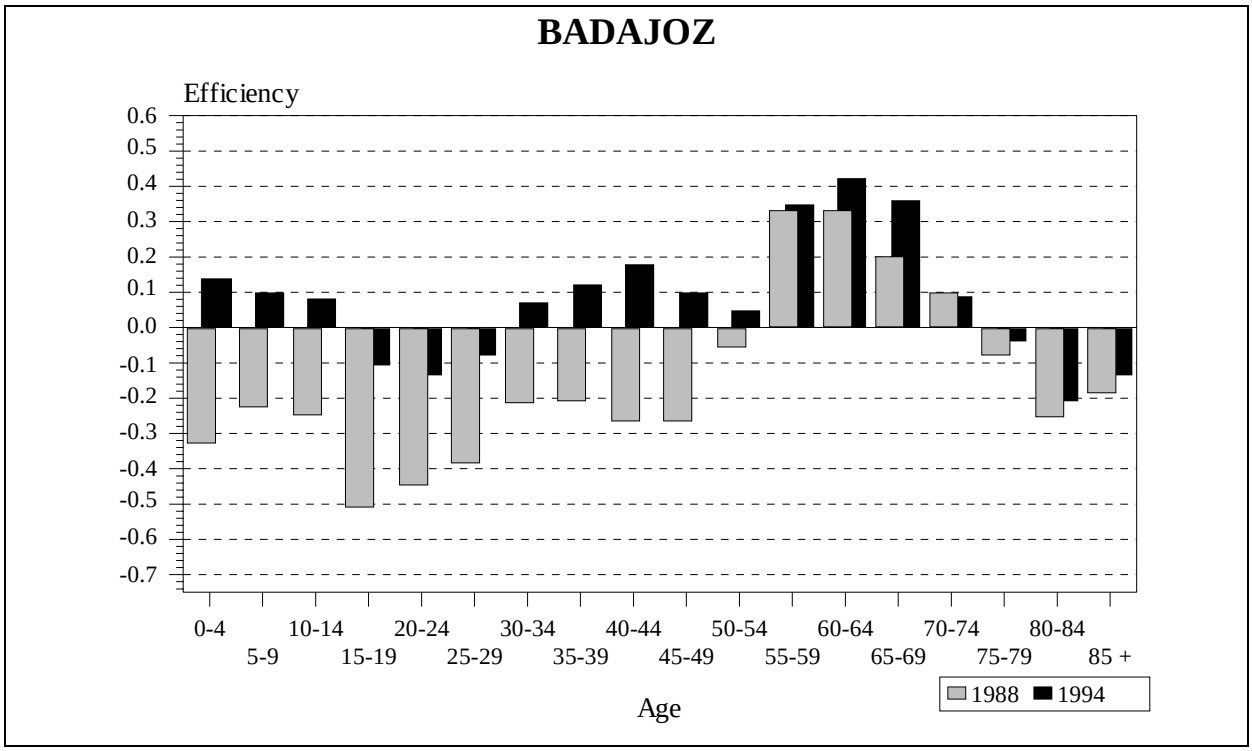
Figure 38: Proportion of in-migrants to Guadalajara from Madrid and elsewhere, 1994



Source: EVR individual registrations 1988,1994 (INE)

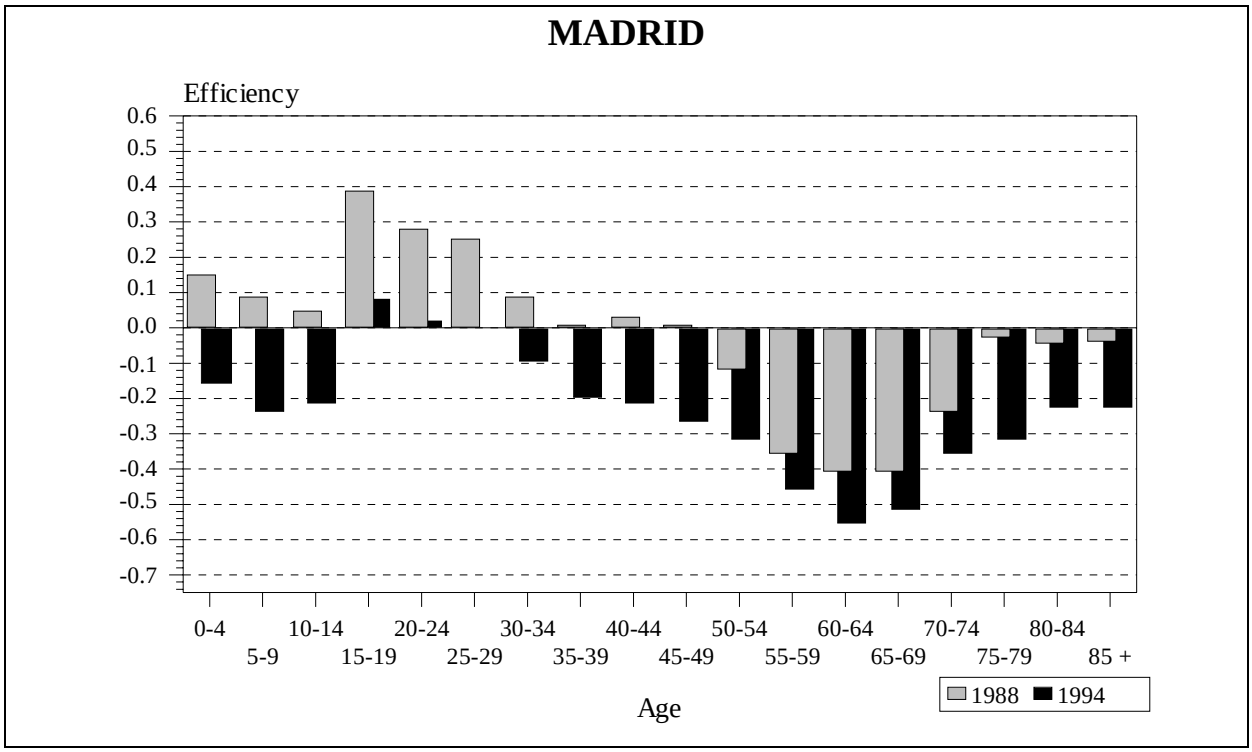
In contrast, most other provinces in this category retain negative efficiencies in their young working age groups, as exemplified by Badajoz (Figure 39).

Figure 39: Migration efficiency by age, Badajoz, 1988 and 1994



Source: EVR individual registrations 1988, 1994 (INE)

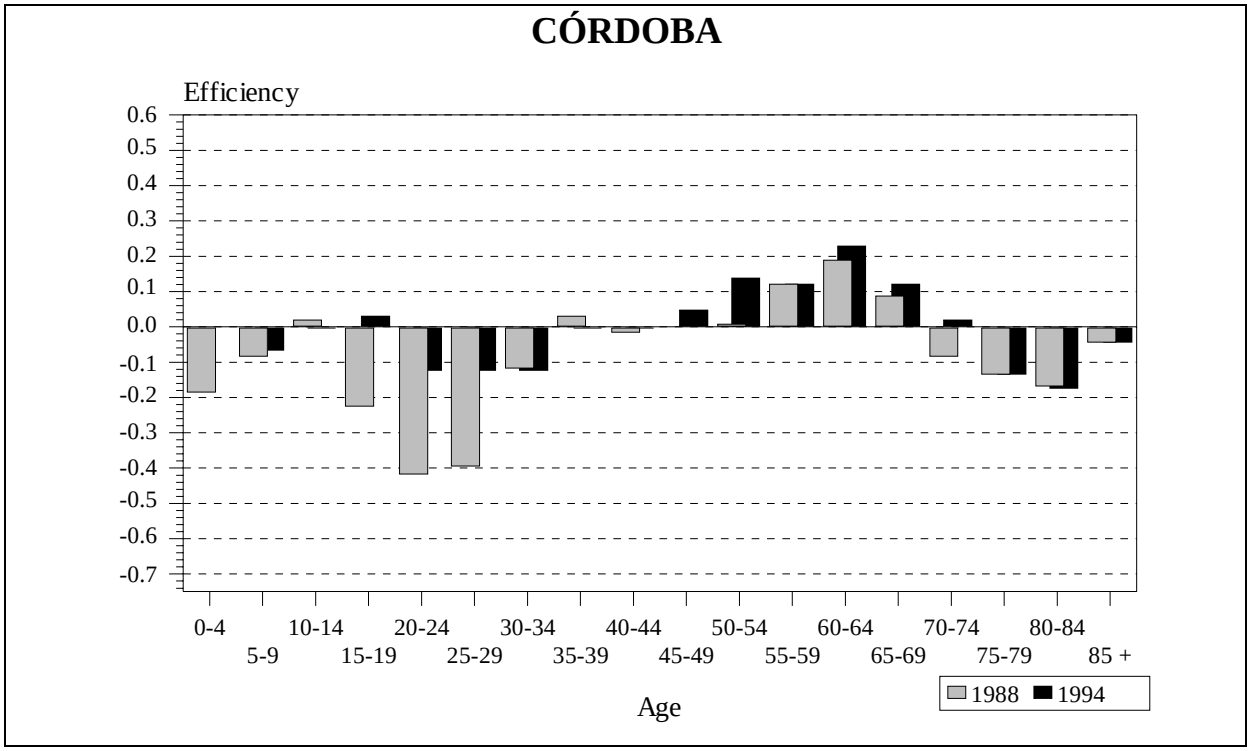
Figure 40: Migration efficiency by age, Madrid, 1988 and 1994



Source: EVR individual registrations 1988, 1994 (INE)

From positive to negative (Huelva, Madrid and Zaragoza): These provinces experienced lower in-migration and higher out-migration in 1994 than in 1988. Whilst negative efficiencies for Huelva and Zaragoza were less than 1%, the aggregate efficiency for Madrid was -11% in 1994 and the province lost population in all ages over 30 (Zamora, 1993) as many people moved to live (and sometimes work) in neighbouring provinces (Figure 40). At age 60-64, net migration losses were over 50% of migration turnover. Madrid retained its attractiveness for younger working age migrants, although the positive efficiencies in ages 15-29 were much reduced.

Figure 41: Migration efficiency by age, Córdoba, 1988 and 1994



Source: EVR individual registrations 1988,1994 (INE)

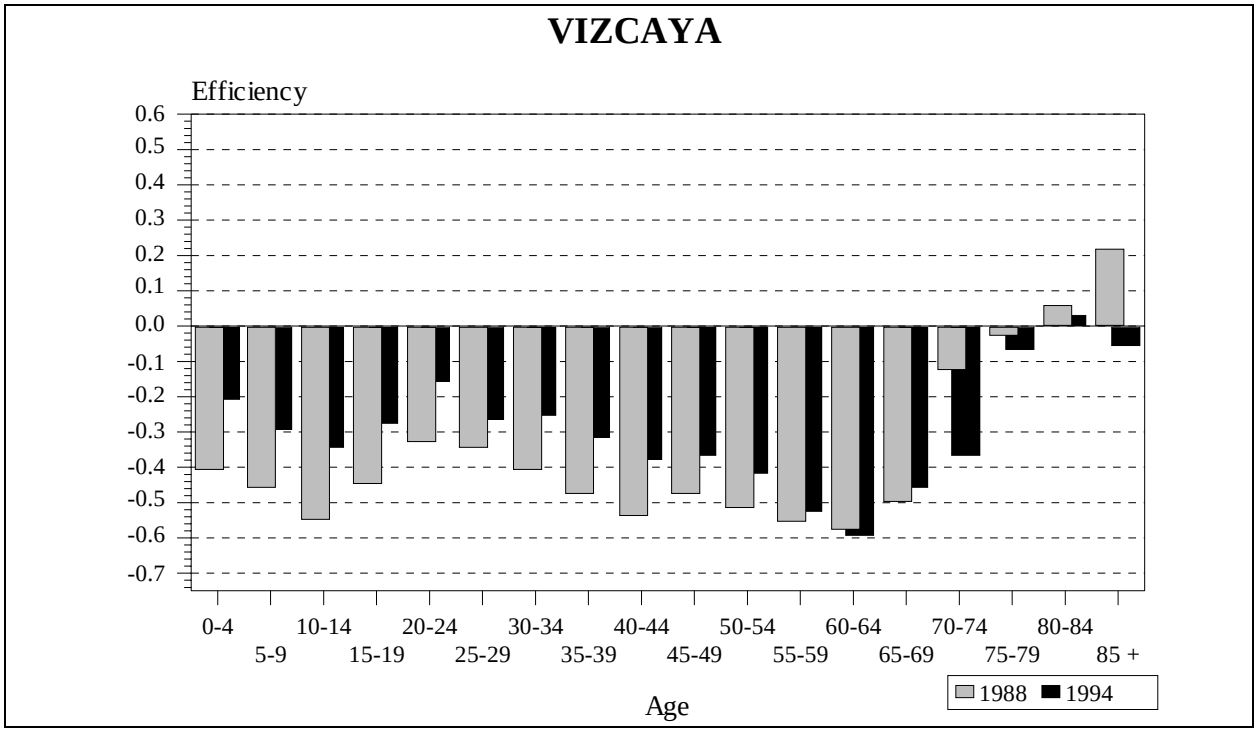
- ***Provinces with negative efficiency in 1988 and 1994***

There are 20 provinces in this largest category, only two of which experienced increasing migration efficiency during the period.

Decreasing negative efficiency (Ávila, Burgos, Cádiz, Ciudad Real, Córdoba, Cuenca, Guipúzcoa, Jaén, León, Asturias, Palencia, Pontevedra, Salamanca, Soria, Teruel, Valencia, Vizcaya and Zamora): The general tendency in these provinces is for their in-migration to increase and their out-migration to decrease, bringing their aggregate efficiency is closer to zero. Amongst this group, it is possible to identify two types of provinces: traditional net

exporters (e.g. Córdoba) and traditional net importers (e.g. Vizcaya). The aggregate migration efficiency for Córboba (Figure 41) is made up from negative efficiencies for young adults and the elderly and positive efficiencies for older working age and retirement migrants. The age variations in efficiencies for these provinces are similar to some of provinces from the previous group (e.g. Badajoz) but the aggregate efficiencies remain negative.

Figure 42: Migration efficiency by age, Vizcaya, 1988 and 1994



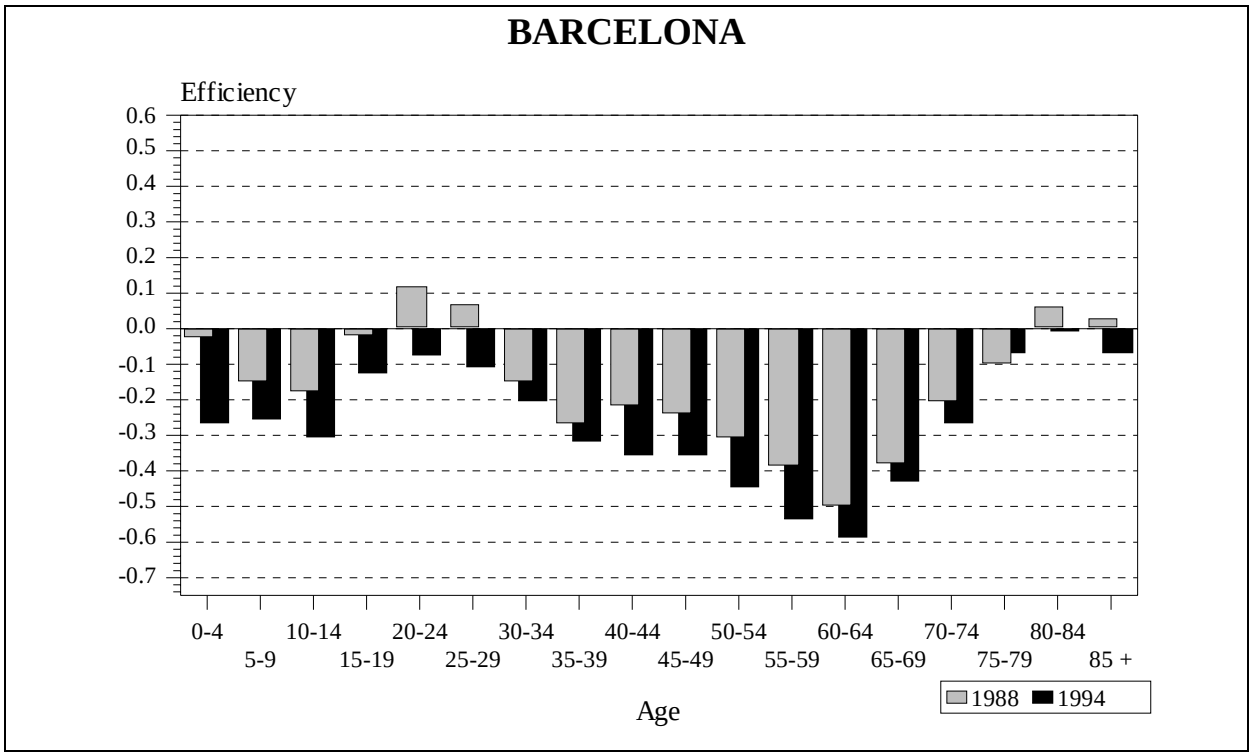
Source: EVR individual registrations 1988, 1994 (INE)

In Vizcaya, like Asturias, Valencia and Guipúzcoa, lowest negative efficiencies amongst those of working age occur for 20-24 year olds, indicating a lower propensity to leave the metropolitan environment than older workers. Vizcaya is the most spectacular example of a province with net outflows, having decreasing but still sizeable negative efficiencies for all working ages up to 60-64, when net losses increase to become 60% of gross turnover (Figure 42). Like Barcelona and Guipúzcoa, Vizcaya has an economy based on primary and secondary industry. This is unlike Madrid, where the tertiary sector is more important (López Groh, 1987). Since the period of industrial conversion in the early 1980s, when many enterprises were restructured, Bilbao and its metropolitan area have undergone regeneration and urban renewal as efforts have been made to create an environment attractive to inward investment (Martínez and Vicario, 1995). Flagship projects and marketing strategies for an advanced tertiary sector have been adopted as best exemplified by the creation of the Guggenheim Museum on the waterfront. This may partly explain the decrease in out-migration and the drop in negative

efficiencies in all age groups except 60-64. In older working ages, the efficiency of net migration loss declines and becomes positive in the 80-84 and 85+ age groups.

Increasing negative efficiency (Barcelona and Valladolid): Valladolid has a very low negative net migration in 1988 (-2) and its efficiency in 1994 was -5%, perhaps as a consequence of the low development of the Duero axis (Mella, 1999) of which Valladolid is supposed to be the centre (Rapado, 1983). The case of Barcelona is quite different. Although Barcelona's in-migration increased between 1988 and 1994, its out-migration also increased very considerably, resulting in a net loss of 9,407 people, nearly a quarter of the gross migration turnover. Economic crisis and industrial restructuring damaged employment growth in this province as it did in Vizcaya (López Groh, 1987; Pascual, 1992). Furthermore, Barcelona lost migrants to neighbouring Tarragona and Girona as a consequence of residential suburbanization and industrial deconcentration. Even in the young working and very elderly age groups, Barcelona failed to retain positive efficiencies (Figure 43) in 1994.

Figure 43: Migration efficiency by age, Barcelona, 1988 and 1994



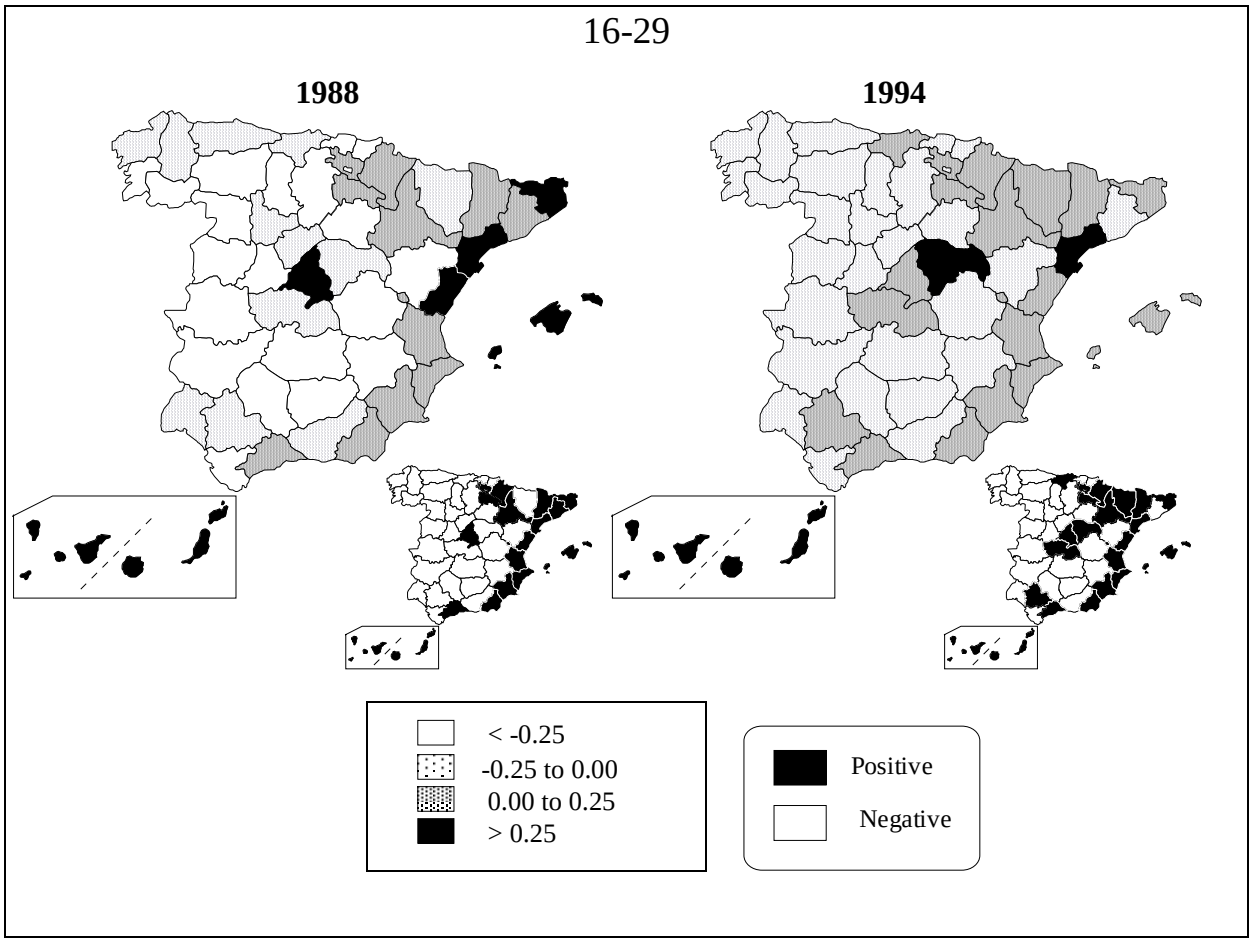
Source: EVR individual registrations 1988, 1994 (INE)

6.4 Age-specific Migration Efficiencies: Broad Working Age Groups

In this section, we examine variation in the spatial patterns of migration efficiency across all the provinces using three broad working age groups: the young labour migrants (aged 16-29)

looking for, or taking up, their first jobs or improving their positions; mid-working age migrants (aged 30-49) many of whom will be migrating with other members of their family; and older of per-retirement migrants (aged 50-64). These three broad age groups have been defined on the basis of the similarities between the net migration patterns of migrants in the five-year age groups.

Figure 44: Migration efficiencies of young working age group, 1988 and 1994

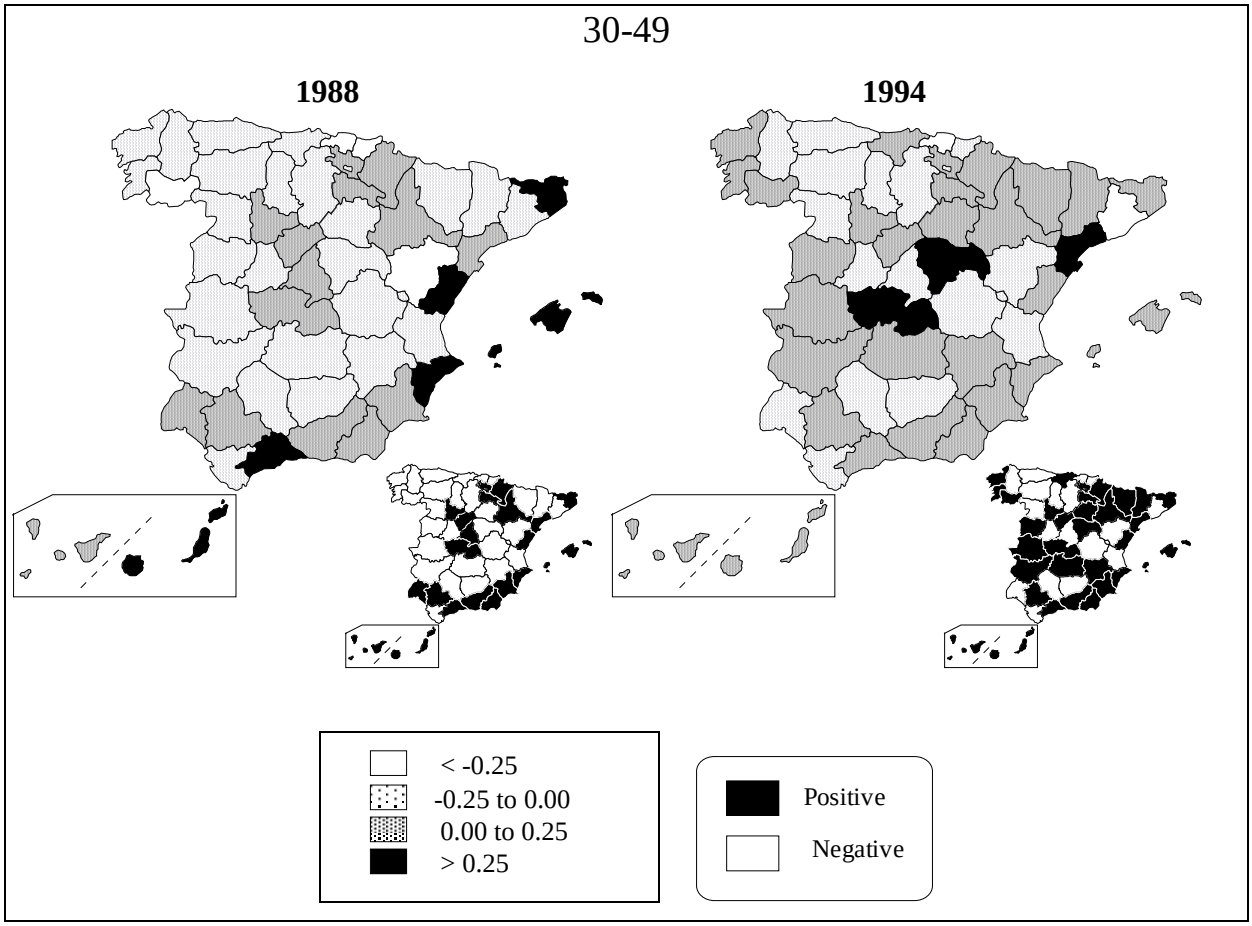


Source: EVR individual registrations 1988,1994 (INE)

Migrants of *young working age* tend to migrate to the most dynamic provinces in search of employment opportunities (Figure 44). In 1988, net migration gains were largest (>2,000) in Madrid (8,033), Baleares (4,456), Las Palmas (3,705) and Girona (2,117) and net migration was most efficient in redistributing this subgroup of the population in Girona, Tarragona, Castellón, Madrid, Baleares, Santa Cruz de Tenerife and Las Palmas, where efficiencies were all over 25%. Positive migration efficiencies were confined to Madrid, the Ebro and Mediterranean axes and the islands, whereas net migration losses over 2,000 occurred in the interior provinces of Jaén (-2,372) and Badajoz (-2,072) and negative efficiencies were highest in Cuenca (-50%), Jaén (-47%), Léon (-43%) and Orense (-43%). By 1994, this polarisation

was reduced and although more provinces appeared with positive net migration balances, only Las Palmas had a gain in excess of 2,000 and positive efficiencies over 25% were experienced in Las Palmas (34%), Guadalajara (29%) and Tenerife (28%). No province had net migration losses over 2,000 or negative efficiencies over 25% in 1994 in this age group. Migration of individuals in this age group is largely responsible for determining the spatial pattern of aggregate net migration, with certain exceptions.

Figure 45: Migration efficiencies of mid-working age group, 1988 and 1994



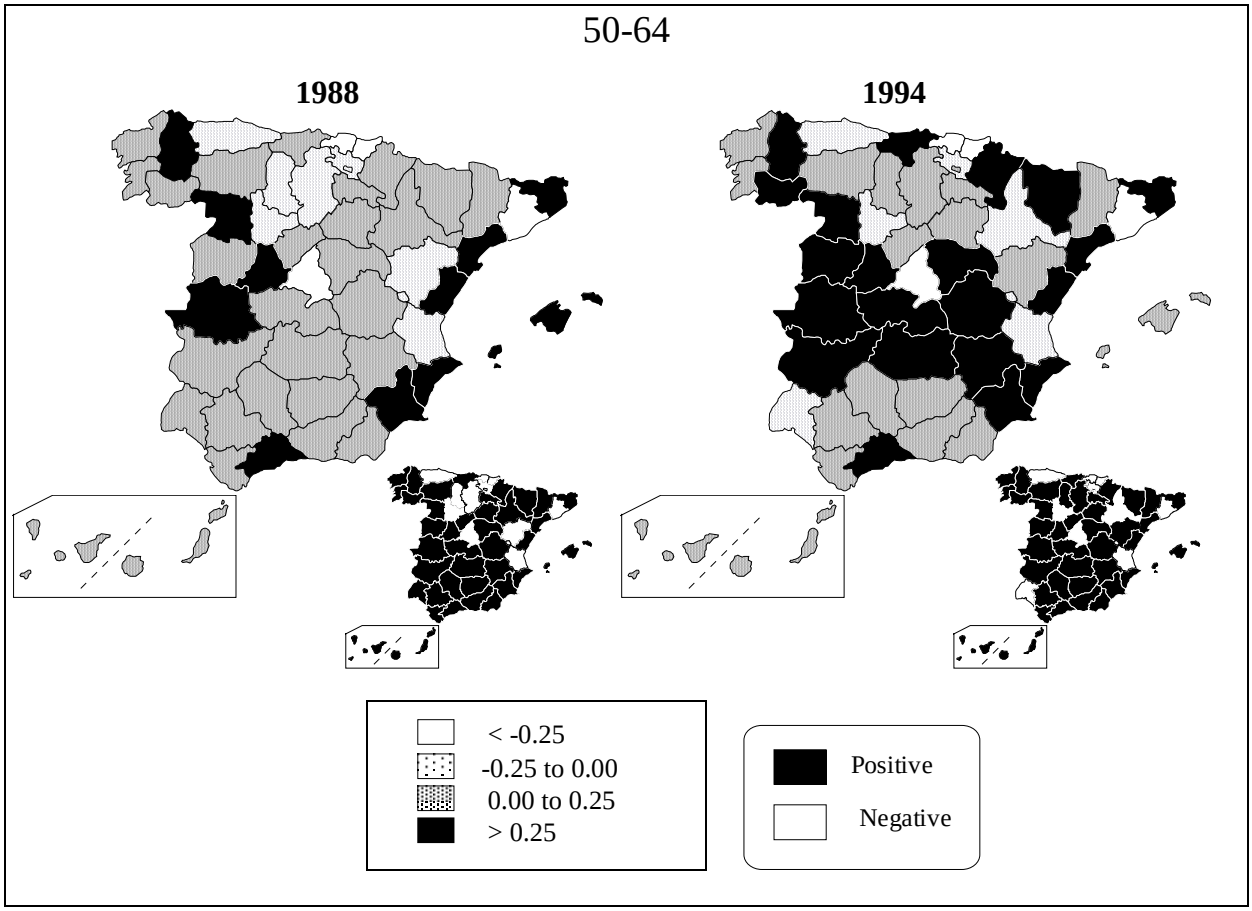
Source: EVR individual registrations 1988,1994 (INE)

Generally speaking, the net exchanges and efficiencies of net migration in the *mid-working age* group are lower than those aged 16-29 and higher than those aged 50-64. In 1988, only the Baleares gained over 2,000 and Barcelona, and Vizcaya lost over 2,000 people through net migration. The major change occurring between 1988 and 1994 has been the number of provinces whose balances switch from negative to positive and the increased net migration losses from Barcelona (-4,577), Madrid (-3,805) in 1994 (Figure 45). In fact Madrid gained 759 net migrants in 1988. Net migration balances of Albacete, Badajoz, Cáceres, Ciudad Real, La Coruña, Guadalajara, Huesca, Lleida, Orense, Pontevedra and Cantabria all turn positive by

1994 and the highest efficiencies are found in Guadalajara (41%), Toledo (31%) and Tarragona (28%). Only Barcelona and Vizcaya had negative efficiencies over 25%.

The spatial pattern of net migration is different again when we consider *older working age* migrants (Figure 46). Very few provinces had net migration losses in either 1988 or 1994 but amongst those that did, the losses from Barcelona and Madrid were particularly noticeable, rising to over 3,000 in both cases in 1994. The highest negative efficiencies in 1988 were in Guipúzcoa (62%) and Vizcaya (56%) despite having lower net losses than Barcelona or Madrid. The provinces with the major industrial cities are therefore generating net migrants of older working age while the rest of the provinces tend to gain. Positive efficiencies in 1994 were highest in Cáceres (48%), Guadalajara (48%) and Tarragona (44%).

Figure 46: Migration efficiencies of older working age group, 1988 and 1994



Source: EVR individual registrations 1988,1994 (INE)

Two general points can be made in conclusion. Firstly, there has been an increase between 1988 and 1994 in the number and spatial extent of provinces with net gains in all three broad age groups. Secondly, there has been a shift from provinces with only net gains of older

working age migrants to provinces that had net gains in the mid-working age group but net losses of young working age migrants. Most of these are interior, rural provinces that were responsible for generating migrants in the past phase of rural exodus.

7 Return Migration

This section of the report concentrates on one particular type of migration flow that has gained prominence in the late 1980s and early 1990s: return migration. The following questions are addressed:

- What proportion of internal migration is that of people returning to their province of birth?
- What is the age structure of return migration?
- Which are the main provinces of origin and destination of return migrants?

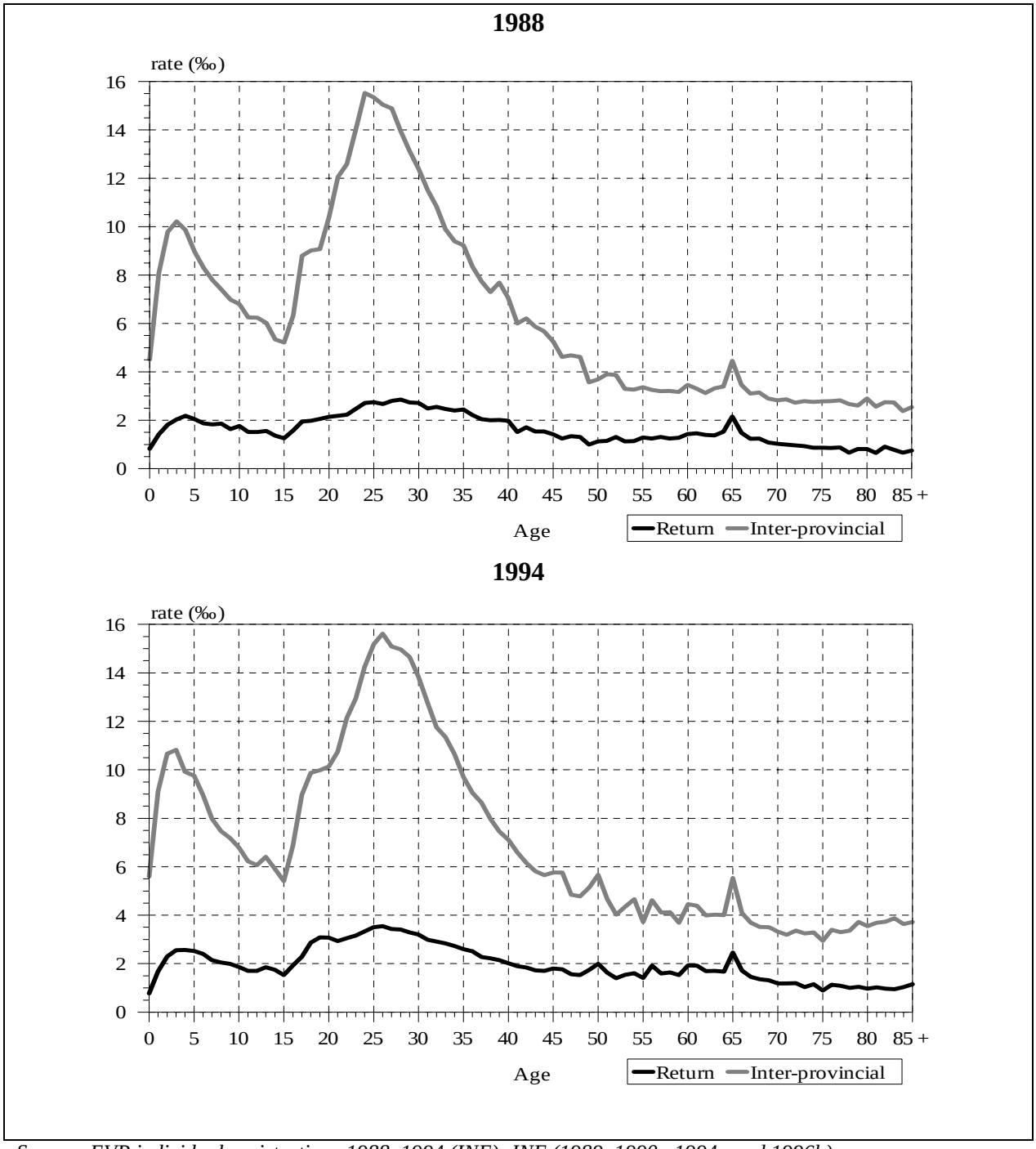
Return migration is defined in this section to refer to the situation when a person migrates back to his or her province of birth, rather than to a province in which he or she once lived but was not born. In 1991, 8.7 million people (22.9% of the total population) in Spain lived in a different province from that in which they were born. Most of the migration occurred during the rural exodus and were stimulated by employment opportunities in the main cities of the provinces of Barcelona, Madrid and Vizcaya. There is now some evidence to suggest that a return migration is occurring, particularly at retirement age (Abellán, 1991). The return of Spaniards from abroad has been studied in detail by Castillo (1981) but very little is known about return migration within the country from a geographical perspective. Moreover, preliminary analysis (García Coll and Stillwell, 1999) suggests that return migration is not just confined to retirement age. When the industrial crisis began in the 1980s and when improvements in less developed provinces started to occur, a process of return migration began to take place that has been described by Cabré *et al.* (1985) and Romero and Albertos (1996). In this section, we provide further evidence of the extent and patterns of retirement at the end of the 1980s and mid-1990s. Section 7.1 reports on the numbers of migrants involved and their age distribution whilst their spatial patterns are examined in Section 7.2.

7.1 Aggregate and Age-specific Levels

In 1988, 67,531 moves or 22.3% of inter-provincial migration were return moves to the province of birth; in 1994, the total was 84,077 and the proportion increased to 27.7%. Of those return migrants, 59% moved back to the municipality where they were born in 1988 and 40% went to another municipality in the same province. In 1% of cases, the destination municipality was unknown. Those returning to the same municipality numbered almost 53,000 in 1994 (62% of returners) with over 32,000 (38%) going back to another municipality in the same province. Because the data does not allow linkages between family members to be identified, it is not

possible to establish how many other partners or family members accompanied each return migrant. In the case of Andalucía (IEA, 1993), it was estimated that 47.5% were individuals returning to their birth provinces and the remainder were their relatives, who were not return migrants. Figure 47 shows the age-specific migration rates of return migrants plotted against the total inter-provincial migration rate schedules in 1988 and 1994, indicating much less variation across the age range.

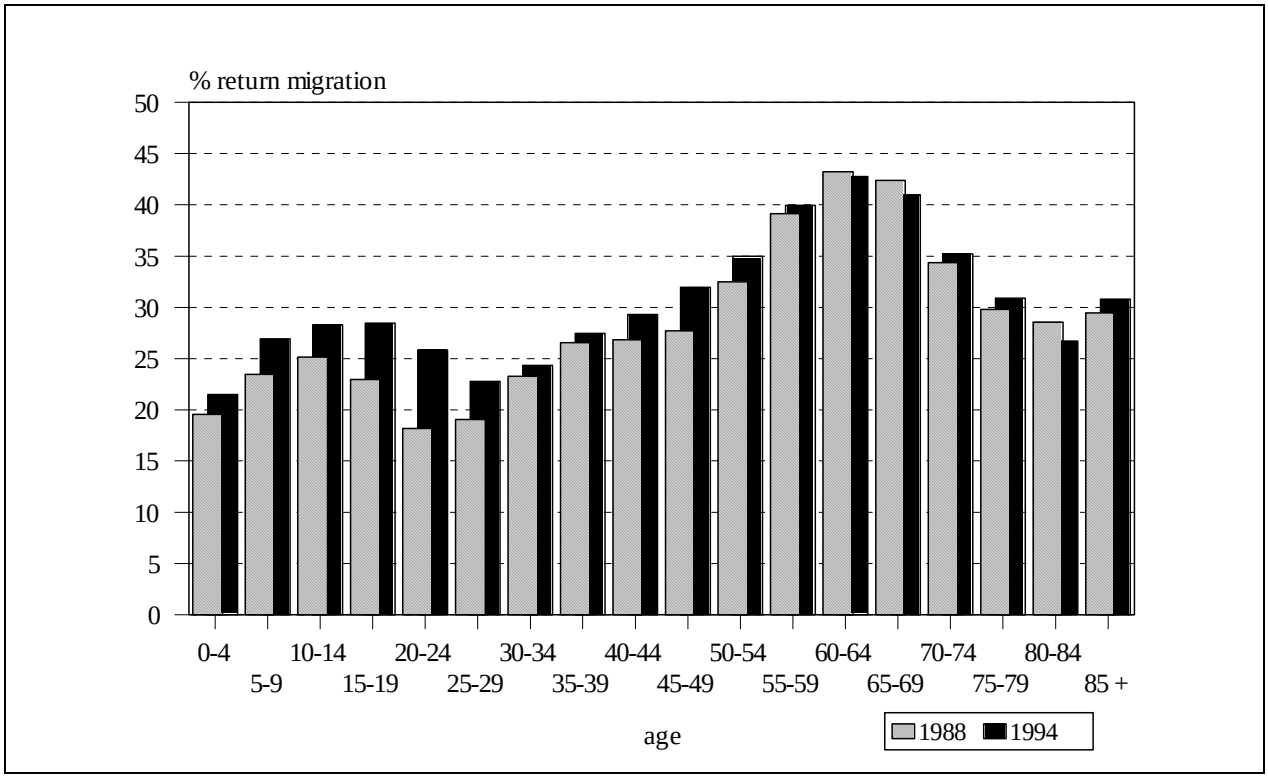
Figure 47: Age-specific total and return inter-provincial migration rates, 1988 and 1994



Source: EVR individual registrations 1988, 1994 (INE); INE (1989, 1990, 1994c and 1996b)

This means that the proportion of migrants that return to their province of birth is much higher for those in their 50s and 60s. More specifically, the proportion of return migrants in the total flows of working age migrants in 1988 varies from 17.1% of those aged 25-29 to 34.5% of those aged 55-59. By 1994, the proportions range for 22.8% of those aged 25-29 to 42.8% of those aged 60-64 (Figure 48). The latter age group experienced the largest increase in the proportion of return migrants from 32.1% in 1988 to 42.8% in 1994.

Figure 48: Return migration percentage by age, 1988 and 1994



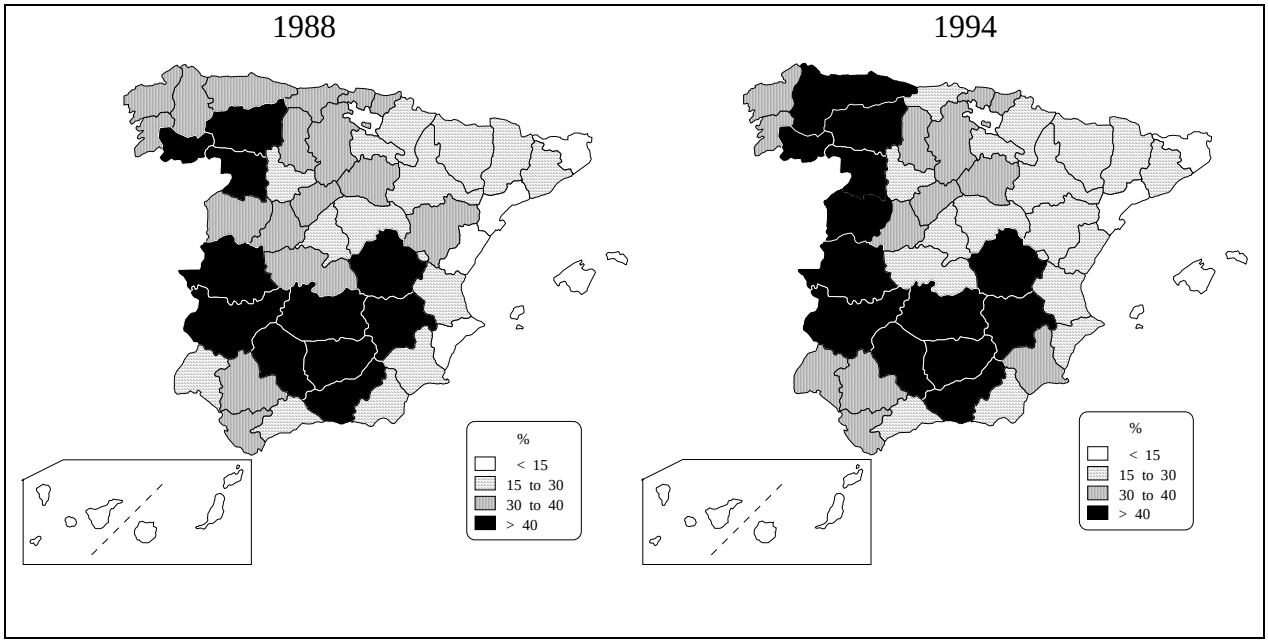
Source: EVR individual registrations 1988, 1994 (INE)

7.2 Major Origins, Destinations and Interaction Flows

The geographical distribution of the proportion of in-migration that is return movement is very similar in 1988 and 1994 (Figure 49). The differences between provinces are very large. At one extreme, return migration was only 7% of total in-migration to Baleares and Girona in 1994; at the other extreme, the proportion was 54% in Jaén and Badajoz. Provinces in the southern western interior have the largest proportions of return migrants and this process is contributing to the increases in in-migration in these provinces whose economies are not particularly dynamic. The pattern of return migration contrasts with the pattern of total net migration, reflecting the different motivations of the individuals concerned. It also is the reverse of the pattern of provinces from which return migrants originate (Figure 50). In 1988, the major flows

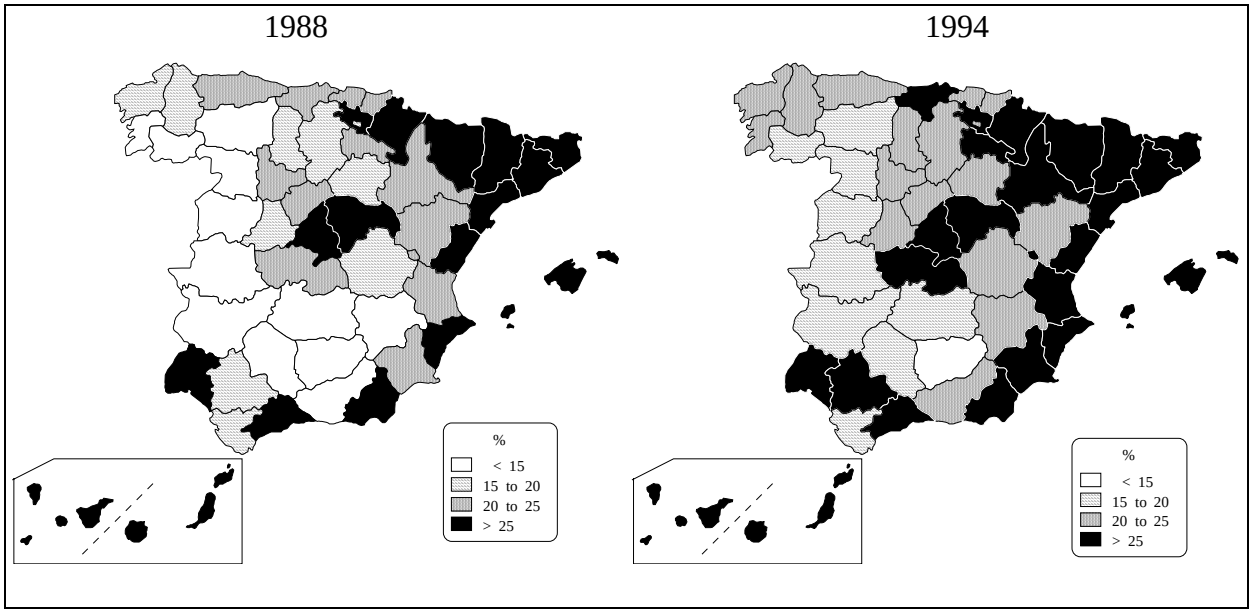
(>500 individuals) of return migration occurred between Madrid and its neighbouring provinces to the south and between Barcelona and Girona, Sevilla and Granada (Figure 51). The pattern of major return flows from Madrid had extended by 1994 to include Ávila to the west and Guadalajara to the east. Longer distance return flows from Barcelona to Badajoz exceeded 500 persons in 1994 and the return flow to Barcelona from Tarragona was also relatively large by 1995.

Figure 49: Return migration percentage of total in-migration by province, 1988 and 1994



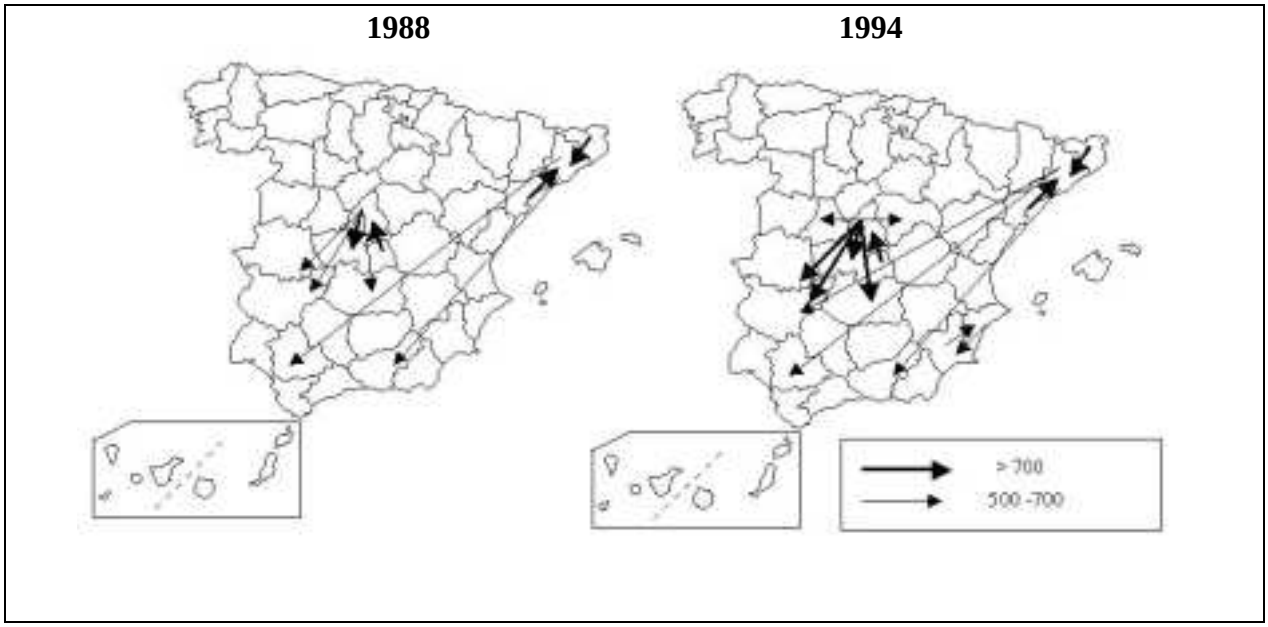
Source: EVR individual registrations 1988, 1994 (INE)

Figure 50: Return migration percentage of total out-migration by province, 1988 and 1994



Source: EVR individual registrations 1988, 1994 (INE)

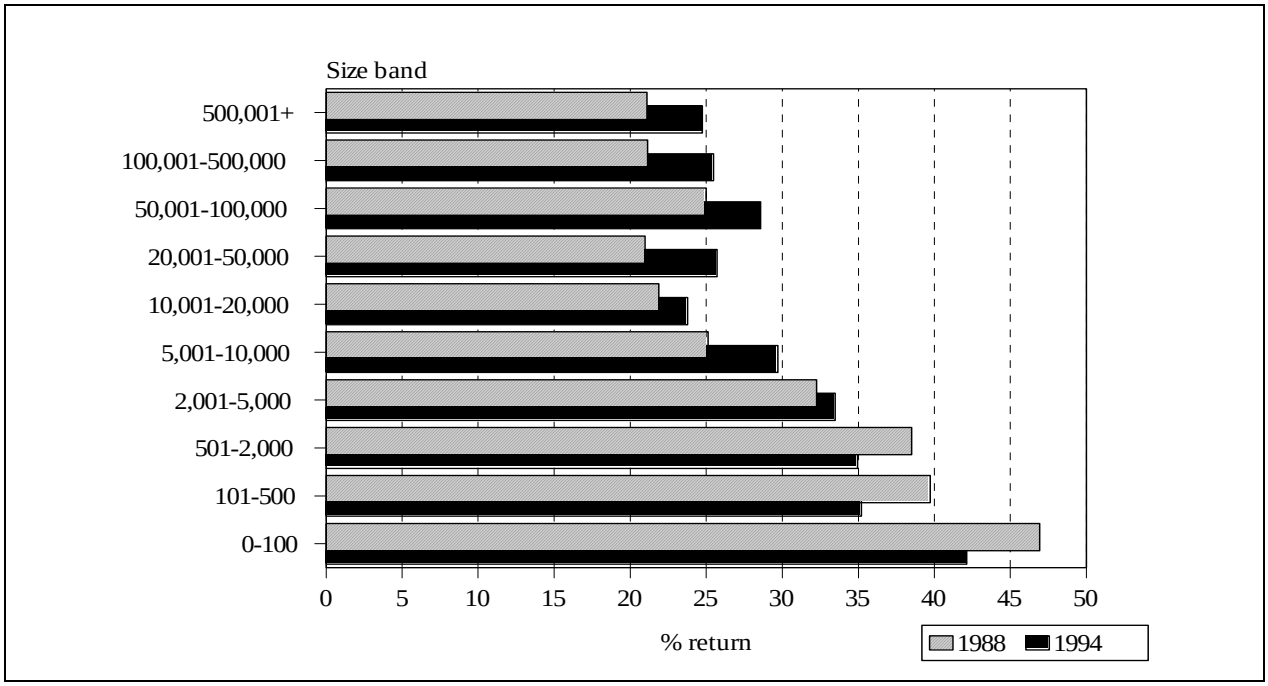
Figure 51: Main flows of inter-provincial return migrants, 1988 and 1994



Source: EVR individual registrations 1988, 1994 (INE)

Finally, in Figure 52, we present the percentages of migration that is return movement to municipalities of different size. Return migration is proportionally more important to the smaller, more rural municipalities as a whole than to the larger more urban municipalities although the proportions fall for smaller areas between 1988 and 1994 and rise for cities and more urban areas.

Figure 52: Return migration by municipality size, 1988 and 1994



Source: EVR individual registrations 1988, 1994 (INE)

8 Conclusions

This report has documented the changes taking place in population and internal migration in Spain in two calendar years, 1988 and 1994. During the period in between, the economy reverted back from one in which growth was occurring and unemployment rates were falling (from 21.9% in 1985 to 16.3% in 1990) to one of recession with national unemployment rates rising to 24% in 1994. Whilst the national population continued to grow at an average rate of 0.4% per year during this time, sub-national population dynamics varied spatially. At the provincial scale, the pattern of growth was dominated by the Madrid metropolitan area, the islands and the provinces that comprise the Mediterranean and Ebro axes. At the municipality level, the pattern of growth reflects the attractiveness of coastal locations and particular regional centres. However, substantial population declines were evident in the municipalities of Madrid and Barcelona by 1994. The population change data, when aggregated by municipality size, presents a picture of declining rates of growth in the big cities and large urban areas between 1988 and 1994. In contrast, the smaller municipalities that represent rural areas of the country have experienced either declining rates of population loss or a transition from population decline to population increase. There is a strong positive relationship between population change and net migration at both provincial and municipality scales.

Over this time interval, the level or intensity of internal migration between municipalities increased, particularly for those moves occurring over shorter distances within provinces as the processes of suburbanisation intensified. In the provinces of Madrid and Barcelona, the process involved increasing numbers of movements being recorded across boundaries with neighbouring provinces. Thus, the most dramatic change in the spatial pattern of net migration between 1988 and 1994 was the reversal of Madrid's net migration balance from positive to negative as suburbanisation spilt over into Toledo in particular, creating a new axis of potential development to the south west.

Despite the growth of inter-provincial and intra-provincial migration between the two periods, the efficiency of net migration in redistributing the population declined significantly. The processes of industrial restructuring that reduced the flows of labour migrants so prominent in the 1960s and 1970s continued to reduce the proportion of longer distance inter-provincial migration between 1988 and 1994 and continued to transform the net migration balances of the major industrial provinces. The pattern of net migration in Spain in 1994 was no longer dominated by huge in-migration flows from the rural areas to the major industrial cities although Madrid and Barcelona retained the largest number of in- and out-migrants. In

aggregate terms, rural Spain has become a net importer whilst Madrid and Barcelona have become large net exporters of migrants. Net migration gains, like population gains, have moved down the urban hierarchy. The spatial pattern of provinces with net migration gains aligned with the main Ebro and Mediterranean axes of maximum economic development potential in both periods and there is evidence of a north-south axis from Galicia to northern Portugal by 1994.

We have used data from the EVR to establish the demographic structure of inter-and intra-provincial migration and to show that moves made by those of working age accounted for nearly three quarters of all moves between provinces in 1994 and increased in volume more rapidly that total migration. The net migration rates for five-year age groups show a reduction in spatial variation between 1988 and 1994. However, whilst working age in-migration totals became less polarised between 1988 and 1994, partly as a consequence of the decline in in-migration to Baleares and Las Palmas, out-migration became more spatially concentrated. The efficiency with which net migration redistributes the population declined significantly between the two years despite an increase in total moves. Negative and positive efficiencies over 25% were almost non-existent by 1994. However, the change in efficiency of net migration varies spatially and not all provinces experienced a decline; in fact there are six provinces where positive efficiency increased and a further two with higher negative efficiency.

The spatial patterns of net migration have been compared for three broad working age groups. The young working age net migration balances were positive for Madrid and for the provinces in the Ebro and Mediterranean axes, and negative for many of the provinces of the interior. The size of the flows and the efficiencies involved means that young working age migrants have been responsible for defining the patterns of total net migration in many provinces and for the more even redistribution of the population. Net migration efficiencies for mid-working age migrants were lower and the two main axes were identifiable in 1988, but one of the major changes during the period was the switch from negative to positive balances for a number of other provinces. In older working ages, it has been the provinces containing the major cities that have generated net migrants and most other provinces in the country have experienced net migration gains at this age.

One of the most valuable characteristics of the EVR data is that they provide information on annual inter-provincial migrants cross-classified by province of birth as well as by province of origin and destination. The data for 1988 and 1994 has provided evidence that around one

quarter of inter-provincial migration of working age involved individuals returning to the provinces where they were born. Proportions are lower in younger working ages and higher in older working ages, with 42.8% of migrants aged 60-64 being return migrants in 1994. It is less surprising to discover that provinces in the south west interior have the highest proportions of return in-migrants since these were the provinces from which large numbers of migrants departed during the rural exodus.

This case study has shown that internal migration between provinces and between municipalities in Spain has continued to reshape the nation's population distribution in new ways, albeit less efficiently, between 1988 and 1994. Whilst it is clear that the relationships between migration and population change in different parts of the country are of critical importance since migration is frequently observed to be the key driver of change, it is also important to recognise the complexity of the migration patterns that the EVR data has allowed us to expose. Much work remains to be done to identify and disentangle the factors and forces that have determined the population shifts and the migration flows that have been discussed in this report.

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