

# Internal migration and residential segregation of immigrant populations in three major Spanish cities and their metropolitan areas (2004-2011)

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## **Abstract**

Introduction: During the 2000s Spain became the European country with the largest net absolute migration in the EU, lagging only behind the USA worldwide. The location of employment opportunities, along with the importance of overseas flows in the Spanish immigration boom, turned the municipalities of Madrid and Barcelona into gateway cities for international migration. Along with those two, Valencia also became an important spot of immigration. In terms of internal migration, these three cities have also played a major role in the redistribution of immigrants across their metropolitan areas, but keeping also a close population-exchange relationship between each other. The aim of this paper is threefold: first, it examines the process of settlement of principal foreign-born populations in each of these municipalities by measuring the degree of residential segregation. Second, it assesses the demographic characteristics of the population that embodies internal migration flows between the municipalities of Madrid, Barcelona and Valencia, and between these municipalities and their metropolitan areas. Third, it explores the impact of the economic crisis in both, the settlement process and internal migration of foreign-born population. Data: We use migration flows and population data between 2004 and 2011 derived from Municipal Registers (and released annually by the National Statistic Institute) to analyze movement and settlement of international immigrants. Results: The preliminary results allow us to confirm a general decrease of the degree of residential segregation of immigrant populations in all three municipalities, with particular exceptions. In terms of internal migration, the crisis period (2008-2011) has meant a decrease of the migratory intensity between these municipalities for all population groups, as well as a recentralization of flows directed to Madrid and Barcelona.

## **Introduction:**

During the early years of the XXI century Spain became the European country with the largest net absolute migration in the EU, lagging only behind the USA worldwide (OCDE, 2007). The settlement of international migrants has become a reality, with analysis and concerns about increasing population diversity and social integration in both academic and policy circles. The unfavourable economic outlook has added pressure for policymakers who have to deal with plausible outbreaks of xenophobia, and the danger that existing patterns of residential segregation among immigrants groups may amplify over time, entailing increased discrimination, disadvantage and isolation.

The evolution of international migration in Spain can be clearly divided in two stages: the first, marked by the (im)migratory boom period, which lasted up to the year 2007 (with more than 500,000 new entries per year and a peak of almost 1,000,000 of new arrivals in 2007). Spanish migratory boom was by that time a consequence of the strong demand of low-skilled labour force (Domingo & Gil-Alonso, 2007) during a period of unprecedented economic growth (EEAG, 2011) with conditions -exponential rise of new dwellings (García-Montalvo, 2008; Bielsa & Duarte, 2010) and the dynamics of suburbanization and recentralization (Nel-lo 1997, Miret 2009)-likely to affect the spatial distribution of natives and immigrant groups (Sabater et al, 2012). The location of employment opportunities, along with the importance of overseas flows in the Spanish immigration boom, turned the municipalities of Madrid and Barcelona into gateway cities and redistribution centers for international migration. Economic affluence coupled with the sheer size of the migratory inflows led the emergence of new centers in other regions like Valencia (Valencian Community), Palma de Mallorca (Balearic Islands) or, more recently, Zaragoza (Aragon). The second stage on the evolution of international migration began in 2008, when the ongoing economic crisis hit Spain and initiated the decline of the immigration boom. Hypercyclical unemployment rates of the foreign-born populations skyrocketed, the number of new entries fell down and out migration began to grow (Domingo & Sabater, 2012)

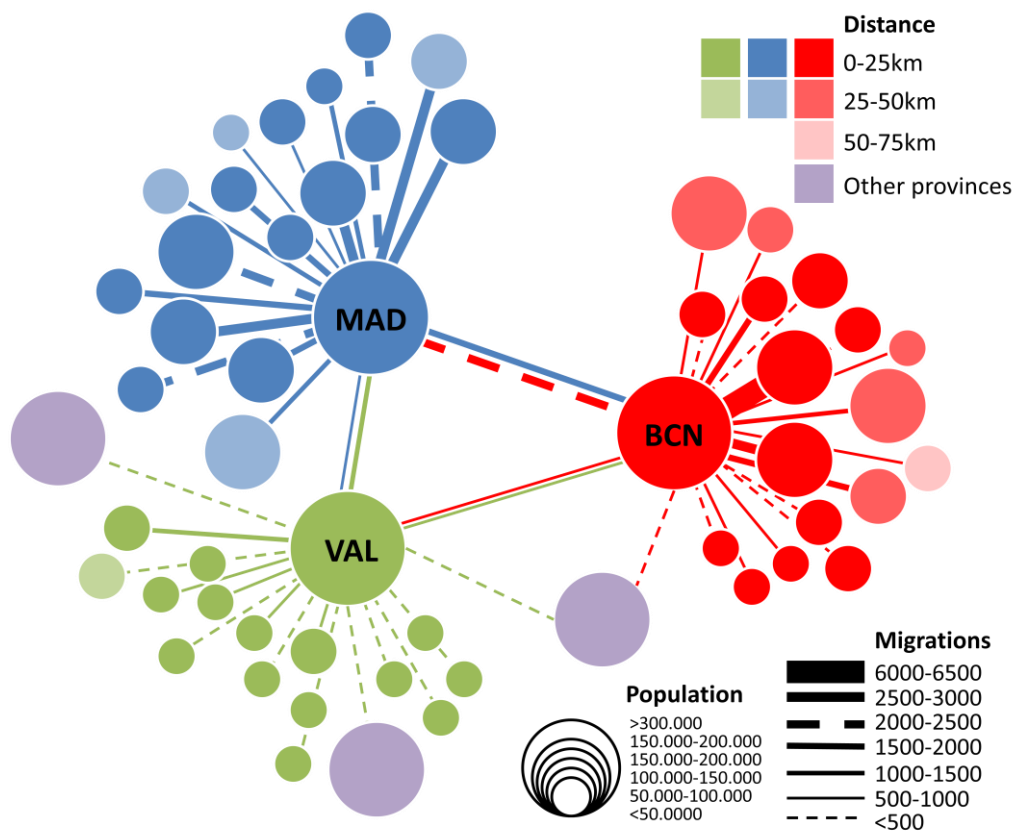
In terms of internal migration the sequence is similar. From 2000 to 2007 the number of inter-municipal movements made by the foreign-born population grew up to triple those from Spanish natives (Recaño & Domingo, 2006), a well-known trend in countries of immigration like Canada, the United States or England (Nogle, 1994; Rogers & Hennings, 1999; Finney & Simpson, 2008). In 2007, 30% of the total internal movements were performed by immigrants. The arrival of the crisis reduced the intensity of internal mobility of both, natives and foreign-born populations (Domingo & Recaño 2009); however, in 2011 the share of internal movements performed by the foreign-born population still represented 30% of the total.

## **Aim:**

In this paper we focus on three principal municipalities of Spain (Madrid, Barcelona and Valencia) and their metropolitan areas. Our interest is based on two reasons: First, the urbanity of these municipalities, along with the high shares of immigrants among their populations, transforms them into a suitable case of study to contribute on the understanding of recent migrants' spatial behaviour. For that purpose we analyze the levels of residential

segregation for different countries of origin before and during the economic crisis. In second place, we are interested in the close population-exchange relationship sustained by Madrid, Barcelona and Valencia, as well as in the movements from these three cities to surrounding municipalities of their metropolitan areas. In figure 1 it is shown that whilst these municipalities, principally, redistribute population among municipalities of their metropolitan regions, they also exchange population between each other. Although Figure 1 shows the population redistribution system of these three municipalities in 2011, the relationship is the same in previous years. During the 2000s only small changes occur between destination municipalities of their respective metropolitan areas. The migratory relation between Madrid, Barcelona and Valencia, in terms of its volume, the direction of the flows, the demographic characteristics of its protagonists and the impact that the economic crisis has had on the system, remains unexplored.

**Figure 1: Top 20 destination for migrations from Madrid, Barcelona and Valencia's municipalities by flow volume and size and distance of destination municipality, 2011**



Source: own elaboration with data from the Population Municipal Register and the Statistics of Residential Variation (INE)

This paper builds on the demographic body of work in these areas (Stillwell & van Ham, 2010; Maloutas & Fujita, 2012, Finney & Catney, 2012). Our hypotheses are:

1. The impact of the crisis has reduced the volume and intensity of internal migration flows of the foreign-born population, and has recentralized them to the gateway cities for international migration. Such recentralization increases the degree of

concentration of the foreign born population, but not necessarily affects the unevenness of their spatial distribution.

2. The recentralization process is not only an outcome from the economic crisis; it also follows a more general pattern of recentralization which started with the native born population before the onset of the crisis. Economic crisis is affecting the magnitude and intensity of the process.
3. While the demographic characteristics of those who move in the pre-crisis period correspond to a residential movement profile (wider representation of ages and sexes), during the period of crisis the eminently labour character of displacements exerts a closer selection by age and sex.

### **Data and Methods:**

This paper uses migration statistics and population data between 2004 and 2012 from Municipal Registers (and released annually by the National Statistics Institute) for the analysis of immigrant settlement and internal migration. Since self-reporting of racial or ethnic background is not used in official statistics in Spain, analysis are focused on the 10 largest immigrant groups by country of origin (Ecuador, Peru, Colombia, Bolivia, Argentina, Morocco, China, Dominican Republic, Romania and Pakistan). Our smallest unit of analysis is the census tract, with an average of 1,500 inhabitants.

Methodologically, we implement the following steps:

1. Following the canonical works (Massey and Denton, 1988), we use the index of dissimilarity (D) as the standard measure to analyze the uneven distribution of two populations, which allows us to identify the extent of sharing residential space of immigrant groups with the 'host society'. We also compute the isolation index (Lieberson, 1981) to measure the general level of concentration of each population. Since these indexes do not refer the specific distribution of the population across the set of spatial units analyzed, we complement our analysis of the settlement process of different foreign-born populations by computing and mapping location quotients by census tracts, for the year 2011, in Madrid, Barcelona and Valencia.
2. In order to disentangle the constitutive elements of the migratory system formed by Madrid, Barcelona and Valencia and its metropolitan areas, we analyze internal migration by computing in and out migration rates by country of origin, in addition to the basic computation of absolute net migration of in- and out-migration. Migration measures are calculated for two periods (2004-2007 and 2008-2011) to assess the impact of the crisis over internal migration. We also present the demographic profiles of those who move in both periods.

### **Preliminary findings:**

All immigrant groups became more evenly distributed with respect to the Spanish population during the period 2004-2011, with the exception of Ecuadorians living in Madrid and Valencia.

The values of the dissimilarity index are low-to-moderate for all groups, with the exception of those of the population from Pakistan, as we can see from table 1. If we split by period we observe that the crisis period has meant a turnaround in the trend for Bolivians and Romanians in Madrid, and for Colombians and Romanians in Valencia. In terms of isolation, is in Barcelona where more immigrant groups achieved a reduction of their levels of concentration between 2004 and 2011. Ecuadorians and Argentines reduce their levels of concentration during this period in the three municipalities. Pakistanis, by contrast, increased their level of concentration in all cities, remarkably in Barcelona.

If we look at the absolute number of out-migrations from Barcelona, Madrid and Valencia by origin (Figure 2), we corroborate the impact of the economic in the decrease in the number of migrations directed from Barcelona and Madrid to Valencia and vice versa for both the Spanish and the foreign-born populations, as well as in the increase of the movements from Barcelona and Madrid for both origins and from Madrid to Barcelona in the case of the Spanish population.

### References:

Bielsa, J. & Duarte, R., (2010): Size and linkages of the Spanish construction industry key sector or deformation of the economy? *Cambridge Journal of Economics*, Vol 35, 317-334.

Domingo, A. & Gil-Alonso, F., (2007): Immigration and Changing Labour Force Structure in the Southern European Union. *Population (english edition)*, Vol. 62, 709-727.

Domingo, A. & Recaño, J., (2009): La Inflexión en el Ciclo Migratorio Internacional en España. Impacto y Consecuencias Demográficas. In E. Aja, J. Arango, & J. Oliver Alonso, editors, *La Inmigración en Tiempo de Crisis*. Barcelona: CIDOB, 182-207.

EEAG., (2011): *The EEAG Report on the European Economy*. Munich: CESifo. Retrieved May 1<sup>st</sup> 2011, de <http://www.cesifo-group.de/portal/pls/portal/docs/1/1201535.PDF>

Finney, N. & Simpson, L., (2008): Internal Migration and Ethnic Groups: Evidence for Britain from the 2001 Census. *Population, Space and Place*, Vol. 14, 63-83.

Finney, N & Catney, G. (Eds.) (2012): *Minority Internal Migration in Europe*. Surrey: Ashgate Publishing, International Population Studies Series.

García-Montalvo, J., (2008): El sector inmobiliario español a principios del siglo XXI: entre la demografía y las expectativas. *clm.economía*, Vol. 11, 57-79.

Lieberson, S., (1981): An asymmetrical approach to segregation . In C. Peach, V. Robinson, & S. Smith, editors, *Ethnic Segregation in the Cities*. London: Croom Helm, 61-82.

Maloutas, T. & Fujita, K. (Eds.) (2012): *Residential Segregation in Comparative Perspective. Making Sense of Contextual Diversity*. Farnham: Ashgate Publishing Limited.

Massey, D. & Denton, N., (1988): The Dimensions of Residential Segregation. *Social Forces*, Vol. 67, 281-315.

Miret, N., (2009): Inmigración y Metropolización en Barcelona. *AREAS. Revista internacional de Ciencias Sociales*, Vol. 28, 103-116.

Nel-lo, O., (1997): Las Grandes Ciudades Españolas: Dinámicas Urbanas e Incidencia de las Políticas Estatales. *Papers. Regió Metropolitana de Barcelona*, Vol. 27, 9-70.

Nogle, J., (1994): Internal Migration for Recent Immigrants to Canada. *International Migration Review*, Vol. 28, 31-48.

OECD (2007) *International Migration Outlook. 2007 edition*. SOPEMI. Paris: OECD.

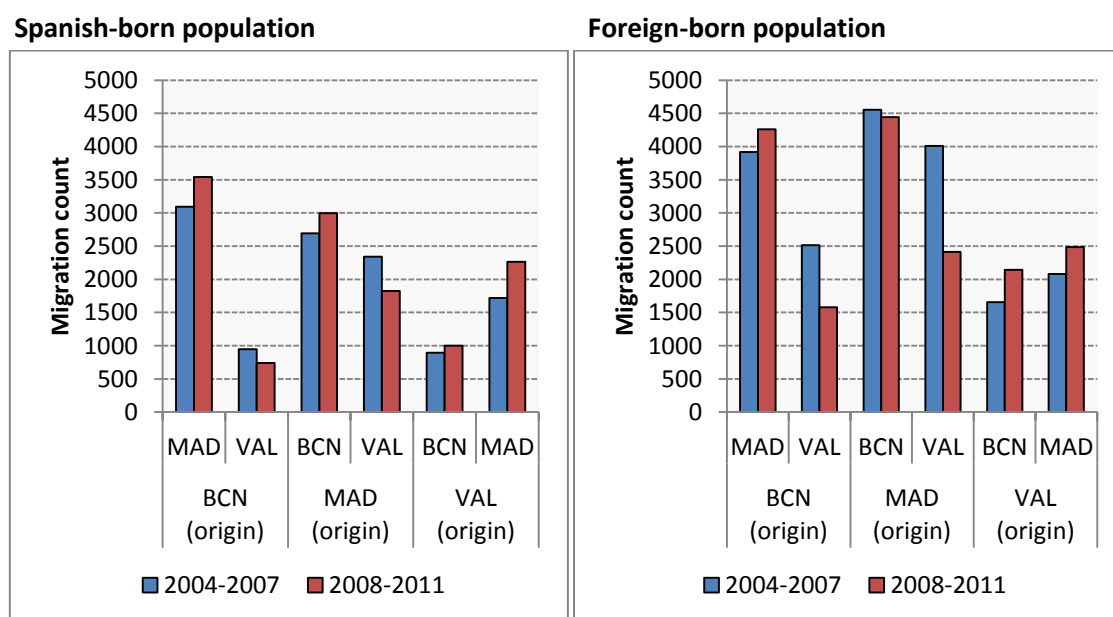
Recaño, J. & Domingo, A., (2006): Evolución de la Distribución Territorial y la Movilidad Geográfica de la Población Extranjera en España. In E. Aja & J. Arango, editors., *Veinte años de Inmigración en España. Perspectiva Jurídica y Sociológica*. Barcelona: Ediciones Bellaterra, 303-338.

Rogers, A. & Henning, S., (1999): The internal Migration Patterns of the Foreign-Born and Native-born population in the United States: 1975-1980 and 1985-1990. *International Migration Review*, Vol. 33, 403-429.

Sabater, A., Bayona i Carrasco, J. & Domingo, A., (2012): Internal Migration and Residential Patterns across Spain After Unprecedented International Migration. In N. Finney & G. Catney, editors, *Minority Internal Migration in Europe*. Surrey: Ashgate Publishing, International Population Studies Series.

Stillwell, J. and van Ham, M. (Eds.) (2010): *Ethnicity and Integration. Understanding Population Trends and Processes*, Volume 3, London-New York: Springer.

**Figure2: Migrations from Madrid, Barcelona and Valencia to the other two municipalities by origin, 2004-2007 and 2008-2011**



Source: own elaboration with data from the Statistics of Residential Variation (INE)

**Table 1: Residential segregation indexes by selected immigrant groups across census tracts.  
Municipalities of Barcelona, Madrid and Valencia, 2004-2007-2008-2011**

	Barcelona						Madrid						Valencia					
Dissimilarity	2004	2007	2008	2011	Change 04-07	Change 08-11	2004	2007	2008	2011	Change 04-07	Change 08-11	2004	2007	2008	2011	Change 04-07	Change 08-11
Ecuador	38.56	37.35	38.42	35.74	-1.21	-2.68	40.41	41.85	42.49	43.54	1.44	1.05	40.43	41.65	41.73	42.00	1.22	0.28
Perú	35.33	31.09	30.39	27.20	-4.24	-3.19	35.21	33.46	33.31	33.20	-1.74	-0.11	50.77	43.28	42.22	40.46	-7.49	-1.76
Colombia	32.87	27.75	26.83	23.31	-5.13	-3.52	32.63	31.08	30.28	29.16	-1.55	-1.12	30.42	27.81	27.04	27.16	-2.60	0.12
Bolivia	60.12	47.84	44.62	34.03	-12.29	-10.59	51.33	42.93	42.06	42.81	-8.40	0.75	52.42	39.34	38.14	37.48	-13.08	-0.66
Argentina	30.29	27.79	27.41	24.80	-2.50	-2.61	37.26	34.27	32.91	31.62	-3.00	-1.29	30.57	26.42	25.77	25.52	-4.15	-0.25
Morocco	49.64	46.11	45.62	42.74	-3.53	-2.88	37.85	37.71	38.68	37.92	-0.14	-0.76	30.67	29.08	28.38	28.18	-1.59	-0.20
China	54.13	45.48	42.66	35.74	-8.65	-6.92	58.43	52.39	52.22	49.89	-6.03	-2.33	50.58	45.70	43.71	39.96	-4.88	-3.75
Rep. Dominicana	54.10	48.98	47.68	42.87	-5.12	-4.82	50.12	47.33	46.53	45.81	-2.79	-0.72	65.53	59.35	55.44	50.76	-6.18	-4.68
Rumania	62.97	51.02	48.77	40.63	-11.95	-8.14	47.53	39.59	38.98	39.19	-7.95	0.21	45.87	35.22	35.65	36.05	-10.65	0.40
Pakistan	80.30	74.55	73.99	69.81	-5.74	-4.19	92.20	89.32	87.89	84.53	-2.88	-3.36	73.10	62.94	62.12	57.49	-10.16	-4.63
<b>Isolation</b>																		
Ecuador	3.74	3.12	3.18	3.11	-0.62	-0.07	7.92	6.23	6.42	6.52	-1.69	0.10	4.75	4.41	4.48	4.53	-0.33	0.05
Perú	1.69	1.93	2.06	2.15	0.24	0.09	1.70	2.06	2.36	2.63	0.36	0.28	0.39	0.50	0.49	0.55	0.10	0.06
Colombia	1.44	1.33	1.40	1.50	-0.11	0.09	2.28	1.88	2.02	2.08	-0.40	0.06	1.94	1.92	2.00	2.14	-0.02	0.14
Bolivia	2.90	8.19	6.83	1.90	5.28	-4.93	1.42	2.89	3.26	2.76	1.46	-0.50	1.25	3.08	3.56	2.68	1.83	-0.88
Argentina	1.94	1.99	2.02	1.83	0.05	-0.19	1.32	1.25	1.27	1.22	-0.07	-0.05	1.25	1.35	1.35	1.21	0.10	-0.15
Morocco	3.54	2.85	2.84	2.36	-0.69	-0.47	1.91	2.21	2.43	2.48	0.30	0.05	0.99	1.01	0.96	0.97	0.02	0.01
China	1.46	1.78	1.81	1.61	0.32	-0.20	1.70	2.33	2.98	3.61	0.63	0.63	0.84	1.12	1.20	1.54	0.27	0.34
Rep. Dominicana	1.87	1.76	1.86	1.77	-0.10	-0.09	2.15	2.44	2.70	2.98	0.29	0.28	0.33	0.40	0.37	0.39	0.07	0.02
Rumania	0.99	0.94	1.15	0.81	-0.05	-0.34	2.29	3.17	3.54	3.92	0.88	0.38	1.01	1.54	2.31	2.92	0.54	0.61
Pakistan	7.83	8.28	8.50	10.25	0.46	1.75	0.39	0.56	0.67	0.67	0.17	-0.01	1.03	2.00	1.81	2.18	0.98	0.37

Source: Own elaboration with data from the Population Municipal Register (INE)