

Internal Migration Patterns of Natives and Foreigners in Spain

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Abstract: As a consequence of strong international immigration, Spanish statistical data offer the possibility to distinguish between patterns of migration for both natives and foreigners. The objective of this paper is to determine the difference in patterns between these two categories as regards their migration within Spanish borders. The period of analysis is mainly 2003-2010, the level of aggregation is NUTS 3 (provincial) and the method of research is a quantitative comparative analysis. The study is divided in the following areas of interest: intra and inter-provincial flows; gross and net migration; migration by sex, by age, by source/destination size, and by nationality. Also, I try to find out if migrants are more attracted by leading provinces and if the hypothesis of social networking for foreign-born migrants is confirmed. The main results reveal: a greater propensity of foreign-born migrants to make long-distance movements; gross migration rates of foreigners much higher than natives'; both natives and foreigners (more) are attracted by prosperous provinces; foreign out-migrants are less willing to leave provinces with high concentration of foreign-born population while foreign in-migrants prefer such provinces, i.e. social networking is true; foreign males migrate more than foreign females while the difference between Spanish sexes is rather inexistent; foreigners and Spaniards have also different age propensities to migration, although with some similarities; Spaniards and foreigners also differ when referring to the size of the province they come/go from/to. And finally, the paper makes a ranking of migration by groups of nationality.

Keywords: internal migration, patterns, natives, foreigners, Spain

1. Introduction

Since 1998 onwards, Spain has become the favorite European destination of international immigrants. The number of foreigners grew steadily and rapidly from 637,085 persons (1.6% of the total population) in 1998 to 3,034,326 persons (7.02%) in 2004, and finally, up to 5,747,734 persons (12.22%) in 2010. Therefore, the foreign population in Spain has multiplied by more than seven in a thirteen-year time. Moreover, in 2010, 18.8% of total immigrants were located in the community of Madrid and 14% in Barcelona (20.9% in Catalonia). The Valencian Community and Andalusia come next with 15.5% and 12.2% of total immigrant population. In 2010, the main immigrants were from Romania (781,343), Morocco (645,156), Ecuador, United Kingdom, Colombia and Bolivia, each with effectives between 200 and 300 thousand citizens. Also in 2010, the provinces of Alicante, Balearic Islands, Almeria and Gerona were recording the highest percentages of foreigners in total population (between 21.5 and 24.2%) whereas Jaen, Cordoba, Corunna, Badajoz, Caceres and Cadiz were having the lowest percentages (between 3 and 4%). Madrid was having 16.7%, Barcelona 14.6%, Valencia 12.2% and Seville 4% immigrants in their aggregate population. And finally, Almeria, Castellon, Gerona, Lerida and Tarragona were the provinces that witnessed the highest increases in foreign-born population percentages, with more than 10 points.

Nonetheless, one should bear in mind that these figures are underestimated taking into account that numerous immigrants do not declare their residence and live illegally in Spain. But here, in this paper, I will consider only the legal registered immigrants.

But why did Spain become the "most wanted" country in Europe? De Haas (2007) enumerates the following possible reasons: a higher labor demand for low-skilled workers, an increasing desire of self-accomplishment among immigrants and a favorable immigration policy.

The data used in this paper is taken from the Spanish National Institute of Statistics (INE) through the section "Statistics of Residence Variation" which provides information on official annual migration, both internal and external. The main period of analysis is 2003-2010 because relevant disaggregated data cover only this time interval. The advantage of annual data is that allows the capture of short-term changes neglected by census data. Another database used is the "Continuous Register" of INE which provides data on the number of Spanish and non-Spanish inhabitants at the beginning of each year.

The aim of this paper is to identify the main patterns in internal migration of both Spaniards and foreigners and, more precisely, the difference between them. This is why the method of research employed is a quantitative comparative statistical analysis. Also, some econometric tests are carried out on certain panel data. The structure of the paper is the

following: section 2 presents some short thoughts offered by the existing literature, section 3 carries out a statistical analysis of domestic migration flows in Spain for both natives and foreigners, section 4 makes a division of internal migration by sex, age, province size, nationality; also, it investigates on the existence of social networking and economic incentives; finally, section 4 offers some insights on future research.

2. Literature Review

The most important questions to answer about foreigners' patterns of internal migration are: *Do they remain in the initial place of residence?*, *Are their patterns of migration similar to those of natives?*, *What motivates them to change residence?*, *Their internal mobility helps them concentrate or spread?* (Recaño, 2002, 2006). The answers are quite difficult to give.

The existing literature ((Recaño & Roig, 2006; García Coll, 2005; Pumares, 2005; Recaño & Domingo, 2006) indicates that: foreigners are much more mobile than Spaniards, their high mobility is strongly related to the length of residence and the age structure, and their migration patterns are different from those of natives (Recaño, 2006).

Nogle (1994) argues that foreigners are more mobile due to their socio-demographic characteristics (age, education, length of residence, job hold, etc.). Bartel & Koch (1991) and Kritz & Noble (1994) consider that immigrants are more influenced by social networks and less by economic and amenity conditions. The existence of previous immigrants in a certain location helps a new immigrant to obtain cheap information about job opportunities, maybe to get a temporary shelter and other facilities (Frey, 1995).

Instead, Schündeln and Schündeln (2002) demonstrates for Germany that foreigners are more responsive than nationals to regional labor market gaps. In turn, Kritz and Gurak (2001) affirm that US immigrants have a lower willingness to leave prosperous regions and/or regions with a high concentration of compatriots.

Plane & Bitter (1997), Hierro & Maza (2010), and Izquierdo & Carrasco (2005) think that foreign-born residents are more mobile between regions than native-born because of lower monetary and non-monetary costs, i.e. weaker friendship and kinship ties, lack of homeownership, instable and temporary jobs usually in the black economy.

Belanger and Rogers (1992) argue that the internal moves of foreigners change their territorial distribution and concentration. Instead, Newbold (1999) is in favor of changes in concentration only among certain nationality groups.

Nogle (1997) says that immigrants recently arrived and those with low human capital resources are most dependent on social networks.

3. Gross Internal Migration (national, intra- and inter-provincial)

During the period 1998-2010, internal migration among Spaniards was within the range 22.4‰ (2001) and 31.3‰ (2006) while among foreigners reached its minimum of 62‰ in 1998 and its maximum of 120.8‰ in 2002. *If the average rate for natives was of 27.4 migrants per 1,000 inhabitants, for foreigners was more than triple (95.2‰)*. Moreover, changes in Spanish rates were very small compared to changes in foreign rates. *If internal movements of Spaniards multiplied by 1.37 from 1998 to 2010, in the case of foreigners the ratio reached 11.5*. And if, in 1998, natives accounted for 96% of total internal migrations, in 2010, their proportion decreased at 73%. Table 1 is illustrative.

Another interesting fact is that although international immigration grew steady during this period, we can observe that foreign internal movements began to fall beginning with 2008. This fact can be attributed to the global economic crisis.

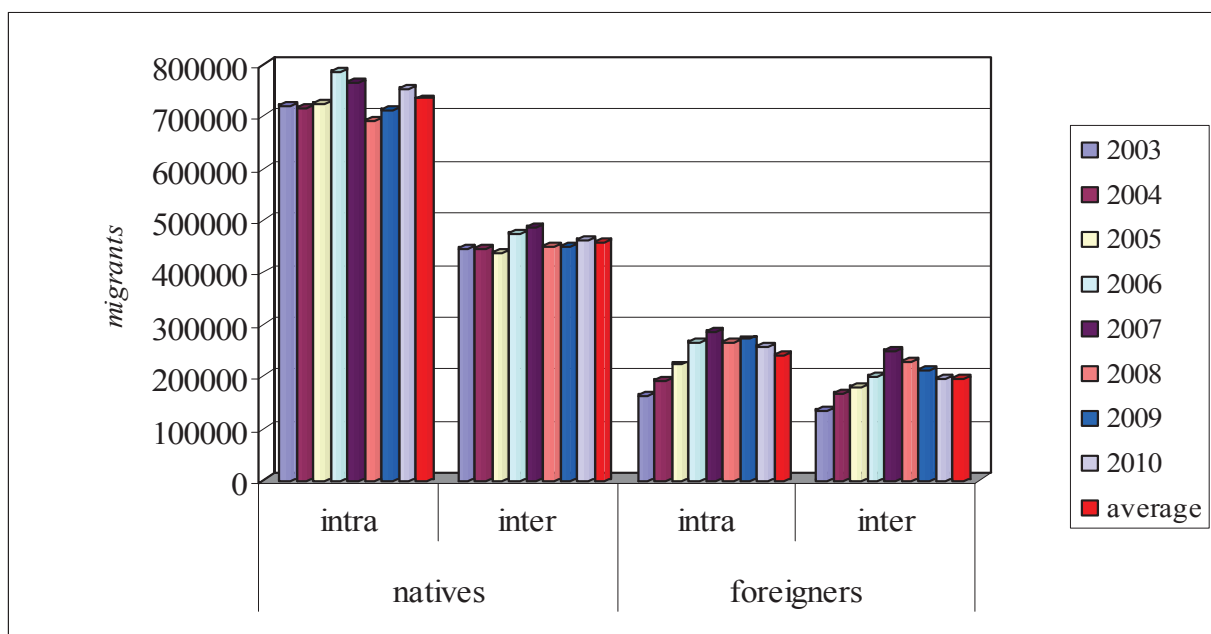
Table 1. Internal migration for natives and foreigners (1998-2010)

Year	Spaniards			Foreigners		
	<i>movements</i>	<i>gross rates (‰)</i>	<i>%</i>	<i>movements</i>	<i>gross rates (‰)</i>	<i>%</i>
1998	893,694	22.8	96	39,529	62	4
1999	955,183	24.2	95	50,944	68	5
2000	952,458	24.1	92	79,626	86.2	8
2001	889,814	22.4	89	104,801	76.5	11

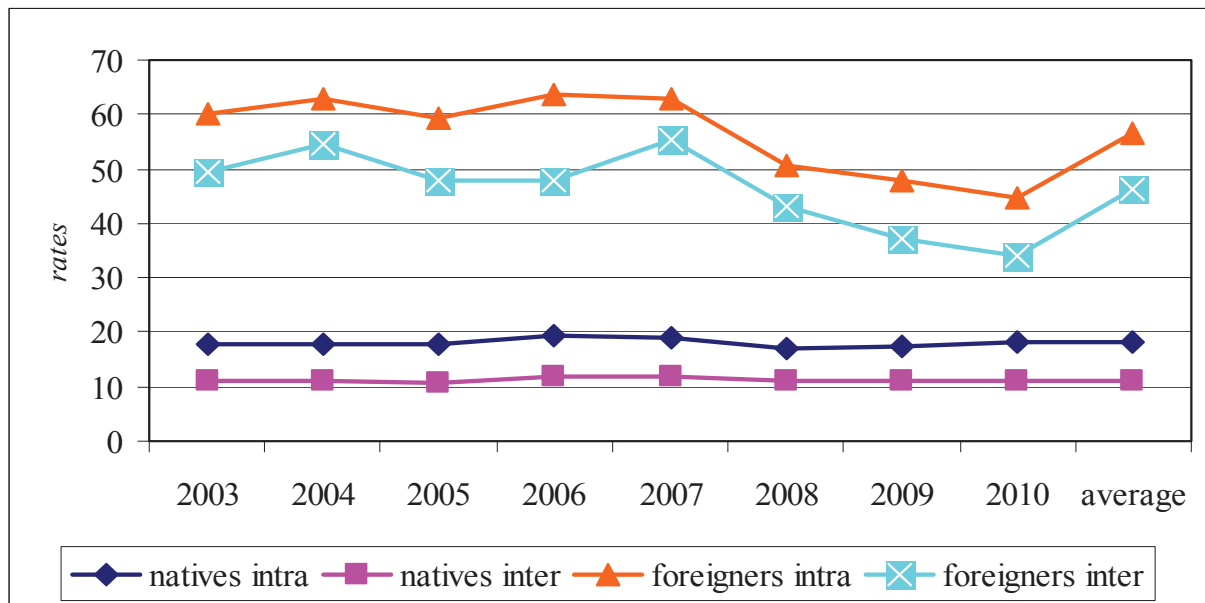
2002	1,085,061	27.2	82	238,866	120.8	18
2003	1,174,313	29.3	80	293,590	110.2	20
2004	1,169,708	29.1	77	357,738	117.9	23
2005	1,168,484	28.9	74	401,877	107.7	26
2006	1,269,331	31.3	73	462,978	111.7	27
2007	1,260,160	31	70	535,193	118.4	30
2008	1,149,426	28.1	70	493,784	93.7	30
2009	1,169,460	28.5	71	483,554	85.6	29
2010	1,226,525	29.7	73	454,870	79.1	27

Source: Own elaboration based on INE data
N.B. Data include Ceuta and Melilla.

During the interval 2003-2010, the average number of native-born intra-migrants was of about 734,000 (62%) while the number of inter-migrants was of about 455,900 (38%). Instead, foreign-born migrants were about 239,200 (55%) moving within one province and 194,650 (45%) moving across different provinces. As for the rates, the highest were 19.4‰ (intra) and 11.9‰ (inter) for natives, and 63.7‰ (intra) and 55.2‰ (inter) for foreigners. The maximum value for total intra-migration was recorded in 2006 while the maximum value for total inter-migration was recorded one year later. In general, the intra oscillations were more flattened than inter ones and the difference between intra- and inter-flows, although always in favor of intra ones, was smaller for foreigners. Another way put, *foreign residents were relatively more mobile between provinces than native-born citizens even though both categories preferred short-distance moves instead of long ones* (fig. 1, (a) & (b)).



(a) Numbers



(b) Rates

Source: Own elaboration based on INE data

NB: Data exclude Ceuta and Melilla

Figure 1. Intra and inter-migration of natives and foreigners

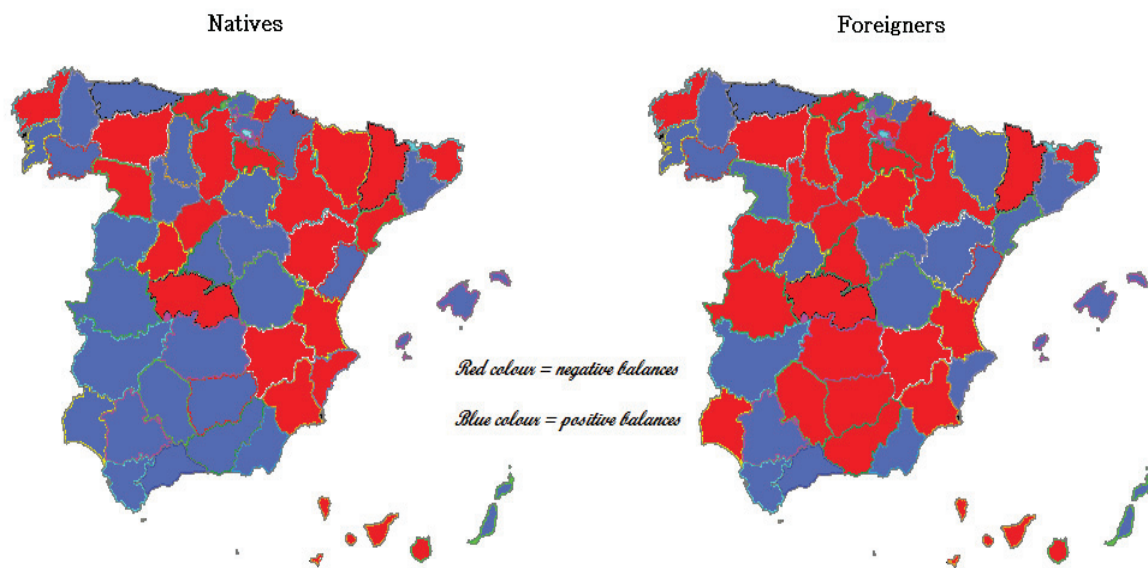
4. Classification of Internal Migration by Various Categories

4.1. Migration Rates by Province. Socio-Economic Stimuli and Social Networking

On average, over the period 2003-2010, in the case of natives, the provinces of Guadalajara, Toledo and Tarragona recorded the highest rates of in-migration (64.2, 46.4 and 44.1‰), while Cordoba, Jaen and Badajoz had the lowest in-migration rates (16.3, 18.2 and 19.5‰). For out-migration, on one hand, Guadalajara (43.9‰), Balearic Islands (42.1‰) and Gerona (39.2‰) registered the highest rates and, on the other hand, Cordoba (16.9‰), Badajoz (18.4‰) and Murcia (19.6‰) registered the lowest rates.

Afterwards, foreign in-migration reached its highest values in Guadalajara (192.9‰), Zamora (191.3‰) and Biscay (184.1‰) and the lowest in Alicante (71.7‰), Malaga (72‰) and Almeria (76.9‰). Instead, the highest and lowest rates of out-migration among foreigners were recorded in Zamora (198.2‰), Jaen (189‰) and Palencia (180.3‰), the highest, and in Malaga (66.1‰), Alicante (67.5‰) and Balearic Islands (80.3‰), the lowest.

Fig. 2 displays net internal migration rates by province for natives and foreigners. Thus, rates turned negative in 21 provinces for natives and 27 provinces for foreigners. Moreover, 15 (17) provinces recorded net outflows (inflows) for both Spaniards and non-Spaniards.



Source: Own elaboration based on INE data

NB: Data include total (intra & inter) flows, including flows to & from Ceuta and Melilla.

Figure 2. Migration balance by province 2003-2010

Are prosperous provinces more attractive for migrants? The previous literature is controversial as regards the preference of foreigners for prosperous regions. By prosperous province I understand a province with higher GDP/capita and lower unemployment rate than the national averages, among others. In order to elucidate somewhat the controversy aforementioned, I will perform a two panel data regressions to illustrate the relationship between net migration rates (only interprovincial) for natives and foreigners (as regressants) and real provincial GDPs per capita (eq. I) and, respectively, provincial unemployment rates (eq. II) (as regressors, both in relative terms, i.e. Spain=100). The period of analysis is 2003-2008. Thus, after controlling for fixed effects (two way, i.e. provincial and time), it seems that *foreigners were indeed more attracted by provinces with higher incomes* (positive correlation of 0.75) than natives (positive correlation of 0.18) (eq. I). Further, when estimating eq. II, I obtain two negative and significant estimates, for natives (-0.17) and for foreigners (-0.02). Therefore, *foreigners were also more responsive than natives to unemployment provincial gaps*. The preference of foreigners for the more developed provinces could be explained by their lower income levels and better job opportunities (as a pull factor) offered by these.

Is social networking a real fact for foreign migrants? Next, I want to find out if there is a social network effect in Spain, i.e. if provinces with many immigrants keep them or attract others. In order to solve this, Hierro and Maza (2010) employed a cross-sectional regression in which put together the percentage of foreign-born population in total provincial population (as regressor) and the rate of interprovincial out-migration for the foreign-born people (as regressant). They have found a negative significant correlation for the period 1996-2005 (-0.58). Instead, using the same variables but with a *two-way fixed-effects panel data model*¹ for the period 2003-2010 (N=350), I get a weaker negative but significant coefficient (-0.44). Applying the same technique for the in-migration rate, I obtain a positive and significant estimate of 0.67². Concretely, a 1% increase in the percentage of foreigner residents will lower their out-migration rate by 0.44% and will boost their in-migration rate by 0.67%. In conclusion, no matter I tested on in-migration or out-migration, *foreign-born migrants were less willing to leave a province with a higher concentration of foreigners or more willing to enter such a province, thus confirming the theory of social networking*. Table 2 presents in detail the results of the regressions performed in STATA (9.2/SE version).

¹ All variables were used in logarithms and, thus, the estimates are interpreted in terms of elasticity.

² Estimates were computed using one lag of the regressor in order to avoid simultaneity.

Table 2. Social networking in Spain

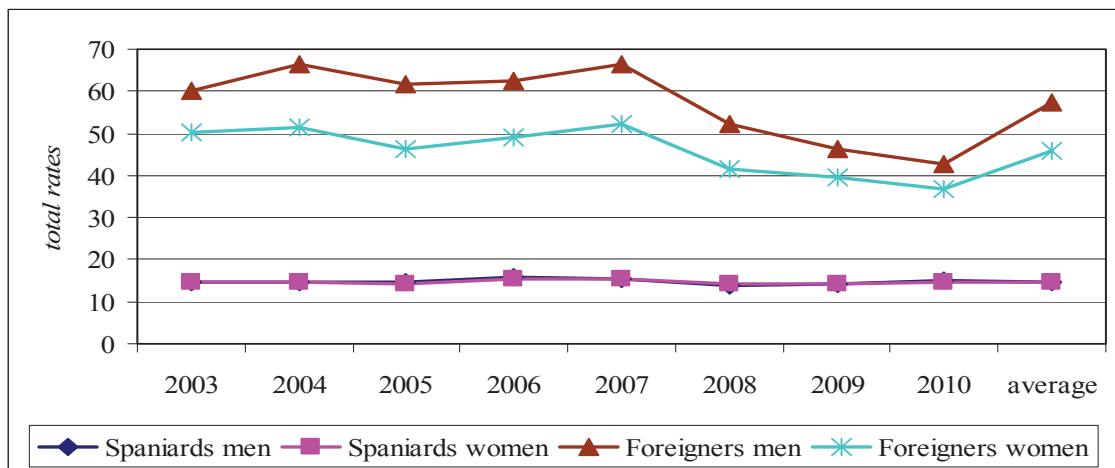
	Out-migration	In-migration
Foreign residents % (1 lag)	-0.44	0.67
Adj. R2	0.95	0.89
Overall F test	103.47***	91.04***
Dummies F test	59.66***	29.45***

NB: Significant at 1% significance level

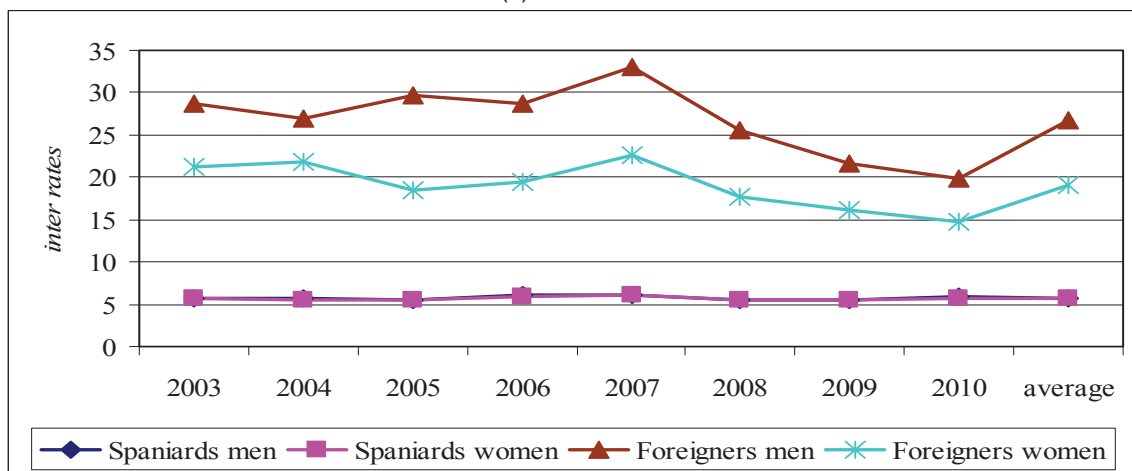
4.2. Migration by Sex

For Spaniards, 50.1% (600,835 persons) of average total migrants were men, and for foreigners, 55.4% (241,245 persons) were also men. If considering inter-provincial migration, the gaps increased at 50.3% (233,590 migrants) for Spanish men and 59% (115,725) for foreign men. Therefore, in Spain, both native and foreign males migrated more than females.

Fig. 3 depicts similar evolutions for both total and inter rates of migration and, furthermore, Spanish sexes had the same rates (total: men = women = 14.8‰; inter: men = women = 5.7‰) but not foreign sexes where men's rates exceeded women's rates (total: men = 57.2‰, women = 45.8‰; inter: men = 26.7‰, women = 19‰).



(a) Total rates



(b) Inter rates

Source: Own elaboration based on INE data

Figure 3. Total and inter rates of migration of natives and foreigners

4.3. Migration by Age Groups

Table 3 presents a ranking by age groups for both natives and foreigners with their corresponding average percentages and rates. As one can see, **the most mobile migrants, both Spaniards and non-Spaniards, were those aged 25-34.** Nevertheless, the hierarchy is different for the two categories.

Table 3. Age ranking of migration for Spaniards and foreigners

* averages 2003-2010 *

Spaniards			Foreigners		
Ranking	Percentages (%)	Rates (‰)	Ranking	Percentages (%)	Rates (‰)
1. 25-34	31	9.1	1. 25-34	38	39.1
2. < 16	18	5.2	2. 35-44	21	21.9
3. 35-44	17	5.1	3. 16-24	16	16.9
...
7. 55-64	6	1.7	7. ≥ 65	1	1.2

Source: Own elaboration based on INE data

4.4. Migration by Size of Provinces

The majority of *both native-born people and foreign-born people came from provincial capitals (30% each) and from little towns with less than 10,000 inhabitants (24% natives and 19% foreigners) and went to little towns with less than 10,000 inhabitants (29%) and other provincial capitals (23%), the natives, and the reverse goes for foreigners (26% of them went to other capitals and 19% to little towns).*

4.5. Migration by Nationality

On average, international immigrants came from the Europe, America (North, Centre and South), Africa and Asia. Therefore, it is logical to expect these immigrants to be the most to move internally. More precisely, foreign residents changed address within Spanish borders as follows: 34.8% were European citizens, 30.3% Americans, 13% Africans and 4.9% Asians. A ranking by nationality of internal migrants looks like this: Romanians (12.5%), Moroccans (8.4%), British (4.9%), Bolivians (4.4%), Columbians (3.5%), Ecuadorians (3.3%), Argentineans (2.9%), Brazilians (2.8%), Peruvians (2.6%), Bulgarians (2.3%) and Chinese (2%) – if considering their absolute total number.

If I consider the net migration outcomes by province and nationality (grouped by continent) since the last enlargement of the EU (2007), the results show a large heterogeneity between groups of nationality as regards their net provincial internal moves. For example, only six provinces registered positive balances for all groups (EU, non-EU, Africa, America, and Asia). The same happened for seven provinces with negative balances. The positive “homogenous” provinces were Alava, Asturias, Cantabria, Corunna, Navarre and Seville, and the negative were Cuenca, Jaen, Las Palmas, Salamanca, Segovia, Teruel and Zamora.

5. Final Remarks

In a future research, I intend to undertake a comprehensive study of the main determinants (push and pull factors) of internal migration for natives and, respectively non-Spanish residents. This will help in elucidate to which factors (of which nature) these two categories are more responsive and how they decide to migrate.

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