Chapter 3
Contrasting Patterns of Migration and Settlement

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Introduction

After centuries of sustained emigration, Spain in the 1980s not only became a country of immigration but a prominent destination among the 'new immigration countries' of the European Union (King et al. 1997). This turnaround grew particularly intense during the 2000s, when a third of all arrivals to Europe went to Spain, making it the most important destination for international migration on the continent (Pellegrino 2004) and the second largest worldwide, behind only the USA (OECD 2007). After Spain's entry into the EU in 1986, immigration was initially dominated by tourists and retirees from elsewhere in the Union, along with farmworkers responding to seasonal demands for agricultural labor. After 2000, however, immigration into Spain grew larger and more diverse owing to the economic boom known as the *Golden Decade*. Between 2000 and 2010 labor demand in construction and services grew rapidly (EEAG 2011) and immigration from Latin America surged, accounting for 38.4% of the total inflow over the decade. This surge took place beside well-established labor flows from Northern Africa (primarily Morocco) and new flows from Eastern Europe (especially Romania). Rapid growth in the number of immigrants raised fears of segregation in Spanish society and put the issue high on national, regional, and local agendas (Capel 1997; Cachón 2003; Izquierdo and Martínez 2003; Arango 2006; Aja and Arango 2006; Montoro et al. 2009). Given the distribution of jobs and housing and the operation of migrant networks, immigrants tend to concentrate in certain regions and localities, clustering particularly in Madrid (Lora-Tamayo 2001; Martínez del Olmo and Leal 2008; Echazarra 2010) and Barcelona (Martori and Hoberg 2004; Bayona

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2007; Musterd and Fullaondo, 2008; Martori and Apparicio 2011; Galeano et al. 2014). The rapid expansion of ethnically diverse neighborhoods and enclaves (Sabater et al. 2013) spawned negative attitudes among natives, especially those at the bottom of the socioeconomic ladder whose occupational characteristics mirrored those of the immigrants (Checa 2001; Caro 2002; Zapata-Barrero 2003; Calavita 2005; Domingo and Sabater 2012).

The twin processes of immigration settlement and spatial integration combine to produce a diversity of segregation patterns across groups and times which depends on the particular histories of immigration and socioeconomic mobility involved (Massey 1985). Concern about rising segregation levels stems from the well-known connection between a group's spatial circumstances and its socioeconomic well-being (Massey and Denton 1993). Although research to date suggests an ongoing process of spatial deconcentration is occurring among immigrants (Domínguez et al. 2010) while underscoring the importance of internal migration for this dispersion (Finney and Catney 2012), studies linking segregation and internal migration are still scarce in Spain (Sabater et al. 2012), especially for immigrants whose numbers surged after 2000 (Recaño and Domingo 2006). In this chapter, we seek to fill this gap by analyzing trends and patterns of segregation for Latin Americans and Africans in Spain, currently the nation's two largest non-European immigrant groups.

Our work contributes to the existing literature in two ways. First, we extend the geographic and temporal coverage of previous analyses of segregation in Spain, arguing that it is important to document levels and trends using a consistent time series to confirm previous findings about dispersal as well as to reveal trends in newer settlement areas. Second, we analyze the link between segregation and internal migration to reveal the degree to which mobility within Spain reinforces or reduces the clustering of Latin Americans and Africans, thereby gaining a more complete understanding of the spatial processes that contribute to segregation and integration among newcomers. In addressing these two issues, we focus on three specific questions:

1. How residentially segregated are Latin Americans from Spanish natives after a decade of unprecedented immigration, and how do these levels contrast with levels segregation observed for Africans?
2. Has residential segregation increased or decreased for Latin Americans and Africans between 2000 and 2010?
3. Has internal migration acted to reinforce or reduce the residential segregation of Latin Americans and Africans over the past decade?

The remainder of the chapter is organized as follows: the next section describes the context for international migration in Spain; the following section discusses the data and measures we draw upon; two sections then present results on trends in segregation and patterns internal migration; a conclusion briefly summarizes our leading findings; and a final sections ends by considering the future of segregation in Spain.

Table 3.1 Population of Spanish, Latin American and African groups in Spain and within Madrid and Barcelona provinces, 2000–2010. (Source: Own elaboration with data from the Population Municipal Register (INE))

	Year 2000		Year 2010	
	Count	%	Count	%
Spain				
Spanish	38,989,252	96.4	40,416,850	86.0
Foreign-born	1,471,232	3.6	6,604,181	14.0
Latin American	389,730	1.0	2,459,089	5.2
African	308,265	0.8	1,076,389	2.3
Other	773,237	1.9	3,068,703	6.5
Total	40,460,484	100.0	47,021,031	100.0
Madrid				
Spanish	4,935,642	95.0	5,190,685	80.4
Foreign-born	259,944	5.0	1,267,999	19.6
Latin American	108,130	2.1	641,705	9.9
African	52,081	1.0	135,996	2.1
Other	99,733	1.9	490,298	7.6
Total	5,195,586	100.0	6,458,684	100.0
Barcelona				
Spanish	4,548,804	96.1	4,597,931	83.4
Foreign-born	186,177	3.9	913,216	16.6
Latin American	59,837	1.3	422,775	7.7
African	53,227	1.1	175,832	3.2
Other	73,113	1.5	314,609	5.7
Total	4,734,981	100.0	5,511,147	100.0

International Migrants in Spain, Madrid and Barcelona

As shown in Table 3.1, between 2000 and 2010 some 5.1 million immigrants arrived in Spain, raising the foreign born share of the national population from 3.6 to 14.0%. The importance of Latin American and African immigration over the decade is clearly indicated in Table 3.1. Whereas Spain was home to similarly sized populations of Latin Americans and Africans in 2000—389,730 and 308,265 persons, respectively, and accounting for 1 and 0.8% of the population—by 2010 the Latin American population had grown to 2.5 million and the African population to 1.1 million, respectively representing 5.2 and 2.3% of the Spanish population. Together these two groups accounted for more than half (54%) of all immigrants present in Spain during that year. The concentrations are even greater in the provinces of Madrid and Barcelona, Spain's two leading immigrant destinations. In the former, Latin Americans comprise 19.6% of the provincial population and Africans 2.1%, together representing 61% of all foreigners; and in the latter, Latin Americans and

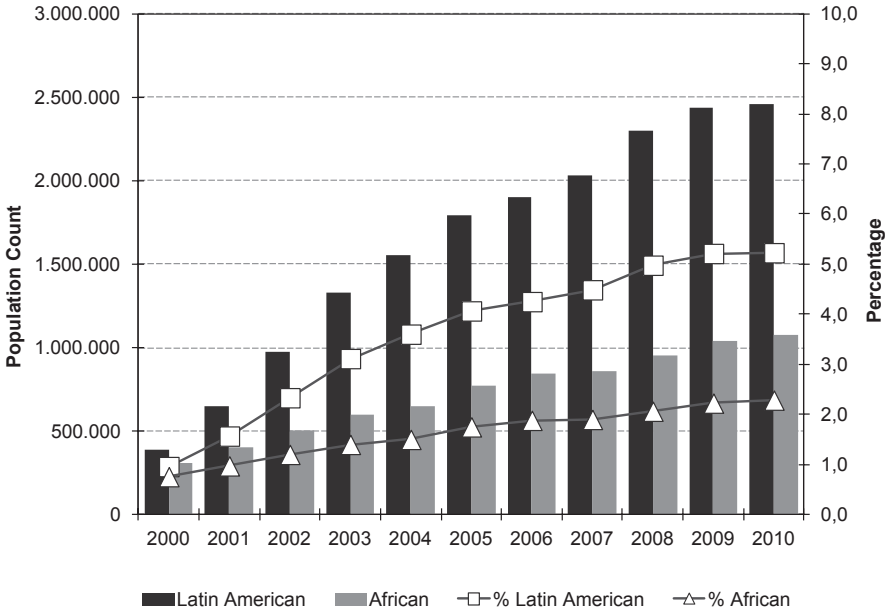


Fig. 3.1 Population change of Latin American and African groups in Spain, 2000–2010. (Source: Own elaboration with data from the Population Municipal Register (INE))

Africans comprise 7.7 and 3.2% of the population, respectively, and two thirds of all foreigners.

In terms of the national origin mix, it is important to note that there are significant compositional differences between Latin Americans and Africans. While the immigrant flows from Latin America have been remarkably diverse, with up to nine national groups with more than 100,000 persons, and four of them with more than 200,000 persons by 2010 (Ecuador with 484,623; Colombia with 371,064; Argentina with 291,740; and Bolivia with 213,862), immigrants originating from Africa are still dominated by one single national origin (Morocco with 760,238 residents). Although Africa's immigration inflows to Spain have also increased in diversity of origins over the past decade, particularly with the growth of international migration from Sub-Saharan Africa, the second and third largest national African groups (Argelia and Senegal with 60,534 and 60,119 persons respectively) still account for a much smaller migration stream to Spain. Thus, immigrants from Morocco comprise the largest non-European national origin in Spain with 1.6% of the total population, while Ecuadorians, the top Latin American immigrant group, constitute just over 1% of the total population (the top four national origins from Latin America constitute 2.9%).

Figure 3.1 shows annual changes in the number and percentage of Africans and Latin Americans between 2000 and 2010. Despite evidence of rising and sustained immigration from Africa, it is evident that Spanish immigration policy had implicit ethnic preferences (Joppke 2005), manifestly favoring immigrants from Latin

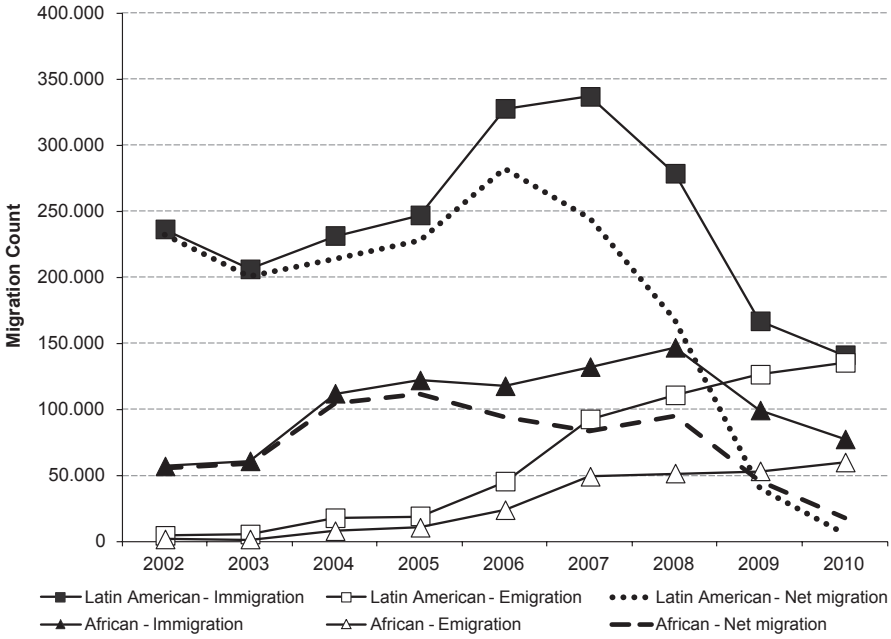


Fig. 3.2 International migration flows of Latin American and African groups in Spain, 2002–2010. (Source: Own elaboration with data from the Residence Variation Statistics (INE))

America (Izquierdo and Martínez 2003) a preferential treatment unique among former imperial powers (Bauböck et al. 2006). Whereas the African population increased by a robust factor of 3.5 over the decade, Latin Americans increased their number by a remarkable factor of 6.3 to become by far the largest immigrant population in the nation.

Figure 3.2 provides further details about the components of growth in the foreign born population by showing numbers of immigrants, emigrants, and net immigration over the period. As can be seen, the peak of net Latin American immigration was reached in 2006 with a figure of 280,000, which represented a balance between around 325,000 immigrant entries and 45,000 exits. Although entries from Latin America continued to rise into 2008, net migration nonetheless fell because departures increased faster. After 2008 exits by Latin Americans continued to rise and entries plummeted, bringing the net inflow down to around 20,000 by 2010. In contrast, net migration from Africa peaked in 2005 at around 110,000 then fell slightly between 2005 and 2008 before falling to around 10,000. Although total arrivals of Africans continued to rise after 2005 and peaked at around 145,000 in 2008, departures also rose steadily over the period and in 2008 reached 50,000 to produce a net of just 95,000 in that year.

Recent trends of international migration are clearly marked by the effect of the Spanish recession. Until 2008, international inflows were in line with the demands of a booming economy that was driven by residential investment and home

construction, an institutionally generated housing bubble that was encouraged by low real interest rates, rapid land deregulation, and tax incentives to encourage ownership. Housing demand grew dramatically among both Spanish nationals and foreigners and developers stepped forward to create a vast new housing stock (García 2010), a situation that greatly contributed to the widespread construction of housing units in metropolitan regions with large immigrant populations such as Madrid (Leal and Domínguez 2008) and Barcelona (Pareja-Eastaway 2009). During the peak years of the Golden Decade more than 800,000 homes were built each year, more than the number of new dwellings erected in France, Germany and Italy combined (Bielsa and Duarte 2010; García Montalvo 2007).

Since the onset of the economic recession, however, low immigration levels have become a characteristic feature of Spanish demography. Nonetheless, despite the low demand for foreign workers and record levels of unemployment, net migration remained slightly positive through 2010. Although we might expect further declines as unemployment rises, it is unlikely to fall below zero. According to González-Enríquez (2009) Spain is likely to remain attractive to immigrants for at least four reasons: (1) the large size of the informal economy; (2) relatively positive Spanish attitudes towards immigrants, at least those from Latin America; (3) a high tolerance of illegality; and (4) the guarantee of social rights for irregular migrants under Spanish law. On the demand side, the need for health and social care among the elderly as a consequence of population aging is particularly important and is likely to sustain policies that encourage international recruitment (Cuadrado et al. 2007; Domingo and Gil-Alonso 2007).

Data and Measures

We measure the residential segregation of Latin Americans and Africans using the smallest geographic unit available in Spain, *Secciones Censales,* which have an average population about 1500 persons. Our dataset consists of a time series running from 2000 to 2010 on population by country of birth. This information comes from Spain's Municipal Registers (*Padrones Municipal de Habitantes*), which are published annually by the National Statistics Institute (*Instituto Nacional de Estadística*, or INE). Data on internal migration come from Residential Variation Statistics (*Estadística de Variaciones Residenciales*) published by INE. Using these data we tabulated all within-country moves that occurred between 2002 and 2010 to compute rates of in-, out-, and net migration. These data are more limited geographically, only allowing us to analyze inflows and outflows at the national, provincial, and municipal levels. Finally, we consider future prospects for integration versus segregation by referring to rates of natural increase obtained from Spain's National Vital Statistics Office for 2005–2010 and frequencies of naturalization from the Ministry of Labor and Immigration.

Since Secciones Censales are constantly affected by electoral boundary changes, harmonization of these areas over time is required to minimize statistical artifacts

produced by the re-drawing of boundary lines.[1] To create a constant spatial grid, we adjusted all units to their 2010 boundaries. This task was accomplished by employing data interpolation based on ad hoc Geographical Conversion Tables (GCTs) that contained street addresses from the Electoral Census Street Map (Instituto Nacional de Estadística 2012) and then undertaking a proportional allocation based on the share of the source geography lying in the target geographic unit. The advantage of this approach to adjustment is that the summation of population data of the source geography is preserved in the transformation of the new target geography (Simpson 2002).

By using the GCTs, which have information on the correspondence between source and target geographies (usually a 1:1 correspondence), we were able to allocate populations to the appropriate 2010 census units (i.e. going from 33,733 to 35,629 Secciones Censales). Unlike previous studies of residential segregation in Spain, therefore, we are able to investigate trends in residential segregation using a consistent geography. Previous work has demonstrated the usefulness of standardizing spatial units to provide more accurate estimates of how populations are changing for small areas over time (Norman et al. 2008), thus precluding possible biases in the measurement of residential segregation (Sabater 2010; Sabater and Simpson 2012).

Segregation can exist at several levels simultaneously, ranging from specific households to neighborhoods to nation-states. However, although different approaches have been suggested to deal with the scale effect (Wong 2010), including a call for multiscale analysis to obtain a more comprehensive understanding (Fotheringham 1989), so far studies in Spain have rarely attended the "inherently scalar nature" of segregation patterns, particularly the features of immigrant residential patterns at the smaller scales of states or provincial areas where patterns are dominated by the existence of large, spatially distinct areas. Given the geographic structure of our data sources, in our study we used *Secciones Censales* to compute measures of residential segregation in all municipalities in Spain and separately for the provinces of Madrid and Barcelona. Secciones Censales are the smallest level at which Municipal Register and census data are released and can be thought as a measure of population distribution at neighbourhood level, particularly for the largest administrative geographies such as Madrid and Barcelona. For convenience in English, from this point on we will refer to Secciones Censales simply as "neighborhoods." Because of data limitations, additional analyses of international and internal migration are undertaken at the provincial municipal levels. Since racial and ethnic categories are not used in Spanish administrative data, our analyses of residential segregation and migration rely on country of birth, which allows for the aggregation of persons born in Latin America and Africa, the two groups of interest here. In doing so, our data allows us to provide an aggregate view of Spain's two largest non-European immigrant groups while minimizing the potential bias

[1] As population sizes for each census tract should be approximately equal (and none cannot exceed 2000 residents), election boundary changes are made for the equalization of electoral districts so that each elector's vote bears a similar weight (Organic Law 5/1985 on the Electoral General Regime).

resulting from segregation analyses in which the population of a group is small relative to the number of areas in the country or region under study (Voas and Williamson 2000).

To assess the spatial situation of immigrants across the smallest areas or neighbourhoods, we turned to the two most common measures of segregation: the dissimilarity index (D) and the isolation index (Pxx*). Although a plethora of indices have been used to capture various dimensions of residential segregation (Massey and Denton 1988; Massey et al. 1996), we rely on the most two most common in order to maintain continuity and allow straightforward comparisons both nationally and internationally. These measures reveal the level and change over time with respect to two dimensions of spatial variation: evenness and exposure.

The dissimilarity index measures how unevenly distributed Latin American and African immigrants are relative to native Spaniards across neighborhoods within a municipality. In this case, D is interpreted as the relative share of immigrants who would have to exchange neighborhoods with Spanish natives in order to achieve an even residential distribution (where each spatial unit has the same proportion of immigrants and natives). A common formula for the dissimilarity index is:

$$D = 0.5 * \sum \left| \frac{N_{xi}}{N_{x\cdot}} - \frac{N_{gi}}{N_{g\cdot}} \right| * 100,$$

where N_{xi} refers to the population of the immigrant group x of interest in neighborhood i; g is the population of the reference group (Spanish natives); and the summation over an index is represented by the dot symbol. Multiplying by 100 expresses the share as a percentage, such that 0 indicates complete integration and 100 represents total segregation.

Residential isolation is computed using the Pxx* index, which is used to indicate the degree of potential contact between members of the same group, represented by x. This index is also commonly expressed as a percentage, where 0 indicates no likelihood of contact with own-group members within neighboroods and 100 means that the unit contains only other immigrants. Pxx* indicates the average percentage of own-group immigrants in the spatial unit inhabited by the average indicate and express the experience of segregation in daily life (Massey and Denton 1988). Pxx* can be expressed as follows:

$$Pxx^{*} = \sum_{i} \left(\frac{N_{xi}}{N_{x\bullet}} \right) \left(\frac{N_{xi}}{N_{\bullet i}} \right) * 100.$$

In order to assess the effect of internal migration on segregation, we computed net migration rates for Spanish provinces and municipalities during the period 2002–2010 and cross-classified them by level of segregation and population composition. Using values of D, we defined four levels of segregation: low (<20), low-moderate (20–34), high-moderate (35–49) and high (≥50). To consider population composition we defined two sets of categories: low versus high immigrant concentrations within municipalities (<10% own group versus ≥10% own group) and low versus high native concentrations (<80% Spanish versus ≥80% Spanish). We also

consider rates of migration by size of place, dividing municipalities into those of moderate size (10,000–100,000 inhabitants) and large size (>100,000 residents). Given that relatively few immigrants settle in small municipalities (<10,000 persons), which are mostly rural, we excluded them from consideration.

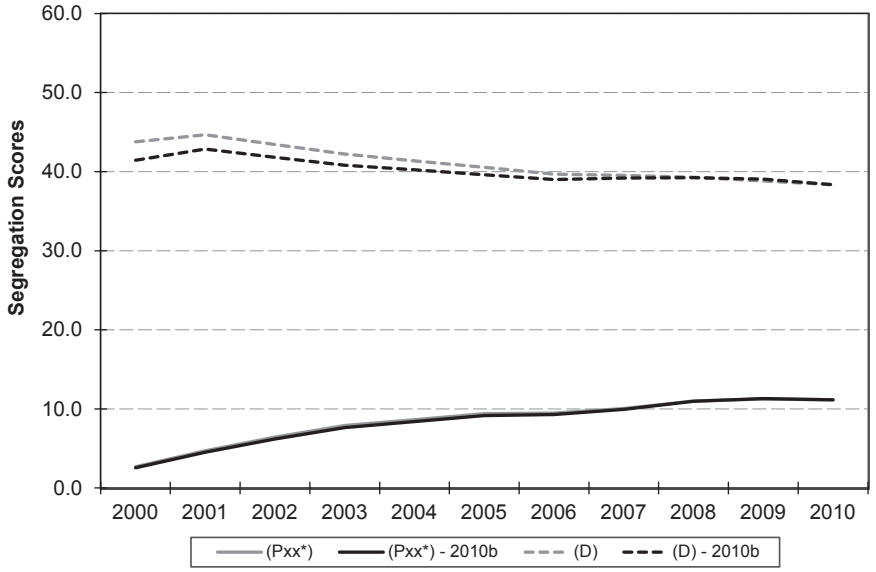
Results

Residential Segregation

Although taking a snapshot of residential segregation may be useful to assess the physical separation between groups at one point in time, we focus on changes over time in order to assess proclivities toward integration or segregation. Figure 3.3 shows trends in residential dissimilarity and spatial isolation for Latin American and African immigrants from 2000 through 2010. For this exercise, segregation measures were computed across all *Secciones Censales* in the country simultaneously in one of two ways: using period-specific boundaries and using constant 2010 boundaries over the study period. In the end, our adjustment for boundary changes made little difference in levels or trends. For the sake of consistency, however, we interpret results for indices computed using constant boundaries.

The results for D reveal differential trends in the degree of spatial integration achieved by Latin Americans and Africans over time. On average, Latin Americans in Spain experience a high-moderate level of segregation that been slowly declining over time (going from 41.4 in 2000 to 38.3 in 2010). In contrast, Africans not only experience a higher degree of residential segregation (at or near 50); it also showed little evidence of a decline over time and in fact rose slightly during the period of observation (going from 47.5 to 48.9). Despite the slight decline in dissimilarity observed for Latin Americans, the results for Pxx* indicate that they experienced a fourfold increase in spatial isolation over the decade (going from 2.5 to 11.2); and despite the slight increase in African segregation, they only experienced a twofold increase in isolation (from 4.0 to 9.1). This contrast reflects the much more rapid demographic growth experienced by Latin Americans over the decade. Mathematically, if a group's share of the population rises while D changes very little, then Pxx* isolation indices have to increase; and the size of the increase depends on the degree to which the group's share of the population rose over time. For both Africans and Latin Americans, however, the degree of spatial isolation is quite small owing the fact that neither group constitutes a high share of the total population. Irrespective of origin, the average immigrant lives in a neighborhood that contains only a little more or a little less than 10% of their own group. By way of comparison, in the United States the average African American lived in a neighborhood that was 48% black (Rugh and Massey 2013), and in this study the unit of analysis was the census tract, which is much larger than a *Sección Censal* and would generally produce a lower level of isolation, other things equal.

Latin American



African

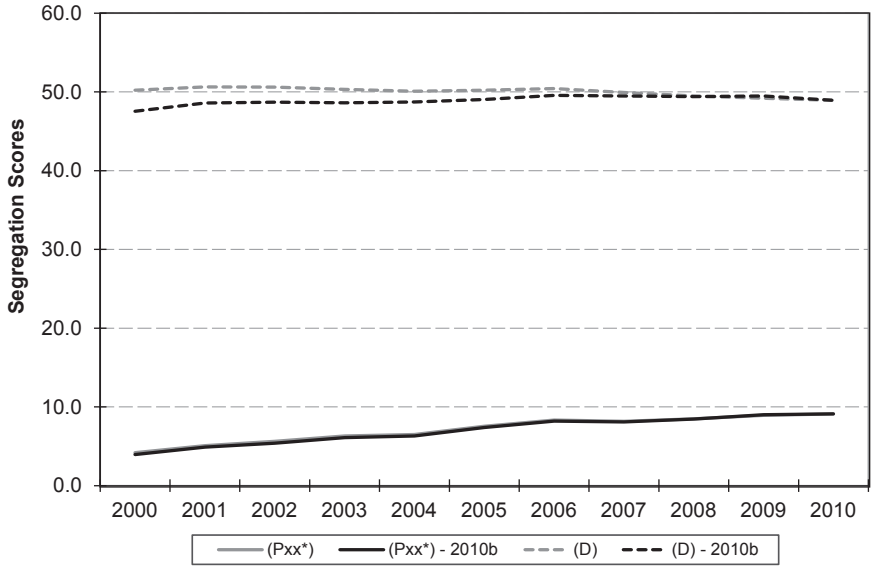


Fig. 3.3 Segregation scores (evenness and exposure) for Latin American and African across census tracts in Spain, 2000–2010. (Source: Own elaboration with data from the Population Municipal Register (INE). NB: 2010b indicates the use of the 2010 boundaries over the study period)

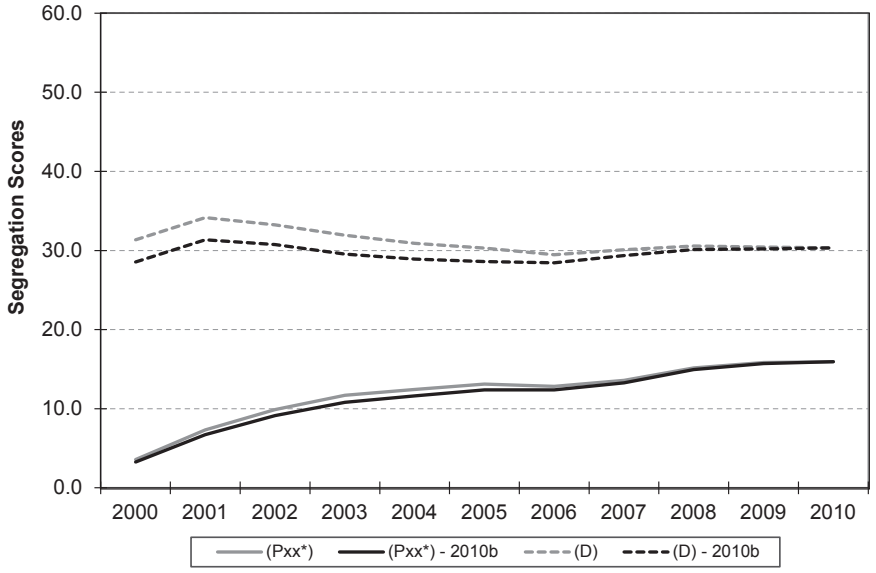
Our results nonetheless suggest contrasting trends in the spatial reception of Spain's two largest immigrant groups by natives. Despite increasing in size by factor of more than six in the course of a decade, the level of dissimilarity between Latin Americans and Spaniards was in the moderate range and fell slightly over time. In contrast, although Africans grew at half the pace of Latin Americans, their dissimilarity increased over the decade and was ten points higher in 2010. As a result, even though the percentage of Latin Americans in Spain was twice that of Africans in that year (5.2 vs. 2.3%), both groups experienced roughly the same level of spatial isolation nationwide (about 10%), reflecting the "structural" difference in segregation as indicated by their contrasting dissimilarity scores.

These trends are largely replicated in the provinces of Madrid and Barcelona, though the absolute values of the indices are different. As shown in Fig. 3.4, Latin American residential dissimilarity changed relatively little over the decade and remained in the low-moderate range, increasingly slightly from 28.6 to 30.3 between 2000 and 2010. At the same time, the level of spatial isolation rose, reflecting the fact that Latin Americans went from 2.1 to 9.9% of Madrid's population over the decade, causing their Pxx* isolation to rise rather sharply in the context of slowly increasing dissimilarity, going from around 3.3 to 15.9. Although the growth of Madrid's African population was less pronounced (increasing from just 1.0 to 2.1% of the provincial population), the level of residential dissimilarity steadily rose rather markedly over the decade, going from 29.9 to 39.7. Despite their higher segregation in the structural sense, the degree of African spatial isolation was much lower than that of Latin Americans because of their relatively small numbers, rising from just 1.8 to 5.2 over the decade.

As shown in Fig. 3.5, in Barcelona, the relative expansion of the African population was greater than in Madrid (going from 1.1 to 3.2% over the decade) while the expansion of the Latin American population was more modest (1.2–7.7%). As a result, in 2010 Latin Americans outnumbered Africans by just 2.4–1 in Barcelona, compared with 4.7 to 1 in Madrid. Possibly reflecting their larger relative numbers, Africans were far more segregated in Barcelona than in Madrid, with the dissimilarity index rising from 45.0 in 2000 to peak at 50.0 (compared with a maximum of 39.7 in Madrid). Given their greater dissimilarity and larger share of the population, Africans were also more isolated in Barcelona, with their Pxx* index rising steadily over time to end the decade at 9.8, compared with 5.2 in Madrid. Although Latin Americans ended up at the same level of dissimilarity in 2010 in both Barcelona and Madrid (about 30) the trends over time were different. Whereas Latin American dissimilarity increased slightly in Madrid, it fell steadily in Barcelona, going from a peak of 39.0 in 2000 to end the decade at 30.0 in 2010, possibly reflecting the slower growth of the Latin American population in the latter. Although the spatial isolation of Latin Americans increased in both provinces, in the end the increase was slower in Barcelona, again reflecting their relatively smaller numbers there. Whereas Latin American isolation in Madrid rose steadily to peak at 15.9 in 2010, in Barcelona it peaked 14.3 in 2009 and then dropped back to around 12.6 in 2010.

To a certain degree, comparisons of segregation and isolation patterns between Madrid and Barcelona reflect where provincial boundaries were drawn. In general,

Latin American



African

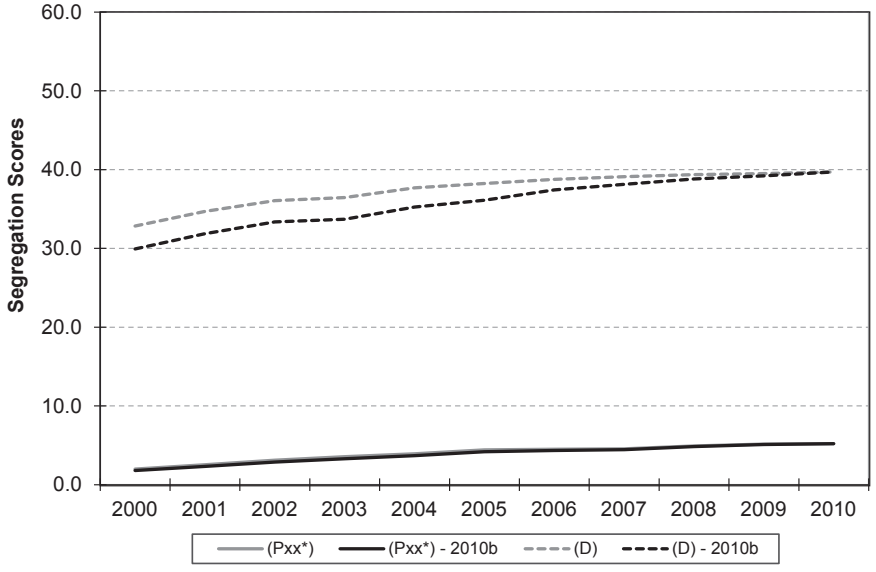
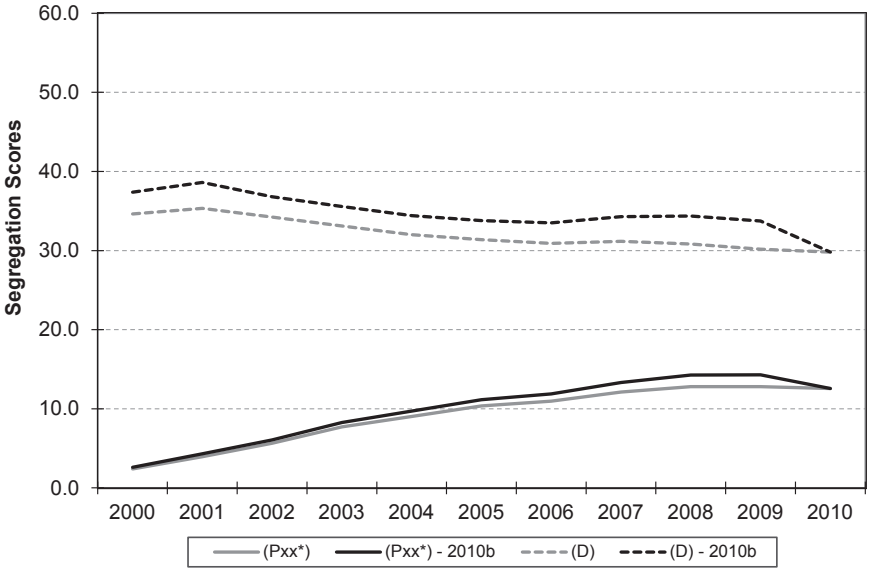


Fig. 3.4 Segregation scores (evenness and exposure) for Latin American and African across census tracts in the province of Madrid, 2000–2010. (Source: Own elaboration with data from the Population Municipal Register (INE). NB: 2010b indicates the use of the 2010 boundaries over the study period)

Latin American



African

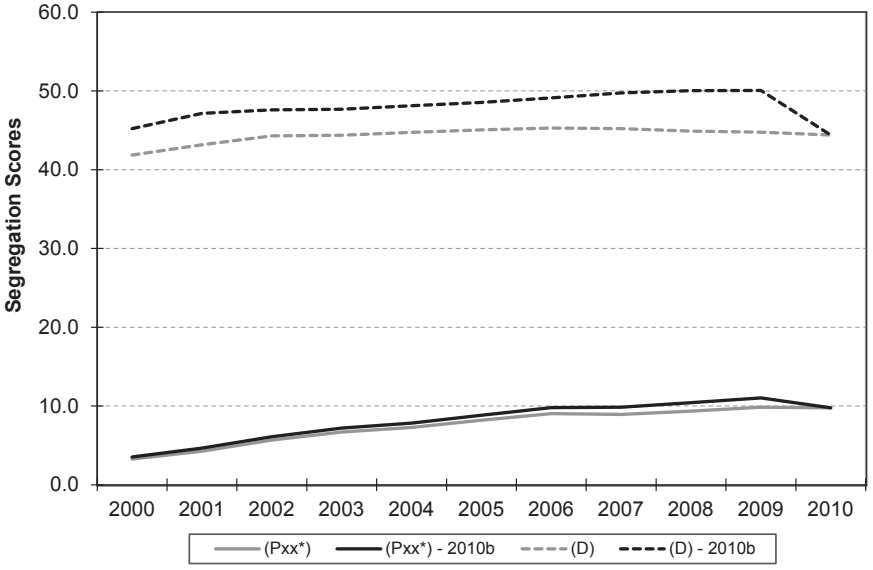


Fig. 3.5 Segregation scores (evenness and exposure) for Latin American and African across census tracts in the province of Barcelona, 2000–2010. (Source: Own elaboration with data from the Population Municipal Register (INE). NB: 2010b indicates the use of the 2010 boundaries over the study period)

the Province of Barcelona includes more non-urban territory and it is more diverse in population composition. Only 78 out of the province's 311 municipalities have an immigrant percentage greater than ten percent. In contrast, the Province of Madrid is a tightly circumscribed, dense metropolitan area in which 136 of 179 municipalities have immigrant shares greater than ten percent. Despite these ecological differences, the respective patterns and trends in spatial isolation and residential segregation yield similar conclusions for both metropolitan areas, as well as the nation as a whole: in each case, the level of dissimilarity from Spanish natives is greater considerably greater for Africans than Latin Americans; and the segregation of Latin Americans has tended to decline over time, however slightly, while African segregation has remained stable or increased. Thus Africans are clearly more segregated in Spain than Latin Americans.

Internal Migration and Segregation

Internal migration plays a key role in redistributing population and determining the demographic, social, and economic composition of specific regions, municipalities and neighborhoods, with direct implications for segregation and social cohesion (Finney and Catney 2012), particularly in gateway metropolitan areas such as Madrid and Barcelona. During the mid −1990s, the leading cities of Spain were caught up in a rapid wave of suburbanization, well before the international migration boom. The municipalities of Madrid and Barcelona, for example, experienced losses of 330,000 and 250,000 persons, respectively, between 1975 and 1996. The exodus of Spanish nationals from the urban core to peripheral areas and surrounding municipalities continued after 2000 and international migration was critical in counteracting depopulation in many metropolitan areas. In the Province of Madrid, for example, non-Spanish nationals rose from 134,000 persons in 1990 to 1 million in 2010 while in Barcelona immigrants rose from 96,000 to 805,000 persons.

In order to determine whether immigrants have been moving toward or away from areas of their own concentration, Table 3.2 computes inter-municipal migration rates for the period 2002–2010, expressed as a percentage of the 2010 population. The table shows net migration rates separately for Latin Americans and Africans and breaks down the data by level of residential dissimilarity (low, low-moderate, high-moderate, and high) and minority concentration (low versus high). These rates reveal the relative degree of movement by both groups into (positive numbers) or out of (negative numbers) specific kinds of municipalities defined by segregation and minority composition.

The top panel of the table focuses on Latin Americans and indicates that inter-municipal migration generally operates to maintain or reduce their segregation with respect to Spanish natives. For example, in municipalities where Latin American segregation was low the net migration rate was −0.81 if the minority concentration was high and 0.73 if it was low, meaning that Latin Americans were moving out of municipalities where they were highly concentrated and into areas where they

Table 3.2 Internal migration rates (as % of 2010 population) by population composition and level of segregation of Latin American and African in Spain, 2002–2010. (Source: Own elaboration with data from the Residence Variation Statistics and the Population Municipal Register (INE))

Segregation	Population composition/Migration type					
	Low concentration < 10 % own Minority group			High concentration ≥ 10 % own minority group		
	In	Out	Net	In	Out	Net
Latin American						
Low	11.45	10.72	0.73	8.90	9.72	−0.81
Low-moderate	10.05	9.57	0.48	9.08	8.59	0.49
High-moderate	9.95	10.01	−0.06	0.00	0.00	0.00
High	0.00	0.00	0.00	0.00	0.00	0.00
African						
Low	11.23	11.39	−0.15	9.75	11.20	−1.45
Low-moderate	11.34	10.50	0.84	10.72	9.39	1.33
High-moderate	10.31	9.98	0.32	10.68	11.05	−0.37
High	10.71	9.69	1.02	8.27	3.95	4.32

The level of segregation is defined by the segregation scores of the Index of Dissimilarity: low (< 20), low-moderate (20–34), high-moderate (35–49) and high (=> 50)

were not well-represented. Thus internal migration operated to reduce segregation levels in areas where segregation was already low. In municipalities where Latin American segregation was in the low-moderate range, we observe about the same level net in-migration regardless of minority concentration (0.48 in areas of low concentration and 0.49 in areas of high concentration), suggesting a rough balance in the tendency toward concentration in these municipalities. In municipalities characterized by a high-moderate level of segregation and low minority concentration, the net migration was negative, indicating a clear tendency toward desegregation. There were no municipalities with a low concentration of immigrants and a high degree of segregation and no municipalities with a high concentration of immigrants and either a high-moderate or high level of segregation.

Among Latin Americans in Spain, therefore, segregation levels are never high and rarely even in the high-moderate range, and net migration patterns tend to mitigate, or at least not exacerbate, existing levels of concentration and segregation. In contrast, among Africans we observe municipalities at all levels of segregation and concentration including the highest, and net migration patterns suggest ongoing processes of residential segregation and concentration. As shown in the bottom panel of Table 3.2, among municipalities characterized by low levels of segregation, the net migration rate for Africans is negative irrespective of the degree of minority concentration. Simply put, Africans are moving out of municipalities with low levels of segregation.

In contrast, they are generally moving into municipalities characterized by higher levels of segregation, especially those already displaying high concentrations

of Africans. Among municipalities characterized by low-moderate segregation, for example, the net migration rate was 0.84 in areas of low concentration and 1.33 in areas of high concentration; and among those characterized by high-moderate segregation the net rate was 0.32 in areas of low concentration. Only in areas of high concentration do we observe net out migration, with a rate of −0.37.

The strongest sign of ongoing segregation and concentration among African immigrants are the sizeable positive net migration rates in municipalities already characterized by high levels of segregation, especially in those characterized by a high concentration of Africans. Indeed, areas with both high African dissimilarity and high African concentration display the highest rate of in-migration observed anywhere in the Table (4.32), though the rate is also strongly positive in areas of high segregation and low concentration (1.02). In other words, among Africans by far the largest migrant streams flow directly into highly segregated municipalities, especially those already containing large concentrations of Africans, a pattern of internal migration that can only operate to increase segregation.

The foregoing results thus suggest that processes of internal migration are moving Africans decisively toward higher levels of segregation and concentration while Latin American mobility patterns offer little evidence of a strong shift toward either segregation or concentration. Although African immigrants are not necessarily hampered by limited Spanish proficiency—indeed, many new arrivals use social ties with already established Africans find housing and work—the contrast between the experience of the two immigrant groups suggests that in this case social networks and language proficiency operate to promote the segregation of Africans and the integration of the Latin Americans. Although the extent to which language skills affect some immigrant groups more than others is largely unknown in Spain, the available evidence suggest that individuals with language proficiency are more likely to end up in jobs commensurate with their qualifications (Blázquez and Rendón 2012), a situation that is certainly more likely to occur among Latin Americans due to historical reasons. Of course, this is expected to have implications about the income and poverty levels of some immigrant families and affect sociospatial integration to the host country.

Table 3.3 presents a parallel analysis of intra-provincial migration by level of segregation for specific metropolitan provinces. Once again net migration rates for 2002–2010 yield evidence of lower levels of segregation and greater rates of dispersal among Latin Americans than Africans. In no province are Latin Americans highly segregated, and in those provinces where Latin Americans experience a high-moderate level of segregation we observe a zero or negative rate of net-migration, with one exception—Madrid—where the net rate is rather strongly positive, suggesting potential movement toward high segregation in that particular metropolitan areas. In areas of low and low-moderate segregation within Alicante and Balears the net rates are positive in all but one case but generally quite small, suggesting little movement in either direction. In Madrid, Barcelona, and Valencia the net rates are likewise positive in areas of low and low-moderate segregation, ranging from 1.0 to 1.7.

Table 3.3 Intra-provincial migration rates (as % of 2010 population) for selected provinces (top 5) by level of segregation of Latin American and African, 2002–2010. (Source: Own elaboration with data from the Residence Variation Statistics and the Population Municipal Register (INE))

	Provinces/Migration type														
Segregation	Madrid			Barcelona			Valencia			Alicante			Balears		
	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net
Latin American															
Low	10.11	8.61	1.50	9.16	7.84	1.32	8.90	7.59	1.31	6.99	6.97	0.02	8.42	8.22	0.21
Low-moderate	8.69	6.97	1.72	8.66	7.43	1.22	7.37	6.32	1.05	6.32	5.80	0.52	6.72	6.92	−0.20
High-moderate	12.69	7.31	5.39	5.21	6.08	−0.87	0.00	0.00	0.00	0.00	0.00	0.00	3.65	4.54	−0.89
High	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
African															
Low	7.73	7.13	0.60	7.01	7.69	−0.68	6.47	5.48	0.99	6.28	7.12	−0.84	5.63	4.50	1.13
Low-moderate	7.65	6.96	0.69	7.40	7.23	0.17	5.25	4.45	0.80	5.32	4.84	0.48	4.76	3.59	1.17
High-moderate	6.37	7.38	−1.01	6.92	6.40	0.52	4.30	4.13	0.17	3.57	3.09	0.48	3.90	3.47	.43
High	11.91	5.47	6.44	7.85	7.31	.54	3.32	1.32	2.00	0.00	0.00	0.00	0.00	0.00	0.00

The level of segregation is defined by the segregation scores of the Index of Dissimilarity: low (<20), low-moderate (20–34), high-moderate (35–49) and high (≥50)

In contrast, for Africans we observe highly segregated municipalities in Madrid, Barcelona, and Murcia; and in Madrid, especially, we observe a clear trend toward greater segregation. In that province, the net rate of in-migration is 6.44 in highly segregated municipalities and 1.01 in those with a high-moderate level of segregation, but only 0.60 and 0.69 in those with low and low-moderate levels of segregation. Thus African migration is focused disproportionately on areas that are already quite segregated. In Barcelona we see some movement toward segregation—the net rate of migration is negative in areas of low segregation and positive at higher levels of segregation; but compared with Madrid the numbers are quite small, with net rates of 0.17, 0.52, and 0.54 for areas characterized by low-moderate, high-moderate, and high levels of segregation, respectively. Compared with Madrid, the movement toward segregation in Barcelona is thus quite modest.

We also observe moderate shifts toward African segregation in Murcia and Alicante. In the former province the rate of net migration into highly segregated areas was 2.00, but only 0.17 in the next level down. Areas of low and low-moderate levels of segregation experienced positive growth through migration, with net rates of 0.99 and 0.80, respectively. In Alicante, there is modest net migration out of municipalities characterized by a low level of segregation (−0.84) combined with small net migration into areas characterized by low-moderate and high-moderate segregation levels (0.48 in both cases). In Almeria we observe growth primarily in areas typified by low and low-moderate levels of segregation, with respective net rates of 1.13 and 1.17, compared with just 0.42 in high-moderate areas.

In sum, we observe high levels of African immigrant segregation in Madrid, Barcelona, and Murcia, with strong evidence of shifts toward greater segregation in Madrid and to a lesser extent in Murcia and Barcelona. Levels of African segregation are generally lower in Alicante and Almeria, with some movement toward segregation in the former but very little in the latter. In contrast, Latin Americans do not experience a high level of segregation in any metropolitan area, and no segregation even at a high-moderate level in Valencia and Alicante; and in no province except Madrid do we see any clear evidence of movement toward greater segregation. In that metropolitan area, in contrast to others, highly segregated municipalities evince a high rate of Latin American in-migration.

Although the internal migration of immigrants within Spain represents one driver of residential segregation and spatial concentration, the other is the internal migration of Spanish natives, a subject taken up in Table 3.4, which shows rates of net migration for municipalities cross-classified by level of segregation and relative size of the native Spanish population. In general rates of in- and out-migration are much lower than we observed among either African or Latin American immigrants, and the net rates are quite small. Almost by definition, immigrants are far more mobile as a group than the native born.

The top panel of Table 3.4 offers some evidence that Spanish natives are avoiding areas characterized by high-moderate levels of Latin American segregation, with negative net migration rates of −0.19 in areas of high Spanish concentration and −0.04 in areas of lower Spanish concentration. In contrast, we observe positive net migration in areas of low residential segregation, with rates of 0.28 in areas of

Table 3.4 Internal migration rates (as % of 2010 population) of Spanish by population composition and level of segregation of Latin American and African in Spain, 2002–2010. (Source: Own elaboration with data from the Residence Variation Statistics and the Population Municipal Register (INE))

	Population composition/Migration type					
Segregation	High native concentration ≥80% Spanish			Low Native Concentration 80% Spanish		
	In	Out	Net	In	Out	Net
Latin American						
Low	3.73	3.45	.28	4.65	3.91	.74
Low-moderate	2.67	2.50	.17	3.99	3.87	.12
High-moderate	2.09	2.28	−.19	3.99	4.03	−.04
High	.00	.00	.00	.00	.00	.00
African						
Low	3.88	3.49	.39	4.69	3.94	.74
Low-moderate	3.27	2.78	.49	4.26	3.73	.53
High-moderate	2.76	2.60	.16	4.28	4.05	.23
High	2.45	2.55	−.10	2.44	2.66	−.21

The level of segregation is defined by the segregation scores of the Index of Dissimilarity: low (<20), low-moderate (20–34), high-moderate (35–49) and high (=>50)

high Spanish concentration and rates of 0.74 in areas of lower Spanish concentration. Low-moderate areas evince small but positive rates of net migration: just 0.17 in areas of low-moderate segregation and 0.12 in areas of high-moderate segregation. As shown in the lower panel of the table, patterns of net migration for native Spaniards are similar with respect to African segregation, with net out-migration from areas of high segregation and net in-migration into areas of lesser segregation, though the absolute value of the rates are generally higher than those observed for Latin Americans. In addition, the rate of net in-migration by Spanish natives generally rises as the level of segregation falls, suggesting progressively greater movement into areas of lower African segregation, with a preference toward areas of low segregation.

To this point we have documented patterns of internal migration for immigrants that generally serve to promote the integration and deconcentration of Latin Americans but that operate to sustain or increase the segregation of Africans, combined with migration by Spanish natives away from areas of high African segregation and a preference for areas of lower African segregation but little selectivity with respect to levels of Latin American segregation. These patterns are consistent with the trends in residential dissimilarity reported earlier, in which Latin Americans evinced low to moderate levels of segregation that were stable or falling over time while Africans displayed moderate to high levels of segregation that were rising over time.

Finally, in Table 3.5 we consider net rates of migration between municipalities classified by segregation and size. Among Latin Americans, there is relatively little

Table 3.5 Internal migration rates (as % of 2010 population) by population size and level of segregation of Latin American and African in Spain, 2002–2010. (Source: Own elaboration with data from the Residence Variation Statistics and the Population Municipal Register (INE))

Segregation	Population size/Migration type					
	Moderate size 10,000 to 100,000			Large size >100,000		
	In	Out	Net	In	Out	Net
Latin American						
Low	10.80	9.65	1.15	6.64	6.64	.00
Low-moderate	10.10	9.67	.43	6.82	6.80	.02
High-moderate	10.56	10.35	.21	5.20	5.42	−.22
High	.00	.00	.00	.00	.00	.00
African						
Low	10.96	9.78	1.19	.00	.00	.00
Low-moderate	11.33	10.21	1.11	9.57	9.67	−.10
High-moderate	10.64	10.06	.58	8.49	8.58	−.08
High	11.39	10.05	1.34	7.18	6.18	1.00

The level of segregation is defined by the segregation scores of the Index of Dissimilarity: low (<20), low-moderate (20–34), high-moderate (35–49) and high (≥50)

net movement in or out of large municipalities, being zero at low levels of segregation, 0.02 at low-moderate levels, and −0.22 at high-moderate levels. In contrast, we observe net in-migration of Latin Americans into moderately sized municipalities, with net rates of 1.15 at low levels of segregation, 0.43 at low-moderate levels, and 0.21 at high-moderate levels. Thus Latin Americans who move internally within Spain are going disproportionately to mid-sized municipalities characterized by low levels of segregation, providing little evidence of movement toward greater segregation or concentration.

In contrast, among Africans we observe a relatively strong rate of net in-migration into large municipalities with high levels of segregation (1.0) but little movement in or out of large municipalities with lower segregation levels (net rates ranging from zero to −0.08). Among moderately sized metropolitan areas, however, we see significant net in-migration at all levels of segregation. Nonetheless, the highest net rate is observed in highly segregated areas (1.34), compared with rates of 1.19, 1.11, and 0.58 in areas of low, low-moderate, and high-moderate segregation, respectively. In general then, we observe systematic movement by immigrants toward smaller, less congested municipalities characterized by lower levels of segregation, with the exception of Africans, who display high rates of migration into highly segregated municipalities of both moderate and large size. Once again it is Africans more than Latin Americans who are moving toward greater segregation, though in this case the pattern is balanced by a simultaneous movement of Africans toward smaller municipalities with lower levels of segregation.

Some Conclusions

Our extension of the geographical and temporal coverage of segregation research in Spain supports three basic conclusions. First, the degree of residential segregation and spatial isolation experienced by Spain's two largest non-European immigrant groups—Latin Americans and Africans—are moderate by global standards, with average dissimilarity indices below 50 based on a rather small spatial unit. In contrast, using the same index segregation levels stood at 54 for South Asians in Canada, 59 for Turks in Belgium, 60 for Bangladeshis in Britain, 67 for Turks in Sweden, 69 for Arabs in Israel, and 84 for Africans in South Africa, according to the latest data (Massey 2015). Second, despite the moderate level of segregation over all, the segregation of Africans from Spanish natives is significantly greater than that of Latin Americans. As of 2010, Latin American dissimilarity stood at 38.3 for Spain as a whole, 30.3 in Madrid, and 30.0 in Barcelona. In contrast, African dissimilarity was 48.9 in Spain, 39.7 in Madrid, and 50.0 in Barcelona.

Finally, according to a variety of data Africans appear to be moving toward higher levels of residential segregation and spatial concentration while Latin Americans do not. Nationwide, Latin American dissimilarity from Spanish natives declined from 41.4 to 38.3 between 2000 and 2010; in Barcelona it dropped from 39.0 to 30.0; and in Madrid it remained fairly steady at around 30. In contrast, African dissimilarity from Spanish natives generally increased, going from 47.5 to 48.9 nationwide, from 29.9 to 39.7 in Madrid, and from 45.0 to 50.0 in Barcelona, despite the fact that immigration over the decade was greater for Latin Americans than Africans. Consistent with these broad trends, a careful analysis of internal migration generally revealed a pattern of dispersal among Latin Americans toward moderately sized municipalities characterized by lower levels of segregation and lower minority concentration, in contrast to Africans who evinced a pattern of movement toward larger municipalities and irrespective of size, toward places characterized by higher levels of African segregation and greater minority concentrations. We also detected a tendency for Spanish migrants to avoid municipalities displaying a high level of African segregation while favoring locations with low levels of African segregation, but to display much less selectivity of movement with respect to Latin American segregation.

Discussion

In general, the residential behavior of Latin Americans suggests something distinctive about this group leading to a level of residential segregation markedly below that of Africans, despite their late arrival and exceptional population growth during the 2000s. This lack of residential clustering among Latin Americans after arrival has also been observed in other geographical contexts (Hardwick 2008; Massey 2008) and has been labeled as heterolocalism by Zelinsky and Lee (1998).

By documenting contrasting patterns of migration and settlement between Latin Americans and Africans in Spain, we provide further evidence of the coexistence of different residential trajectories in Spain that correspond to a hierarchy of ethnic preferences prevailing in Southern Europe (Calavita 2005), with Latin Americans on top, followed by Eastern Europeans, Asians, Sub-Saharan or Black Africans and finally North Africans. Indeed, such preferences are also systematically revealed in the various analyses of labour and housing market outcomes for different immigrant groups in Spain. For instance, Latin American immigrants show the highest labour force participation rates and the lowest unemployment rates, whereas the opposite is true for those coming from Africa (Amuedo-Dorantes and De la Rica 2007; Cachón 2009). Although both immigrant groups remain extremely vulnerable to changes in the labour market, particularly since the outbreak of the economic recession, the labour market experience between these groups differs substantially. While Latin Americans are closely related to the demand for immigrant labour in traditionally feminized niches in the service sector such as the domestic service, elderly care as well as the food and leisure industry, Africans are over-represented in the hardest, less prestigious, and generally worse paid jobs in the construction and agricultural sectors (mostly men) as well as in the domestic service (mostly women). The picture from the housing realm is also very indicative and suggests striking differences between Latin Americans and Africans. Although an important part of the stock of rented housing is occupied by immigrant households, Latin Americans have clearly progressed towards home ownership over the past decade, a situation that is hardly seen for Africans despite the starting point for both immigrant groups was very similar two decades ago (Módenes et al. 2013). Africans not only face worse conditions to enter home ownership, but also cope with common negative attitudes in the rental market where they are over-represented. For instance, on a recent study on information and discrimination in the rental housing market (Bosch et al. 2010), discriminatory practices by landlords towards Africans were commonplace, and suggested that Africans were 15 % points less likely to receive a response from landlords than those with a Spanish name. Of course, social networks and economic factors play a key role in explaining the distribution of the foreign-born population in Spanish provinces (Maza et al. 2013), although it is also evident that when avenues of spatial integration are systematically blocked by prejudice and discrimination towards some immigrant groups, their residential segregation persists over time.

Although our results follow universal theoretical notions about immigrant concentration and dispersal derived from the global city model, segregation is nevertheless a context-bound phenomenon (Maloutas 2007; Maloutas and Fujita 2012). In Spain, as in Southern Europe generally, the topic of residential segregation has only recently appeared on the political agenda despite numerous studies (mostly qualitative) have constantly highlighted the growing visible division between different foreign and native-born groups and the relationship between immigration, residential segregation and poverty (see, among others, Martínez Veiga 1999a, 1999b). However, the relatively moderate levels of segregation we observed to a certain extent might explain the lower level of interest compared to other regions in Europe (Musterd et al. 1998). Some authors (Malheiros 2002; Arbaci 2008) have suggested

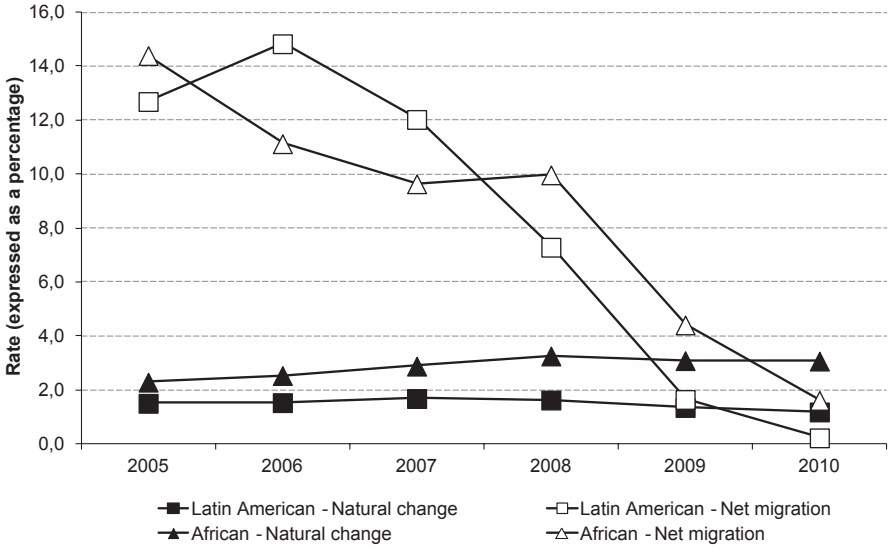


Fig. 3.6 Net migration and natural change of Latin American and African groups in Spain, 2005–2010. (Source: Own elaboration with data from the National Vital Statistics and the Residence Variation Statistics (INE))

that perceptions of residential segregation are different in Southern Europe because fragmented patterns of urban growth formed peripheral urban centers (e.g. banliues, suburbios) in contrast to the concentric progression of neighborhoods envisioned by the Burgess model, thus diluting segregation with minimal public intervention. Within this context, generally weak state regulations and housing informality are still seen as key factors to explain the effects of the southern European welfare regimes on urban segregation (Arbaci 2007). Although the immigrant growth in peripheral urban centers may have limited the degree of segregation experienced by first generation immigrants in Spain, this may change in the future for two reasons. First, a positive rate of natural increase (i.e. an excess of births over deaths) is gradually becoming more important than net migration in determining the size of Latin American and African populations in Spain since 2005 (see Fig. 3.6). As a consequence, the growth in situ of immigrant groups is likely to become increasingly important as mechanism for generation segregation, a scenario that seems quite probable given the very young age structure of Spain's immigrant populations. In a very real way, this means that immigrants' visibility will increase with time as a large second generation comes of age.

Second, integration into the mainstream of Spanish society via naturalization and citizenship access is clearly occurring at different rates for different immigrant groups. As shown in Fig. 3.7, the acquisition of Spanish citizenship is greater and has been rising much more rapidly among Latin Americans than Africans, suggesting that nativity is overshadowed by national origin, with likely implications for

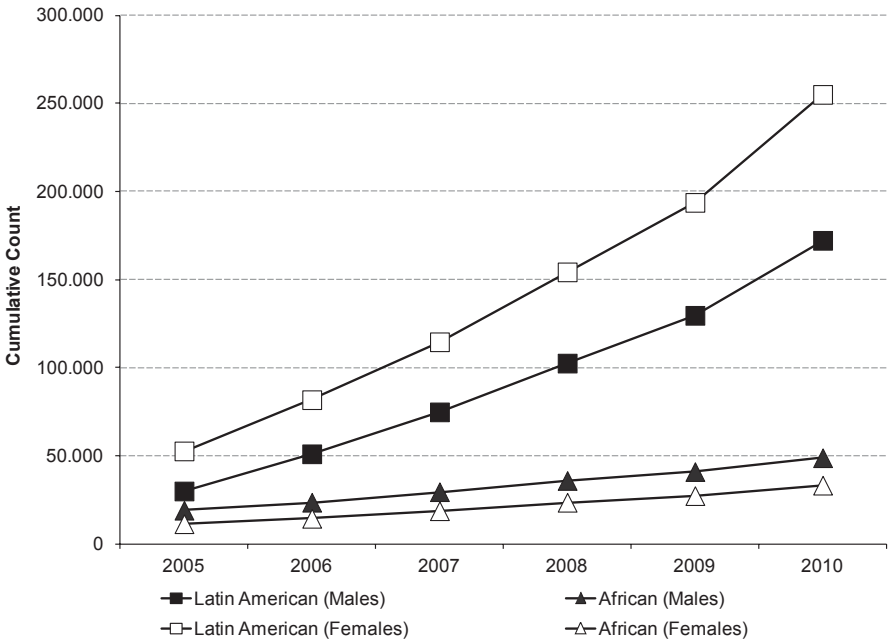


Fig. 3.7 Acquisition of Spanish citizenship for Latin American and African groups by sex in Spain, 2005–2010. (Source: Own elaboration with data from the Ministry of Labor and Immigration)

immigrant integration across the generations. In this context, gender differences between female dominated Latin American immigrants and male dominated African immigrants become particularly relevant, given the role played by mixed marriages in facilitating the integration, both social and spatial, of immigrants into society (Iceland and Anne Nelson 2010). In addition to the contrasting migration and settlement patterns we have described here, variations in fertility, citizenship, and intermarriage in years to come can be expected to exacerbate the contrast in the segregation experiences of Latin Americans and Africans.

In closing, we pause to consider the spatial ramifications of Spain's ongoing economic recession. Rates of employment have fallen more rapidly and profoundly among immigrants than natives, and are thus more likely to have negative consequences for their housing and residential circumstances. In addition, although in normal times internal migration contributes to important goals such as economic growth, cultural dynamism, and social cohesion, during difficult times rates of internal migration generally fall, creating new conditions of social vulnerability by limiting residential choices, causing more immigrants to stay put in distressed neighborhoods and poor areas of initial settlement. It is important, therefore, levels and trends in residential segregation be documented so that this variable can be incorporated fully with the processes of population change that underpin immigrant geographies into research and theorizing about the causes of urban poverty.

Unlike other European countries, Spain has not seen a significant backlash against immigration, even amid its profound economic crisis. Indeed, incidents such as the riots between Moroccans and Spaniards in the agricultural town of El Ejido during early 2000 are a sad reminder of the consequences of negative attitudes combined with residential segregation (Checa 2001; Checa and Arjona 2006). Despite public attitudes toward immigrants tend to harden during difficult economic times groups in favor of immigration are still large, active and vocal in their opposition to immigrants' hostility in Spain (Arango 2013). However, significant changes can be expected if the competition between immigrants and the disfavored segments of the receiving society for scarce social resources becomes greater, a situation that can rapidly deteriorate the general attitude towards immigrants. The question of whether the current crisis is a mere interruption or a major structural change is still uncertain. Whatever the future brings, the depth and length of the recession are likely to have deep and far-reaching effects on Spanish society, including social and spatial polarization.

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