RECENT IMMIGRATION, TERRITORIAL PATTERNS AND COMMUTING IN SPAIN: A METROPOLITAN PERSPECTIVE

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Paper's aim

This paper studies the commuting behaviour of economically active immigrant population in Spain, especially those displacements that had been produced between place of work and place of residence. This analysis adopts an urban perspective, with the study of the two most important metropolises in the country, the Barcelona Metropolitan Region (BMR) and the Madrid Metropolitan Region (MMR), where commuting dynamics are more important.

The interest of the study of immigrants' commuting patterns lies in three motives. On the one hand, it provides very important information about the evolution of total metropolitan mobility, on the other it reports on the situation of immigrants in the labour market and their adaptation strategies, and finally and in relation to its settlement, it is important to test the theory of "spatial mismatch " (Painter et al 2007; Blázquez et al 2010) or the importance of ethnic businesses.

Both BMR and MMR are characterised by a very intense and recent immigration phenomena and by a great diversity of present immigrants' composition. 14.8% of BMR population and 16.0% in the MMR are foreign-born. Together they represent almost 1,750,000 immigrants, who had arrived to Spain during the last decade.

In the first case, the MRB, we found 737.818 immigrants, a 14.8% of total population (51.1% of them are born in Latino America, 21.1% are European, 17.7% African and 8.5% Asiatic). The MMR foreigner's composition is almost similar, with 1.022.760 immigrants (48.5% in Latino-America, 33.5% in Europe, 10.6% African and only 5.0% Asiatic). As a whole they add up to an immigrant population of more than 1,750,000 inhabitants.

First of all, commuting behaviour will be analysed from a descriptive perspective, focusing our attention in three main characteristics. Firstly, we study those who work in a municipality different of the municipality of residence. Then, we focus our attention over the model of travel to work, studying those who use a private vehicle. The third characteristic is commuting time. In this case we had selected those who need for more than 45 minutes in a single displacement to work.

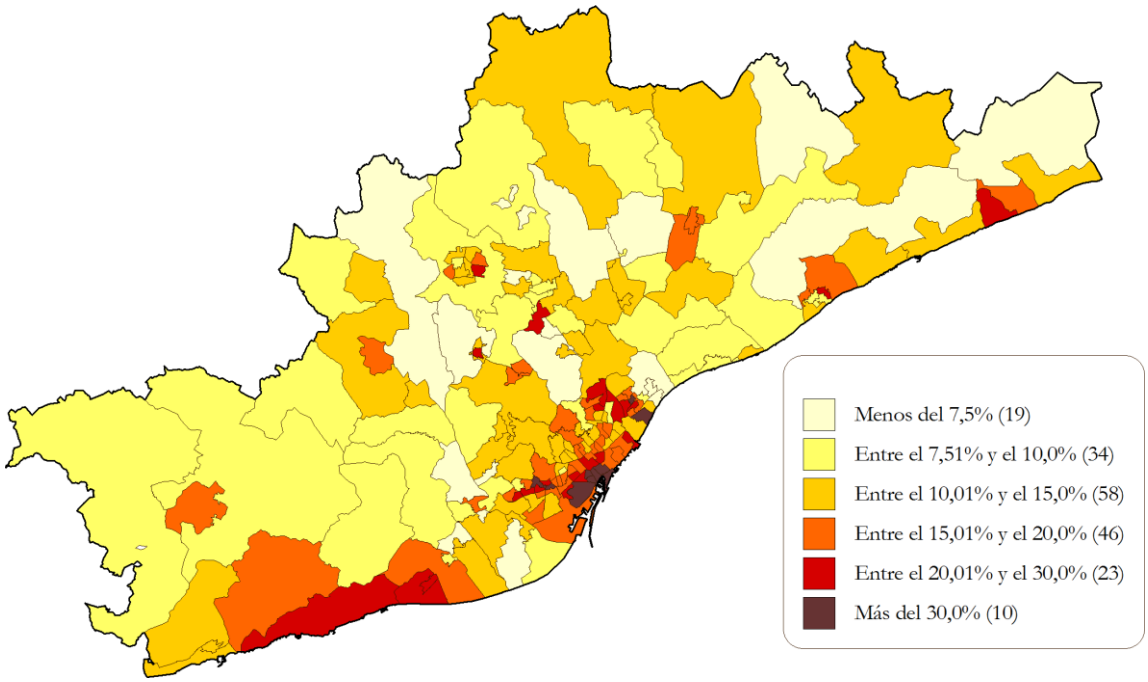
In a second stage, our attention will focus over concentration effects over commuting.

Methodology

We will use the 2011 Census microdata. As it is a survey based census so available spatial data is grouped into 20 to 40 thousand inhabitant units, with a subdivision of the Barcelona metropolitan region in 190 units (figure 1) and the Madrid Metropolitan Region in 237. Using standard deviation as a dispersion measure we had defined different concentration categories for each immigrant group.

We use a logistic regression to determine the concentration effects, controlling by age, sex, country of birth, activity and studies. The concentration is defined by the share of foreigners among total population, studding different types of concentration depending of their geographic location. In a previous work about the BMR case we had identified four different types of concentration (City Center / First Ring (Llobregat) / First Ring (Besòs) / Second Ring).

Figure 1. Geographical distribution of Immigrant's Share among total population, BMR, 2011.



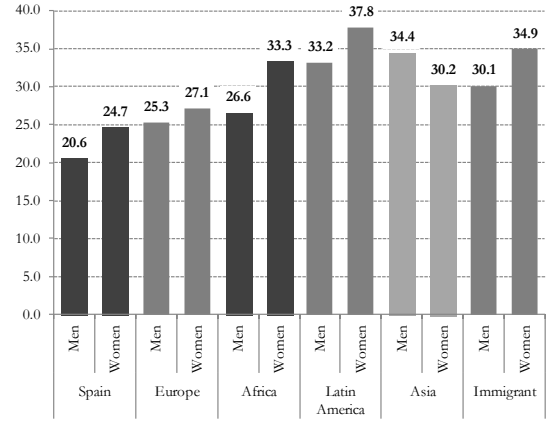
Source: 2011 Population Census microdata, with INE data. Own elaboration.

Preliminary and descriptive findings

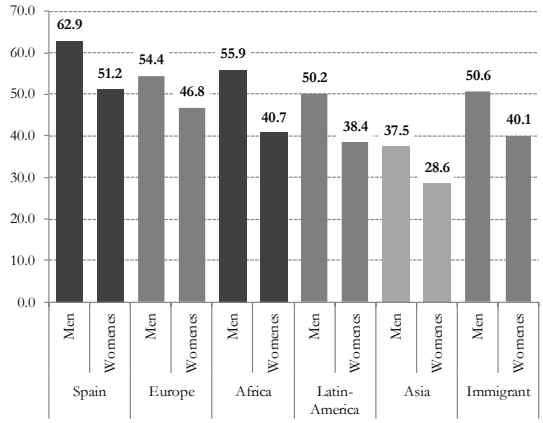
It is a work in progress. At the moment we have the first results for the Barcelona Metropolitan Region (Bayona and Ajenjo, 2015). They shown than immigrants need more time for their displacements, and a greater intensity in public transport use. At the same time, they work less outside their municipality of residence. These patterns have major effects over women. Also, it can be observed a clear concentration effect, reinforced by their location: a metropolitan centre effect is observed, while peripheries penalise daily mobility (table 1).

Figure 2. Commuting characteristics in the MRB, 2011, by sex and origin.

Commuting times



Use of private transport



Source: 2011 Census Microdata. Own elaboration.

Table 1a. Logistic regression results, by concentration characteristics. Barcelona Metropolitan Region, 2011.

Working in other municipality

	City Center		First Ring (LL)		First Ring (B)		Second Ring		No concentration	
	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.
COUNTRY OF BIRTH (ref. Spain)		0.000		0.316		0.000		0.000		0.000
European	0.900	0.216	0.814	0.409	0.509	0.000	0.638	0.000	0.779	0.000
African	0.601	0.027	1.011	0.960	1.181	0.414	0.751	0.081	0.832	0.000
American	0.797	0.003	1.074	0.429	0.784	0.007	0.876	0.189	0.672	0.000
Asian	0.469	0.000	1.686	0.063	0.849	0.211	0.242	0.013	0.422	0.000
SEX (ref. men)										
Women	0.789	0.000	0.789	0.003	0.719	0.000	0.516	0.000	0.667	0.000
AGE (ref. 16-29)		0.004		0.589		0.191		0.000		0.000
30-44	1.252	0.001	1.043	0.669	0.941	0.438	1.085	0.329	1.102	0.000
45-64	1.152	0.055	0.953	0.651	0.856	0.076	0.809	0.018	0.807	0.000
STUDIES (ref. Univ.)		0.009		0.000		0.016		0.000		0.000
Without Studies	0.866	0.234	0.452	0.000	0.719	0.004	0.310	0.000	0.862	0.000
Primary School	0.783	0.002	0.585	0.000	0.935	0.475	0.433	0.000	0.933	0.000
Secondary School	0.872	0.021	0.788	0.037	0.955	0.622	0.594	0.000	1.060	0.000
ACTIVITY (ref. Services)		0.000		0.972		0.000		0.676		0.000
Agriculture	0.156	0.016	0.790	0.633	0.467	0.075	1.161	0.611	1.019	0.782
Construction	2.487	0.000	1.008	0.942	2.078	0.000	1.097	0.277	1.607	0.000
Industry	1.720	0.000	0.999	0.997	1.464	0.001	1.074	0.575	1.248	0.000
Constant	*0.181*	*0.000*	*3.462*	*0.000*	*1.139*	*0.226*	*3.565*	*0.000*	*1.321*	*0.000*

Moving with private transport

	City Center		First Ring (LL)		First Ring (B)		Second Ring		No concentration	
	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.
COUNTRY OF BIRTH (ref. Spain)		0.000		0.006		0.000		0.000		0.000
European	0.720	0.000	0.854	0.556	0.855	0.314	1.280	0.088	0.808	0.000
African	1.011	0.958	0.361	0.000	1.327	0.230	0.634	0.017	0.757	0.000
American	0.865	0.054	0.965	0.691	0.568	0.000	0.599	0.000	0.601	0.000
Asian	0.476	0.000	1.152	0.573	0.719	0.018	1.436	0.542	0.459	0.000
SEX (ref. men)										
Women	0.707	0.000	0.556	0.000	0.583	0.000	0.733	0.000	0.671	0.000
AGE (ref. 16-29)		0.160		0.000		0.107		0.289		0.000
30-44	1.124	0.073	1.413	0.000	1.189	0.042	0.959	0.651	1.186	0.000
45-64	1.040	0.579	0.940	0.563	1.078	0.437	0.868	0.152	0.974	0.158
STUDIES (ref. Univ.)		0.000		0.801		0.004		0.000		0.000
Without Studies	0.538	0.000	0.967	0.809	0.657	0.001	0.625	0.001	0.835	0.000
Primary School	1.054	0.502	0.913	0.429	0.851	0.116	0.645	0.000	0.992	0.657
Secondary School	0.901	0.076	0.997	0.978	0.945	0.576	0.822	0.020	0.992	0.611
ACTIVITY (ref. Services)		0.000		0.000		0.000		0.000		0.000
Agriculture	0.801	0.519	1.703	0.367	0.541	0.218	0.979	0.950	1.189	0.036
Construction	2.224	0.000	1.649	0.000	1.714	0.000	1.653	0.000	1.672	0.000
Industry	1.143	0.369	0.914	0.595	1.230	0.145	1.399	0.036	1.418	0.000
Constant	*0.550*	*0.000*	*1.178*	*0.188*	*1.172*	*0.175*	*2.454*	*0.000*	*1.481*	*0.000*

Travel time (more than 45 minutes)

	City Center		First Ring (LL)		First Ring (B)		Second Ring		No concentration	
	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.
COUNTRY OF BIRTH (ref. Spain)		0.003		0.000		0.000		0.000		0.000
European	1.062	0.621	1.691	0.120	0.675	0.101	0.780	0.162	1.159	0.002
African	0.713	0.328	1.089	0.818	1.552	0.100	0.891	0.664	1.644	0.000
American	0.776	0.029	2.298	0.000	2.789	0.000	2.021	0.000	1.531	0.000
Asian	0.551	0.001	1.946	0.028	1.927	0.000	0.822	0.794	1.154	0.183
SEX (ref. men)										
Women	1.070	0.374	1.048	0.672	1.658	0.000	0.811	0.016	0.998	0.904
AGE (ref. 16-29)		0.036		0.707		0.023		0.144		0.003
30-44	1.067	0.492	0.965	0.791	0.886	0.251	0.971	0.789	0.964	0.132
45-64	0.842	0.107	1.071	0.637	1.165	0.192	0.813	0.093	0.916	0.001
STUDIES (ref. Univ.)		0.059		0.053		0.002		0.000		0.000
Without Studies	1.134	0.475	1.053	0.772	1.103	0.518	0.528	0.001	0.751	0.000
Primary School	0.943	0.621	0.741	0.063	0.917	0.491	0.492	0.000	0.605	0.000
Secondary School	0.803	0.014	0.779	0.093	0.706	0.006	0.639	0.000	0.795	0.000
ACTIVITY (ref. Services)		0.000		0.179		0.005		0.007		0.000
Agriculture	0.215	0.153	2.434	0.171	0.812	0.724	0.391	0.106	0.707	0.009
Construction	1.926	0.000	1.302	0.084	1.088	0.500	0.781	0.048	0.802	0.000
Industry	0.531	0.038	1.212	0.392	1.798	0.000	1.432	0.040	1.254	0.000
Constant	*0.129*	*0.000*	*0.145*	*0.000*	*0.172*	*0.000*	*0.373*	*0.000*	*0.209*	*0.000*

Source: Own elaboration with 2011 Census microdata (INE).

Keywords: Commuting, Immigrants, Concentration effects, Spain, Metropolitan Region.

References

Bayona, J. and Ajenjo, M. (2015) "La exposición a la diversidad en la movilidad habitual: un análisis de la Región Metropolitana de Barcelona" In: García-Castaño, FJ.;

Megías, A. and Ortega, J. (Eds.) *Actas del VIII Congreso sobre Migraciones Internacionales en España*, (pp. S07/71–S07/84). Granada: Instituto de Migraciones.
Blázquez, M.; Llano, C. and Moral, J. (2010) "Commuting Times: Is There Any Penalty for Immigrants?". *Urban Studies*, 47(8), 1663–1686.
Painter, G.; Liu, C. Y. and Zhuang, D. (2007) "Immigrants and the Spatial Mismatch Hypothesis: Employment Outcomes among Immigrant Youth in Los Angeles" *Urban Studies*, 44(13), 2627–2649.